

## RANGE EXTENSION FOR THE WHITE-NOSED COATI (*NASUA NARICA*) IN SOUTHEASTERN GUANAJUATO, MÉXICO

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**ABSTRACT.**—We report the first photographic record of the white-nosed coati (*Nasua narica*) in the southeastern portion of the state of Guanajuato. Although this species is considered abundant and widely distributed in México, Guanajuato is not considered part of its current distribution. Because of the lack of records in surrounding areas, it is not possible to determine if there is an existing linkage to other populations. Thus, it is imperative to continue monitoring this species in the region to identify and assess the connectivity of other established populations and to ensure the species' long-term conservation.

**RESUMEN.**—Reportamos los primeros registros fotográficos del coatí de nariz blanca (*Nasua narica*) en la porción Sureste del estado de Guanajuato. A pesar de que ésta especie es considerada abundante y ampliamente distribuida en México, Guanajuato no es considerado como parte de su distribución actual. Debido a la falta de registros en áreas adyacentes no es posible determinar si existe conectividad con otras. Por lo tanto, es necesario continuar con los monitoreos de la especie en la región para poder identificar otras poblaciones establecidas y asegurar la conectividad que permita su conservación a largo plazo.

The procyonid genus *Nasua* contains 2 species: *Nasua nasua* and *Nasua narica* (Wilson and Reeder 2005). The latter, known as the white-nosed coati, is distributed from the southwestern region of the United States into Central America (Gompper 1995). In México, this species has been documented throughout the country except for on the peninsula of Baja California and in the central highlands and is considered common in the coastal slopes along the Pacific Ocean and the Gulf of México (Valenzuela 1998). The species has been associated most frequently with seasonal tropical forests, pine forests, pine-oak forests and scrublands at altitudes ranging from sea level up to 2900 m. There are 2 documented records of the species in northeastern Guanajuato (Sánchez 2014) although compendium studies (Hall 1981, Ceballos and Arroyo-Cabrales 2012) do not recognize the white-nosed coati as part of the fauna of the state. Furthermore, available records of terrestrial mammals from the CONABIO (Comisión Nacional para el Conocimiento y Uso de la Biodiversidad) do not include the white-nosed coati as present in Guanajuato. Espinoza-García et al. (2014) discussed the potential distribution of the species in northeastern México, which included a small portion of northeastern Guanajuato,

and mentioned the presence of recent records; however, location data and type of documentation associated with these records were not provided. In another report, Villaseñor (2008) included the South American coati (*Nasua nasua*) in an inventory of mammalian species recorded in Sierra de los Agustinos of Guanajuato, but this record is clearly a misidentification because this species is restricted to South America. In addition, all species records of medium- and large-sized mammals from this study were obtained only from interviews with local inhabitants and from spoor (e.g., scats, tracks) without specimen-based, photographic, or visual identification of species.

In the present study, we conducted a survey to determine the species richness of terrestrial mammals in 12 localities of southeastern Guanajuato using 5 camera traps (Wildview TK30, Stealth Cam, LLC, Grand Prairie, Texas, USA) per locality for a total of 60 cameras. Five cameras were placed at each site with one camera in the center and the others orientated to the 4 cardinal points, each separated by an average distance of 500 m. The activity period of the cameras was 12 d with a total sampling effort of 58 camera trap-nights.

On 19 February 2014, we obtained 3 photographic records of the white-nosed coati (Fig. 1).

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Fig. 1. Photographic record of the white-nosed coati (*Nasua narica*).

Records were obtained in the municipality of Tarimoro within the State Natural Protected Area of Sierra de los Agustinos, approximately 2.5 km from the community of La Concepción at an elevation of 2015 m. Vegetation type at the study site is considered tropical scrub, with dominant tree species being *Acacia farnesiana*, *Acacia pennatula*, *Ipomea murucoides*, *Bursera cuneata*, *Lysiloma microphylla*, and pochoc ( *Ceiba aesculifolia* ) (Rzedowski and Calderón de Rzedowski 1987, Zamudio 2012). Annual precipitation in the area varies between 600 mm and 1200 mm (Zamudio 2012). Other mammalian species recorded at the site included ring-tailed cat (*Bassariscus astutus*), American hog-nosed skunk (*Conepatus leuconotus*), hooded skunk (*Mephitis macroura*), southern spotted skunk (*Spilogale angustifrons*), eastern cottontail (*Sylvilagus floridanus*), and gray fox (*Urocyon cinereoargenteus*). These were the only records of the white-nosed coati obtained while surveying the 12 localities.

Our photographs are the first photographic record for the species in this part of Guanajuato.

We considered that the absence of records in other parts of the region does not mean that the species is not present, but is more the consequence of very few wildlife survey efforts having been conducted in the region. Guanajuato is one of 3 states that have the fewest reported number of mammalian studies in México (Guevara-Chumacero et al. 2001). Such studies are especially lacking from southeastern Guanajuato, as greater conservation efforts have been focused on the northern portion of the state (Sánchez 2014), particularly the designated protected areas of Sierra de Lobos and the Reserva de la Biosfera de la Sierra Gorda. This is in part because of a trend to implement conservation efforts in forested environments (e.g., pine, oak, and oak-pine forests; Iglesias et al. 2008, Elizalde-Arellano et al. 2010, Cecaíra-Ricoy et al. 2012, Charre-Medellín et al. 2012, Iglesias et al. 2012), leaving other vegetation types such as tropical scrublands unstudied. However, these habitats are important refuges for biodiversity and it is important to monitor these habitats, especially

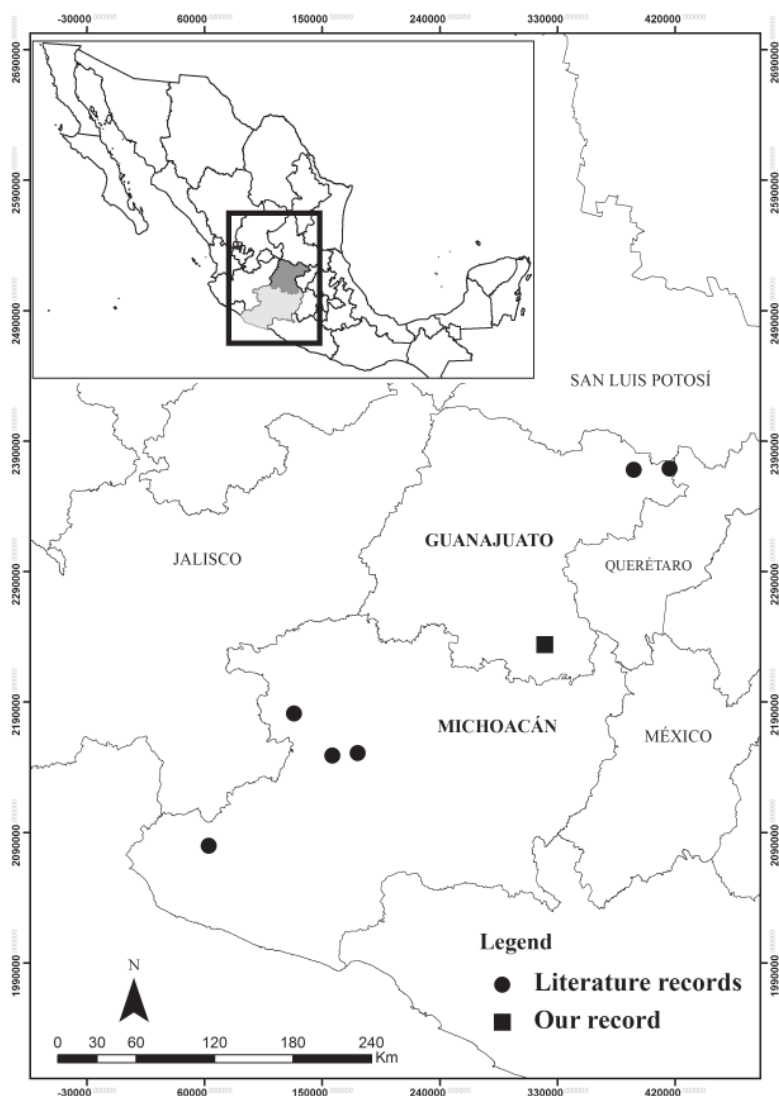


Fig. 2. Geographic location of the white-nosed coati records for Guanajuato and Michoacán, México.

in this region, as they represent relict tropical deciduous fragments which are highly threatened from the high rate of transformation to agricultural, urban, and industrial areas (Carranza-González 2005, Zamudio 2012).

Although the white-nosed coati is considered the most abundant carnivore in the tropical forests of the Americas (Valenzuela 2005), the presence of this species has not been verified for the southern portion of the state of Guanajuato (Ceballos and Arroyo-Cabrales 2012) and our photographic records are the first to confirm it in this area. Nearby known

records of the species are located 165 km south of our record (Goldman 1951, Núñez-Garduño 2005) and 150 km north of our record (Charre-Medellín et al. 2012, Iglesias et al. 2012; Fig. 2). Also, Leopold (1959) includes an occurrence record of white-nosed coati in his book on the wildlife of México, but locality is not provided. Our record extends the current knowledge of the distribution of the species in Guanajuato.

Because of the lack of records in the surrounding areas (Núñez-Garduño 2005), it is impossible to determine whether there is an existing linkage to other populations of the

white-nosed coati in adjacent areas. It is possible that the species has been extirpated in many areas of Guanajuato because the area of tropical deciduous forest, one of the favored habitats of *N. narica*, has been drastically reduced from approximately 45% in the past to <10% at present (Zamudio 2012). It is imperative to continue the monitoring of this species in the region to identify and assess the connectivity of other established populations to ensure the species' long-term conservation.

We thank Fernando Espinosa, Fernanda Cruz, and Socorro Tafoya for their assistance during field work; Robert Jones for the review of this manuscript; the local inhabitants of La Concepción and El Fénix for their permission to work in the Sierra de los Agustinos; and the Consejo Nacional de Ciencia y Tecnología (CONACYT) for providing a graduate scholarship to MEEF.

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Received 10 July 2014  
Accepted 11 February 2015