Research note

New records of tepezcuincle (*Cuniculus paca*) in Puebla, Central Mexico

Nuevos registros de tepezcuincle (*Cuniculus paca*) en Puebla, centro de México

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Abstract. The state of Puebla has little information about mammal presence and distribution. In a study to determine jaguar presence using camera traps and interviews, we obtained 16 new records of tepezcuincle (*Cuniculus paca*) in different vegetation types such as tropical rainforest and cloud forest, as well as in coffee plantations. The records prove that the species is widely spread along the Sierra Norte of Puebla, but the distribution of populations in the Sierra Negra is uncertain.

Key words: *Cuniculus paca*, Puebla, Rio Necaxa drainage basin, Sierra Negra, Sierra Norte, tepezcuincle, lowland paca.

Resumen. El estado de Puebla tiene poca información sobre presencia y distribución de mamíferos. En un estudio para determinar la presencia del jaguar, mediante cámaras y encuestas, logramos obtener 16 nuevos registros de tepezcuincle (*Cuniculus paca*) en diferentes tipos de vegetación como selvas medianas y bosque mesófilo de montaña, además de cafetales. Estos registros prueban que la especie se distribuye ampliamente a lo largo de la sierra Norte de Puebla; sin embargo, se desconoce la distribución de las poblaciones en la sierra Negra.

Palabras clave: *Cuniculus paca*, Puebla, cuenca hidrológica Rio Necaxa, sierra Negra, sierra Norte, tepezcuincle, tuza real.

The tepezcuincle (*Cuniculus paca*) is a nocturnal and solitary rodent (Aquino et al., 2009) found along tropical woodlands (Ramírez-Pulido et al., 2001) at elevations between sea level and 2,329 msnm (Botello et al., 2005). It has a wide range of distribution, from Mexico to northern Argentina (Aquino et al., 2009), and it represents the largest rodent in Mexico. From previous records in several states (López-Wilchis and López-Jardines, 1998; Ramírez-Pulido et al., 2001; Alcantara-Salinas and Rivera Hernández, 2008; Contreras-Díaz et al., 2009; Mejenes-López and Hernández-Bautista, 2009; Tlapaya and Gallina, 2010). In Puebla, previous accounts correspond to 2 localities in the Sierra Norte (Zapotitlán de Méndez and Olintla), which were collected in tropical woodland habitat (Ramírez-Pulido et al., 2001). Here, we present 16 new records of tepezcuincle, which contribute to delimit its distribution in Puebla.

The reports were obtained opportunistically from January 2009 to October 2010, while conducting a field survey for the project “The jaguar in Puebla: presence and human relations” (Fig. 1). The study area is located in the Sierra Norte and Sierra Negra regions of northern Puebla, encompassing an area of 5,709.82 km² that includes 55 municipalities. Our records were obtained mainly through interviews with hunters, ranchers, and tanneries in the area. Field corroboration was done using 23 camera-traps (Wildview Xtreme 4, Bushnell, and Cuddeback), set in forested areas of the Sierra Norte. Following Silver (2004) we placed the cameras 40 to 50 cm off the ground along roads, trails, water holes, and other places with recent animal tracks or evidence of activity. We set the traps for a month before moving them to a new location to cover as much area as possible; depending on the patch size, we placed them within the same or moved them to another patch.

We obtained a total of 16 new records that resulted from camera-traps (4 photographs), signs (a set of tracks, a nest, and bite marks), mounted specimens

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Furthermore, we found mounted specimens in the communities of Jonotla (20°01’58” N, 97°34’14” W) and Tuzampan de Galeana (20°03’52” N, 97°34’28” W) in the municipalities of the same name that are located along the tropical rainforest of Tecolutla River Canyon. The specimen found in Jonotla was hunted 10 years ago, while the other, from Tuzampan was hunted in January 2010. The third individual was hunted 4 years ago in tropical cloud forest in the community of Nanacatlán in the municipality of Zapotitlán de Méndez (20°00’13” N, 97°40’32” W).

Finally, when we conducted our interviews, we asked locals to identify different species from an array of pictures. Through these, we obtained oral reports from local hunters in the Sierra Norte and one from the Sierra Negra who mentioned that there is active taking of tepezcuincle, with varied intensity. In the Sierra Norte, some interviewees mentioned they actively hunt it in the following communities: Mecapalapa in the municipality of Pantepec (20°31’37” N, 97°51’20” W), Villa Lázaro Cárdenas (La Uno) in the municipality of Venustiano Carranza (20°27’41” N, 97°42’01” W), Xicotepec de Juárez in the municipality of Xicotepec (20°16’51” N, 97°57’41” W), Caxhuacan in the municipality of Caxhuacan (20°03’51” N, 97°36’24” W), Cuetzalan del Progreso in the municipality of Cuetzalan (20°01’02” N, 97°31’21” W), and Las Margaritas in the municipality of Hueytamalco (19°59’48” N, 97°18’29” W). Moreover, we attained an oral record of one hunter in the Sierra Negra who admitted taking tepezcuincle in several places near the community of Tlacotepec de Díaz in the municipality of San Sebastián Tlacotepec (18°24’15” N, 96°50’56” W).

These records are important because they expand the distribution of tepezcuincle in Puebla along the mountain ranges of the Sierra Norte and Sierra Negra. However, it is still necessary to determine whether tepezcuincle has a continuous distribution, because there is a 185-km gap between the closest known populations to the north and those in the south. Furthermore, we believe that connectivity with other populations is feasible given the distance between our records and other known populations in neighboring states. For example, from our northernmost record to the next known population in the state of Hidalgo, there is a linear distance of 11 km (Mejenes-López and Hernández-Bautista, 2009); and, from its closest known population in Veracruz (Tlapaya and Gallina, 2010), the linear distance to the Sierra Norte is 70 km, and from the population in the Sierra Negra the distance is 31 km. Ramírez-Pulido et al. (2001) confirmed that tepezcuincle is actively hunted for its flesh in the Sierra Norte. From our surveys we corroborated this fact and determined that meat is sold for as much as US $40 per kilogram in local vegetation types.
markets; moreover, its meat can sometimes be sent to the United States as flesh or even whole carcasses. This situation makes it extremely important to learn more about tepezcuincle, including its distribution and its hunting and human-consumption rates. Our results help to expand the known distribution of the species in Puebla from a couple of localities to most parts of the Sierra Norte. This information will aid in creating management practices that take into account sustainable use of tepezcuincle to prevent major declines of the species in the area.

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Literature cited


