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The Mexican Patch-nosed Snake, *Salvadora mexicana* (Duméril, Bibron & Duméril, 1854; Squamata: Colubridae): a new state record for Zacatecas, Mexico, and a new prey species

Jorge A. Bañuelos-Alamillo[1], Iván T. Ahumada-Carrillo[2], Gustavo E. Quintero-Díaz [3,5], Rubén A. Carbajal-Márquez[4, 5]

[1] Unidad Académica de Ciencias Biológicas, Universidad Autónoma de Zacatecas, Edificio de Biología Campus II Ave. Preparatoria S/N, Col. Agronómica, 98066, Zacatecas, Zacatecas, México.

[2] Centro Universitario de Ciencias Biológicas y Agropecuarias, Carretera a Nogales Km. 15.5. Las Agujas, Nextipac, Zapopan, Jalisco, México.

[3] Universidad Autónoma de Aguascalientes, Centro de Ciencias Básicas, Departamento de Biología. 20131, Aguascalientes, Aguascalientes, México.

[4] El Colegio de la Frontera Sur. Departamento de Sistemática y Ecología Acuática. Unidad Chetumal, Av. Centenario Km 5.5, 77014, Chetumal, Quintana Roo, México.

5 Conservación de la Biodiversidad del Centro de México, A. C. Andador Torre de Marfil No. 100, 20229, Aguascalientes, Aguascalientes, México.

Localities— Mexico, Zacatecas, Municipality of Valparaiso, ca. 2 km (airline) west of San Juan Capistrano, (22.637258° N; 104.118608° W [WGS84]; 1249 m elevation), 18 July 2017. Collected by Jorge A. Bañuelos-Alamillo. The snake was deposited in the Vertebrate Collection at Universidad Autónoma de Aguascalientes (CZUAA-REP-690); a photo voucher is also available at the San Diego Natural History Museum (SDSNH_HerpPC_05366). Adult female (SVL= 900 mm, TL= 380 mm), and had 17 midbody dorsal scales, 188 ventral scales, 106 subcaudals, nine supralabials, 11 infralabials, two loreal scales, one preocular, and three postoculars on both sides (Fig. 1-A). The snake was road-killed near a river within dry forest vegetation and had recently consumed an adult male *Aspidoscelis gularis scalaris* ingested headfirst (Fig. 1-C).

Mexico, Jalisco, Municipality of Mezquitic, 4.5 km southwest of San Miguel Huaixtita (22.050361° N, 104.334153° W [WGS84]; 1460 m elevation), 24 September 2015. Found by Iván, T. Ahumada-Carrillo and Miguel Ángel L. Cuéllar. The specimen was photographed and then released; a photo voucher is available (SDSNH_HerpPC_05365; Fig. 1-B). Adult female found foraging on the ground in dry forest.

Comments— The genus *Salvadora* Baird & Girard, 1853 consists of eight species referred to as patch-nosed snakes because of a conspicuously enlarged rostral shield. These are fast-moving, terrestrial, and diurnal snakes that collectively range from dry areas of the southwestern United States of America to tropical forests in northern Central America (Köhler, 2008; Heimes, 2016; Uetz *et al.*, 2019). They feed primarily on lizards, but their diet also includes snakes, reptile eggs, amphibians, and small mammals (Shaw and Campbell, 1974; Carbajal-Márquez *et al.*, 2014; Santos-Bibiano *et al.*, 2016; Jiménez-Arcos *et al.*, 2018).

Salvadora mexicana (Duméril, Bibron & Duméril, 1854) is endemic to Mexico, occurring from Nayarit along the Pacific coast to the border of Guerrero and Oaxaca. The distribution also includes the Santiago River Basin in Jalisco, Balsas Basin in Michoacán, México, and Morelos, and the Tehuacán Valley in Puebla (Davis and Smith, 1953; Camarillo-Rangel, 1983; Ponce-Campos and García-Aguayo, 2007). The species is listed in Mexico as (Pr) "Sujetas a Protección Especial" by the Norma Oficial Mexicana (NOM-059-SEMARNAT-2010, Diario Oficial de la Federación, 2010) and listed by IUCN as Least Concern (LC) (Ponce-Campos and García-Aguayo, 2007). Its Environmental Vulnerability Score (EVS) has been gauged as 15, placing it in the lower portion of the high vulnerability category (Wilson *et al.*, 2013). It reaches a maximum snout–

Author for correspondence: redman031@hotmail.com

Figure 1. A) An adult female *Salvadora mexicana* from San Juan Capistrano, Municipality of Valparaiso, Zacatecas (SDSNH_HerpPC_05366). Photo by Jorge A. Bañuelos Alamillo. B) An adult specimen of *Salvadora mexicana* from San Miguel Huaixtita, Municipality of Mezquitic, Jalisco (SDSNH_HerpPC_05365). Photo by Miguel Ángel L. Cuéllar. C) An adult male *Aspidocelis gularis scalaris* that was consumed by *Salvadora mexicana* from San Juan Capistrano, Municipality of Valparaiso, Zacatecas. Photo by Jorge A. Bañuelos Alamillo.

vent length (SVL) of 915 mm and a maximum total length of 1500 mm, with males larger than females (Smith, 1938; García and Ceballos, 1994; Ramírez-Bautista, 1994).

This species feeds on a variety of small vertebrates, including lizards (*Aspidoscelis costatus zweifeli, A. deppii infernalis, Ctenosaura pectinata*, *Sceloporus horridus oligoporus*, *S. pyrocephalus*, and *Urosaurus gadovi*), snakes, reptile eggs, rodents, and frogs (*Agalychnis dacnicolor*, *Smilisca baudinii*, and *Trachycephalus typhonius,* [actually *T. vermiculatus*]) (Davis and Smith, 1953; Duellman, 1961; Ramírez-Bautista, 1994; Benítez-Gálvez, 1997). Here, we document a novel prey species and provide new field records that extend the range and add *S. mexicana* to the reptilian fauna of Zacatecas.

These specimens represent new distribution records for the upper Santiago River Basin and extend the range to the state of Zacatecas. The specimen CZUAA-REP-690 extends the known range ca. 44 km (airline) north from the closest known locality at 9.6 km E El Limón, Mezquitic, Jalisco (KU 95964; GBIF, 2018) and ca. 68.7 km (airline) north from our additional record at 4.5 km southwest of San Miguel Huaixtita, Municipality of Mezquitic, Jalisco, which closes the gap with the populations of the Pacific coast (Fig. 2). Also, the *A. g. scalaris*

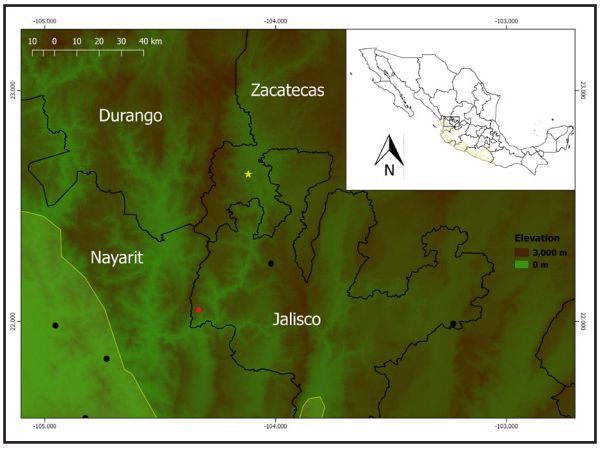

Figure 2. Collecting localities for *Salvadora mexicana* at west-central Mexico. The yellow star represents the new record of *S. mexicana* for Zacatecas; the red spot is our additional record for Jalisco; black spots are previous recorded localities. The black lines represent state boundaries. The yellow area represents the IUCN Red List of Threatened Species distribution of *S. mexicana* (Ponce-Campos and García-Aguayo, 2007).

represents a new species in the diet of *S. mexicana*. With this new record, there are now three species of *Salvadora* known from Zacatecas: *S. bairdi*, *S. grahamiae lineata,* and *S. mexicana* (Morafka, 1977; Uetz *et al*., 2019). Our specimens were found in a habitat that in Jalisco, Zacatecas, and surrounding areas is rapidly being transformed into crop and livestock production, and is also threatened by mining (Sousa and Martínez, 2010). Our discovery of *S. mexicana* suggests that additional species, typical of the Coastal Plain, remain to be documented in the upper Santiago River Basin.

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