



Our purpose is to document and publicize the values and conservation needs of horned lizards, to promote horned lizard conservation projects, and to assist with horned lizard management initiatives throughout their ranges.

The Mexican Plateau Horned Lizard *Phrynosoma orbiculare* in Sonora, Mexico

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Phrynosoma orbiculare (Mexican Plateau Horned Lizard) is widespread from the Mexico City area in south-central Mexico northward to the Sierra Madre Oriental in Coahuila, the Mexican Plateau, and the Sierra Madre Occidental (SMO), which extends in western Mexico from Zacatecas and Jalisco north to Chihuahua and

Sonora. The presence of *P. orbiculare* in Sonora is poorly known. It has been found at three localities in east-central Sonora (ca. 28°19'N lat.). In August 1985, Hale and Julia V. Salmon found *P. orbiculare* in Arroyo Ciénega el Horquetudo (ca. 12 km S of Yécora). They

were part of the dynamic group of herpetologists inspired by Charles H. Lowe at the University of Arizona. In July 1997, Ferguson found another adult near Trigo Colón (13.5 km ESE of km E of Yécora). He was part of a group of botanists led by Paul S. Martin, also at the University of Arizona, working on the flora of the Río Mayo Region. In August 2010, Joseph Scheer photographed an adult on Mesa del Campanero (12 km W of

Yécora). He is an art professor at Alfred University in New York, who was working on a project to document Sonoran moths with very high-resolution scans. These three localities are at 1740 to 2064 m elevation in pine-oak forest in the Sierra Madre Occidental.

In June-August 1935, Barry Campbell from the

University of Michigan collected amphibians and reptiles in the Sierra el Tigre in north-eastern Sonora. He collected *P. orbiculare* at the Mina Santa María in upper Arroyo las Carabinas (23.7 km S of Colonia Morelos, 2036 m elev., 30°36'N lat.). The Sierra el



Fig. 1. *P. orbiculare* from Trigo Colón. Photo by G. M. Ferguson.

Tigre is a large Sky Island mountain range in the Madrean Archipelago just northwest of the Sierra Madre Occidental. This is 248 km north of Mesa del Campanero, and 80 km south of the Arizona border. Eighty years later, wildlife biologist Pedro Rodríguez-Hernández of the Ajos-Bavispe Reserva Forestal Nacional y Refugio de Fauna Silvestre Ajos-Bavispe found a *P. orbiculare* at

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Rancho el Tigre, a few kilometers south of Mina Santa María. He was a guide on a scouting trip for a Madrean Discovery Expedition sponsored by GreaterGood.org and Ajos-Bavispe. The camaleón was active in mid-afternoon in needle litter in pine-oak forest at 2250 m elevation.

F. Robinette was the zoologist on the 1890-1892 Lumholz Expedition to northwestern Mexico sponsored by the American Museum of Natural History. Carl S. Lumholz was a Norwegian explorer and ethnographer. There is specimen collected by Robinette (probably in 1890) from 'northern Sonora' in the Lumholz collection at AMNH that was identified as *P. orbiculare bradti* by horned lizard researcher Richard R. Montanucci. The Lumholz collection crossed northern Sonora from near Cananea southeast to Bacadéhuchi and Nácori Chico into the Sierra Madre

Occidental and Chihuahua. The subspecies *P. o. bradti* is in the northwestern part of the species distribution. Today, *P. hernandesi* is the camaleón of pine-oak forests in the Sierra la Mariquita and de los Ajos near Cananea. Either *P. orbiculare* was more common in the past or Robinette found it farther to the southeast.

With eight species, Sonora has greatest diversity of horned lizards of any state in Mexico or the United States. They are *Phrynosoma cornutum*, *P. ditmarsii*, *P. goodei*, *P. hernandesi*, *P. mcallii*, *P. modestum*, *P. orbiculare*, and *P. solare*. Five species of *Phrynosoma* are listed in the 2010 NOM, the Mexican endangered species law. *Phrynosoma mcallii* and *P. orbiculare* in Sonora have Amenazada (Threatened) status.


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Fig.2. *P. orbiculare* from Mesa del Campanero. Photo by Joseph Scheer.



Figs. 3-6. *P. orbiculare* from Rancho el Tigre. Photos by T.R. Van Devender.