

Noteworthy Amphibian and Reptile Records from Sonora, Mexico

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Abstract—Noteworthy records for the state of Sonora, Mexico, are presented for the spadefoot toad *Spea bombifrons*, the turtle *Trachemys yaquia*, the lizards *Gambelia wislizenii*, *Hemidactylus turcicus*, *Sceloporus cowlesi*, and *S. slevini*, and the snakes *Crotalus tigris*, *Gyalopion canum*, *Heterodon nasicus* subsp. *kennylyi*, and *Indotyphlops braminus*. *Hemidactylus turcicus* and *Indotyphlops braminus* are non-native species. Range extensions, new state, municipality, and elevational records are reported.

Resumen—Se presentan registros notables para el estado de Sonora, México, del sapo de espuelas *Spea bombifrons*, la tortuga semiacuática *Trachemys yaquia*, las lagartijas *Gambelia wislizenii*, *Hemidactylus turcicus*, *Sceloporus cowlesi* y *S. slevini*, y las serpientes *Crotalus tigris*, *Gyalopion canum*, *Heterodon nasicus* subsp. *kennylyi* e *Indotyphlops braminus*. *Hemidactylus turcicus* y *Indotyphlops braminus* son especies introducidas. Se reportan extensiones de distribución y nuevos registros estatales, municipales y de altitud.

Introduction

In recent years, amphibians and reptiles have been observed in Sonora, Mexico, on Madrean Discovery Expeditions (MDE) to Sky Island mountain ranges, MDE wildlife camera studies, MDE student herpetological inventories, and personal field trips. Additional observations are from iNaturalist, the University of Arizona Herpetological Collection, final reports, and regional herpetofauna publications. Here, we present noteworthy and additional selected records of one amphibian and nine reptiles from Sonora, Mexico, with discussion of their significance. All records and images are available in the public MDE database (madreandiscovery.org).

ANURA—FROGS

Scaphiopodidae. *Spea bombifrons* (Cope, 1863) (Great Plains Spadefoot Toad) is found from southwestern Canada throughout the Great Plains in the United States into northern Mexico in Chihuahua, Coahuila, Nuevo León, and Tamaulipas (Lemos-Espinal 2015). Rorabaugh (2008), Lemos-Espinal and H.M. Smith (2009), Enderson et al. (2010a), and Rorabaugh and Lemos-Espinal (2016) predicted its presence in Sonora. Here, we report the first records for the state and the Municipality of Agua Prieta.

Records: Municipality of Agua Prieta: Rancho El Valle, 64.4 km (by air) E of Agua Prieta, 31.328°N 108.844°W, 1571 m elev., 16 July 2013. Single male calling in large stock tank in plains grassland. E.F. Enderson (Fig. 1A); 9.7 km (by air) SW of Agua Prieta. 31.236°N 109.586°W, 1299 m elev., 15 July 2022. Chihuahuan desertscrub. H.D. Pinto-Santana (Fig. 1B).

TESTUDINES—TURTLES

Emydidae. *Trachemys yaquia* Hennig, 2002 (Yaqui Slider) is endemic to Sonora in the drainages of the Ríos Mayo, Sonora, and Yaqui. It was described as *Pseudemys scripta* subsp. *yaquia* on a series of specimens from Conicárit in Presa Mocúzari (= Adolfo Ruiz Cortinez) on the Río Mayo 26 km northwest of Álamos (Legler and Webb 1970). It is most common in the Río Yaqui, the largest river system in Sonora, including the Río Áros tributary with headwaters to the east in the Sierra Madre Occidental in Chihuahua. The northern Río Bavispe tributary drains southeastern Arizona, northeastern Sonora, and northwestern Chihuahua. It flows west from its headwaters in the Sierra Madre Occidental, loops northward around the Sierra El Tigre, and south through Presa Angostura Reservoir. The Río Áros and Bavispe join north of Sahuaripa to become the main Río Yaqui which enters the Gulf of California

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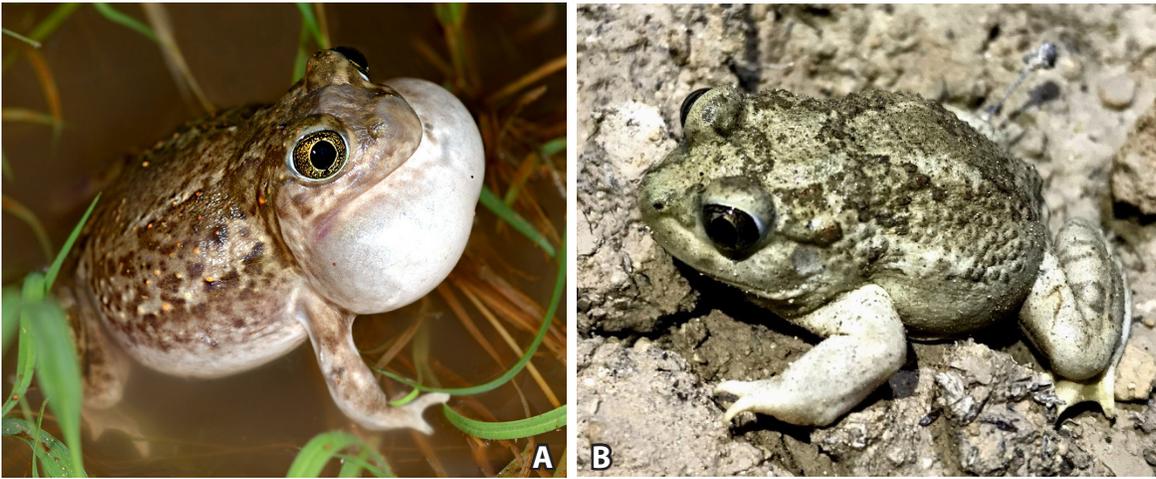


Fig. 1. *Spea bombifrons*. **A.** Rancho El Valle, east of Agua Prieta. Photo by Erik F. Enderson. **B.** South-southwest of Agua Prieta. Photo by H. Daniel Pinto-Santana.

near Ciudad Obregón. Here, we report it in the upper Bavispe near Bacerac and a western side drainage southwest of Colonia Morelos; La Estrella below Presa El Novillo; in the southern Bavispe on Rancho El Hoyo east of Divisaderos; on Rancho El Carricito in Arroyo Bacadéhuachi (an eastern tributary), south-southeast of Granados (Rorabaugh and Van Devender 2020, Van Devender et al. 2024); and on the Río Áros. The record south of Tunapa near the Chihuahua border in the Río Áros drainage was mistakenly reported for Chihuahua in iNaturalist. In the Río Sonora, *T. yaquia* is present from Bacoachi (Turner et al. 2025) south to Hermosillo. Large individuals are common in Presa Abelardo L. Rodríguez in Hermosillo. In the Río San Miguel, a major northwestern tributary of the Río Sonora, it is present in Ciénega de Saracachi near Cucurpe and near San Miguel de Horcasitas. Fossils of *P. scripta* reported in Pleistocene deposits at Rancho La Brisca 6.6 km northeast of the Ciénega de Saracachi were likely *T. yaquia* (Van Devender et al. 1985). Here, we include records from the Municipalities of Agua Prieta, Álamos, Arizpe, Bacerac, Bacoachi, Cucurpe, Granados, Hermosillo, Huásabas, Sahuaripa, San Miguel de Horcasitas, and Soyopa. An adult captured by a *Puma*

concolor during rain at night was photographed on a wildlife camera on Rancho El Hoyo (Rorabaugh and Van Devender 2020, Van Devender et al. 2024).

Records: Municipality of Agua Prieta: 7.5 km (by air) WSW of Colonia Morelos, western tributary of Río Bavispe. 30.805°N 109.299°W, 911 m elev., 1 May 2020. M.F. Enriquez-G. [iNaturalist]. Municipality of Álamos: Presa Mocúzari on Río Mayo [28.2 km (by air) NNE of Álamos], 27.224°N 109.109°W, 85 m elev., 31 September 1966. H.L. Heringhi (Heringhi 1969). Municipality of Arizpe: Arizpe (on Río Sonora), 30.342°N 110.159°W, 820 m elev., 18 August 1958. C.H. Lowe [CHL 9237, UAZ 28107]. Municipality of Bacerac: Río Bavispe at Bacerac, 6.5 mi (rd) N of Huachinera, 30.300°N 108.961°W, 1045 m elev., July 1974. M.D. Robinson, D.R. Frost [UAZ 39965]; Presa Bacerac on Río Bavispe, 2.3 km (by air) SW of Bacerac, 30.348°N 108.952°W, 1027 m elev., 21 November 2024. J.G. Martínez-Valenzuela (Fig. 2A); Río Bavispe at Los Olivares, 3.2 km (by air) SW of Bacerac, 30.339°N 108.958°W, 1023 m elev., 12 May 2024. Monitoreo de Nutria y Castor.

An adult [*Trachemys yaquia*] captured by a *Puma concolor* during rain at night was photographed on a wildlife camera on Rancho El Hoyo ...

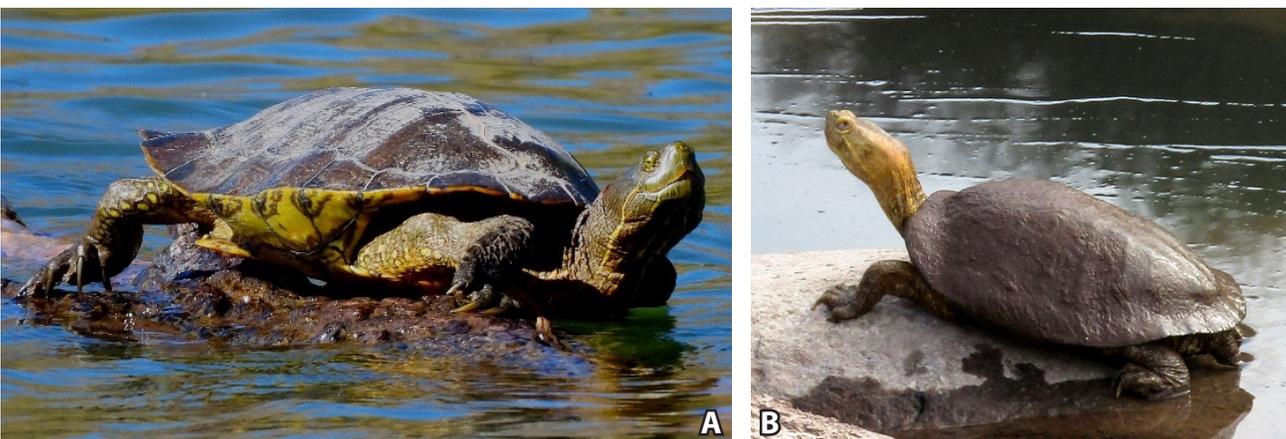


Fig. 2. *Trachemys yaquia*. **A.** Presa Bacerac on Río Bavispe. Photo by J.G. Martínez-Valenzuela. **B.** South-southeast of Tunapa, 46 km (by air) E of Sahuaripa, Río Áros drainage. Possible albino. Photo by J.C. Nieto [iNaturalist].

Municipality of Bacoachi: Bacoachi, Río Sonora, 30.628°N 109.973°W, 1033 m elev., 12 August 2024. Hatchling in stream in cottonwood-willow riparian forest. J.A. Salazar-Martínez (photos in Turner et al. 2025). Municipality of Cucurpe: Ciénega de Saracachi, Rancho Agua Fria, 10.6 km (by air) ENE of Cucurpe, 30.358°N 110.601°W, 945 m elev., 12 March 2022, T. Hare; Municipality of Granados: Rancho El Carricito, 16.5 km (by air) SSE of Granados on Arroyo Bacadéhuachi, 27.717°N 109.227°W, 549 m elev., 14 April 2017, J.M. Galaz-Galaz (wildlife camera photo, Rorabaugh and Van Devender 2020, Van Devender et al. 2024); Rancho El Hoyo 22.5 km (by air) E of Divisaderos on Río Bavispe, 26.642°N 109.240°W, 465 m elev., 17 July 2017, J.M. Galaz-Galaz (wildlife camera photo, Van Devender et al. 2024). Municipality of Hermosillo: Dam on Río Sonora at Hermosillo (now Presa Abelardo L. Rodríguez), 29.071°N 110.911°W, 220 m elev., 1966. R.S. Felger [UAZ 13759]. Municipality of Huásabas: Río Bavispe, 2.1 km (by air) NNW of Huásabas, 29.925°N 109.27°W, 554 m elev., 27 August 2003. T. Burkhardt. Municipality of Sahuaripa: Buena Vista on Río Áros, 4.3 km (by air) NE of Sahuaripa, 29.263°N 108.891°W, 664 m elev., 30 July 2005, S.E. Carrillo-Percástegui, M.D. Bogan, S. Jacobs, E. Wallace (O'Brien et al. 2006); Los Chinos on Río Áros, 40.1 km (by air) ENE of Sahuaripa, 29.175°N 108.831°W, 703 m elev., 12 July 2016. R.A. Villa, S. Jacobs, A.D. Flesch (O'Brien et al. 2006); 7.4 km (by air) SSE of Tunapa, 46 km (by air) E of Sahuaripa, Río Áros drainage, 29.117°N 108.773°W, m elev., February 2021. J.C. Nieto [Fig. 2B; iNaturalist]. Municipality of San Miguel de Horcasitas: 4 mi SW of San Miguel on Río San Miguel, 29.552°N 110.658°W, 424 m elev., June 2010. R.G. Webb [UTEP 3894]. Municipio de Soyopa: La Estrella at Río Yaqui, 28.947°N 109.640°W, 810 m elev., 13 September 2009, P.C. Rosen.

SQUAMATA—LIZARDS

Gekkonidae. *Hemidactylus turcicus* (Linnaeus, 1758) (Mediterranean House Gecko) is native to western India, the Arabian Peninsula, Somalia, and the Mediterranean region, but has spread to eastern Africa, South America, southern and southeastern Eurasia, and many areas in the Americas and the Caribbean (Rorabaugh and Lemos-Espinal 2016). In Sonora, it was reported from Bahía de Kino Nuevo (Peralta-García and Valdez-Villavicencio 2008) and Hermosillo (Lara-Resendiz et al. 2017). Rorabaugh and Lemos-Espinal (2016) also reported it from El Golfo de Santa Clara, Puerto Peñasco, and San Luis Río Colorado. Here, we report the first records from Agua Prieta and Naco, and those Municipalities. Agua Prieta is 359 km northeast of Hermosillo. It has been known from Douglas, Arizona, for a while (Brennan and Holycross 2006), so it is not surprising that it occurs in Agua Prieta.

The animals were found on walls in urban settings.

Selected records: Municipality of Agua Prieta: Agua Prieta, 31.331°N 109.558°W, 1207 m elev., 19 August 2018. M.Y. Pinto-Santana; 31.316°N 109.559°W, 1202 m elev., 30 April 2018. H. Daniel Pinto-Santana; 31.323°N 109.517°W, 1248 m elev., 12 April 2020. H.D. Pinto-Santana; 31.32902°N 109.53772°W, 1228 m elev. 21 September 2022. H.D. Pinto-Santana (ASUHEP 000798, 000708-000710 photo vouchers); 31.327°N 109.553°W, 1210 m elev., 26 September 2021. A. Badilla; 31.308°N 109.515°W, 1251 m elev., 1 October 2023. lopatuco [iNaturalist]; 31.321°N 109.535°W, 1228 m elev., 3 August 2024. guille64890 [iNaturalist]; 31.303°N 109.543°W, 1217 m elev., 11 December 2024. G. Higalid. [iNaturalist]. Municipio de Hermosillo: Colonia Nueva España, Hermosillo, 29.101°N 111.002°W, 210 m elev., 11 July 2021. T.R. Van Devender, A.F. Ballesteros-Reina (Fig. 3A). Municipality of Naco: Naco, 31.323°N

Hemidactylus turcicus (Linnaeus, 1758) (Mediterranean House Gecko) is native to western India, the Arabian Peninsula, Somalia, and the Mediterranean region, but has spread to eastern Africa, South America, southern and southeastern Eurasia, and many areas in the Americas and the Caribbean ...

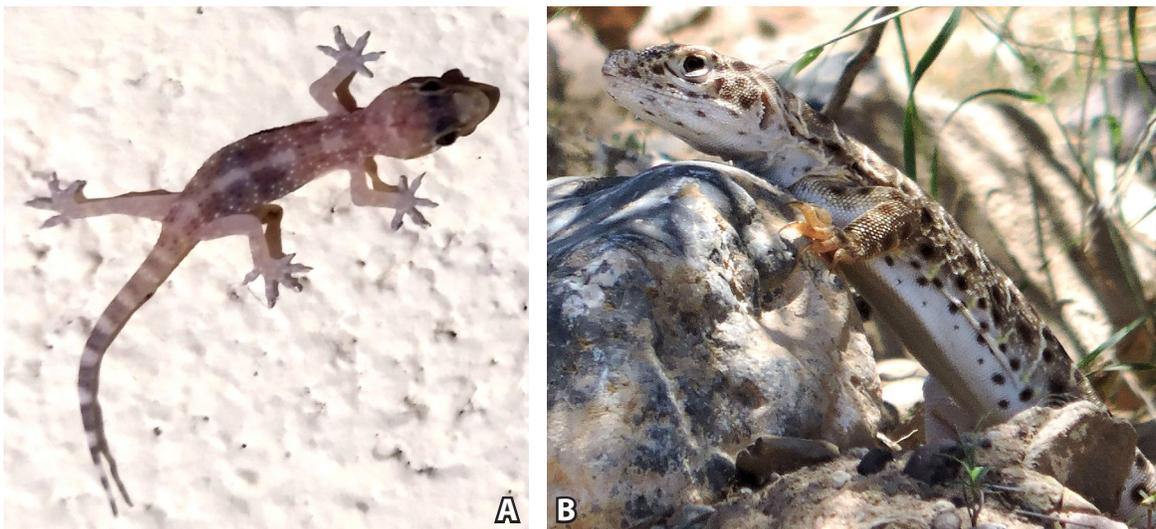


Fig. 3. A. *Hemidactylus turcicus*. Hermosillo. Photo by H. Silva-Kurumiya. **B.** *Gambelia wislizenii*. La Calera, south of Agua Prieta. Photo by H. Daniel Pinto-Santana.

109.939°W), 1421 m elev., 4 December 2022. G. Medina-Quijada, S.D. Dávila-Macías. (ASUHEP 000716 photo voucher). Municipality of Puerto Peñasco: Near Manny's Beach Club, Puerto Peñasco, 31.297°N 113.358°W, 3 m elev., 14 February 2010, J.C. Rorabaugh. Municipality of San Luis Río Colorado: Villas del Sol Hotel, El Golfo de Santa Clara, 31.684°N 114.496°W, 7 m elev., 7 September 2007, E. Soto-M., J.C. Rorabaugh [UAZ 56726-PSV].

Crotaphytidae. *Gambelia wislizenii* Baird and Girard, 1852 (Long-nosed Leopard Lizard)

is widespread in the western United States from Oregon and Idaho south to California, Arizona, Baja California, and Sonora. It is in Chihuahuan desertscrub from southeastern Arizona through New Mexico to western Texas and adjacent Chihuahua and Coahuila (Lemos-Espinal and G.R. Smith 2016, Lemos-Espinal and H.M. Smith 2009). The records south of Agua Prieta and north of Fronteras fill a gap between the known distribution in the Sonoran Desert in western Sonora and the Chihuahuan Desert in southeastern Arizona (Rorabaugh and Lemos-Espinal 2016). They are the first records for the Municipalities of Agua Prieta and Fronteras.

Records in Chihuahuan Desertscrub: Municipality of Agua Prieta: Near La Calera, 10 km (by air) SW of Agua Prieta, 31.280°N 109.646°W, 1270 m elev., 17 July 2022. H.D. Pinto-Santana, M.Y. Pinto-Santana, J.G. Martínez-Valenzuela (ASUHEP 000679, photo voucher; Fig. 3B); Río San Bernardino, Rancho San Bernardino, 24.8 km (by air) E of Agua Prieta, Cuenca Los Ojos Foundation Conservation Area, 31.328°N 109.257°W, 1128 m elev., 1 May 2005. R.L. Minckley (ASUHEP 000678, photo voucher). Municipality of Fronteras: 3.8 mi (rd) N of Fronteras, 30.951°N 109.544°W, 1115 m elev., 7 July 1974. M.D. Robinson, D.R. Frost (UAZ 39018).

Phrynosomatidae. *Sceloporus cowlesi* Lowe and Norris, 1956 (Southwestern Fence Lizard) is found from eastern Arizona east through much of New

Mexico to western Texas and adjacent Chihuahua and Coahuila, Mexico. In Chihuahua and Coahuila, it is considered a Chihuahuan desertscrub species (Lemos-Espinal and G.R. Smith 2016, Lemos-Espinal and H.M. Smith 2009). The Sonoran records here are in the Municipalities of Agua Prieta, Cananea (Rorabaugh et al. 2019b), and Naco. The specimen from Tamosura in Cananea was in the beak of a Greater Roadrunner (*Geococcyx californianus*).

Records: Municipality of Agua Prieta: Ejido Cabullona, 24.9 km (by air) SE of Agua Prieta, 31.157°N 109.524°W, 1107 m elev., 9 July 2022. Chihuahuan desert grassland. J.G. Martínez-Valenzuela, H.D. Pinto-Santana, M. Y. Pinto-Santana (ASUHEP 000660 photo voucher; Fig. 4C); Rancho Llano Blanco, 8.3 km (by air) SSW of Agua Prieta, 31.229°N 109.589°W, 1215 m elev., 14 August 2022. J.G. Martínez-Valenzuela, H.D. Pinto-Santana, M.Y. Pinto-Santana (ASUHEP 000711 photo voucher; Fig. 4B); Río Agua Prieta, Agua Prieta, 31.332°N 109.577°W, 1189 m elev., 24 August 2022. Riparian area in urban area. H.D. Pinto-Santana, M.Y. Pinto-Santana (ASUHEP 000712 photo voucher; Fig. 4A; Van Devender et al. 2017). Municipality of Cananea: Cañón de Evans, 18 km SE, 10 km E by rd of Agua Prieta turnoff from Cananea [ca. 16 km SSE of Cananea on SON 89], 30.943°N 110.378°W, 1435 m elev., 24 April 1950. R.R. Miller (as *Sceloporus undulatus*); Tamosura Shopping Center, NE of Cananea, 30.999°N 110.253°W, 1525 m elev., 12 March 2021. G. Molina-Padilla; Municipality of Naco: 6 mi S of Naco, 31.243°N 109.923°W, 1540 m elev., 7 September 1973. Desert grassland. C.W. Howard [UAZ 365545].

Phrynosomatidae. *Sceloporus slevini* H.M. Smith, 1937 (Slevin's Bunchgrass Lizard) is found in the southwestern United States and adjacent Mexico. In Sonora, it is known from the Yécora area (Enderson et al. 2014) and Mesa Tres Ríos (Rorabaugh et al. 2019a) in the Sierra Madre Occidental and in the Sky Islands Region in the Sierras de los Ajos

Gambelia wislizenii Baird and Girard, 1852 (Long-nosed Leopard Lizard) is widespread in the western United States from Oregon and Idaho south to California, Arizona, Baja California, and Sonora.



Fig. 4. *Sceloporus cowlesi*. A. Agua Prieta. **B.** Rancho Llano Blanco, south-southwest of Agua Prieta. **C.** Ejido Cabullona. Photos by H. Daniel Pinto-Santana.

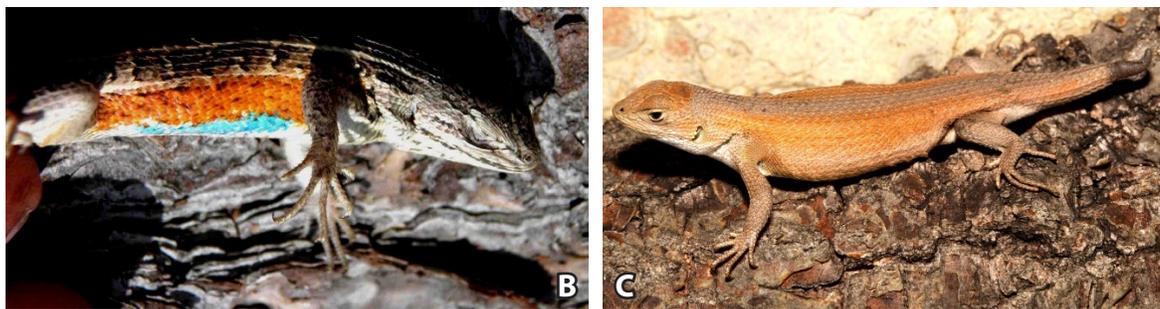
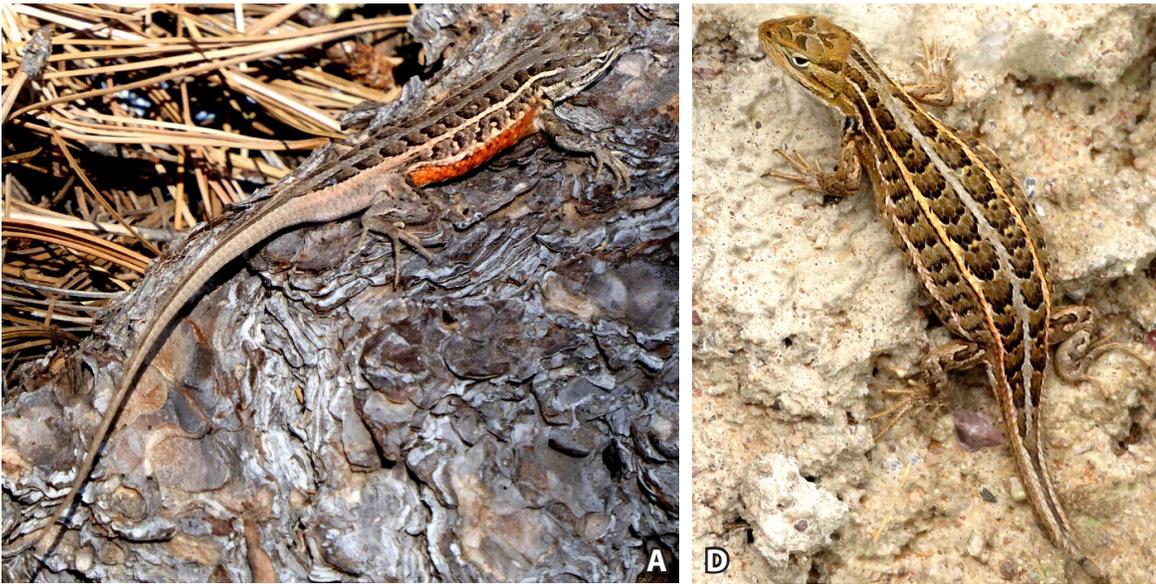


Fig. 5. *Sceloporus slevini*. **A. B.** Male. Sierra Elenita. Photos by A.L. Reina-Guerrero and T.R. Van Devender. **C.** Patternless female. Hoya de Packard, Sierra de los Ajos. Photo by R. W. Van Devender. **D.** Gravid female. Ejido Zapata, east-northeast of Cananea. Photo by G. Molina-Padilla.

and Mariquita. Selected records here are in the Municipalities of Agua Prieta, Bacoachi, Cananea, Fronteras, Nácori Chico, Santa Cruz, and Yécora, including the first records for the Municipality of Agua Prieta and the Sierra Elenita. Patternless color morphs were found in the Sierra de los Ajos, Mesa del Campanero west of Yécora (Enderson et al. 2014), and Arroyo del Macho near Mesa Tres Ríos (Rorabaugh et al. 2019a) in the Sierra Madre Occidental. Most records are from high elevation pine-oak forest. Lowland grassland records were from Rancho Los Fresnos (Rorabaugh et al. 2013), Ejido Zapata near Cananea, and Ranchos San Bernardino and El Valle east of Agua Prieta.

Selected records: Municipality of Agua Prieta: Rancho El Valle, W side of Animas Valley, 31.324°N 108.952°W, 1593 m elev., 18 May 2010. Adult escaped in bunchgrass in plains grassland. T.R. Van Devender; 24.3 km (by air) E of Agua Prieta, Rancho San Bernardino. 31.327°N 109.272°N, 1139 m elev., 11 September 2020. Desert grassland. dcafaggi [iNaturalist]. Municipality of Cananea: Ejido Zapata, 12.0 km (by air) ENE of Cananea, 31.031°N 110.169°W, 1449 m elev., 27 March 2018. Desert grassland. G. Molina-Padilla (Fig. 5D); Sierra

Elenita, 9.7 km (by air) W of Cananea, 30.988°N 110.386°W, 2419 m elev., 3 May 2016. F. I. Ochoa-Gutiérrez (Figs. 5A, B); Sierra Elenita, 9.8 km (by air) W of Cananea, 30.996°N 110.386°W, 2218 m elev., 1 May 2016. Pine-oak forest. J.M. Cirett-Galán; Vicinity of Observatorio Astrofísico Guillermo Haro, Sierra Mariquita, 9.4 km (by air) NNW of Cananea, 31.054°N 110.383°W, 2422 m elev., 19 September 2010. Pine-oak forest. T.R. Van Devender. Municipality of Bacoachi: Hoya de Packard, 30.6 km (by air) ESE of Cananea, Sierra de los Ajos, 30.942°N 109.960°W, 2323 m elev., 24 August 2014. Pine-oak forest. R.W. Van Devender (Fig. 5C). Municipality of Fronteras: El Chilicote, 36 km (by air) WNW of Fronteras, Sierra de los Ajos, 30.934°N 109.935°W, 2149 m elev., 28 June 2017. Pine-oak forest. A.C. Blanco-Gutiérrez. Municipality of Nácori Chico: Arroyo del Macho, 9.7 km (by air) SW of Mesa Tres Ríos, 29.789°N 108.796°W, 2142 m elev., 7 August 2018. Pine-oak forest. A.C. Blanco-Gutiérrez. [ASUHEP 000267 photo voucher]. Municipality of Santa Cruz: Just E of Los Fresnos Ciénega, Rancho Los Fresnos, 38.3 km NNW of Cananea, 31.309°N 110.429°W, 1533 m elev., 23 May 2006. Plains grassland. J.C. Rorabaugh (Rorabaugh et al. 2013; UAZ 57137-PSV).

Patternless color morphs were found in the Sierra de los Ajos, Mesa del Campanero west of Yécora (Enderson et al. 2014), and Arroyo del Macho near Mesa Tres Ríos (Rorabaugh et al. 2019a) in the Sierra Madre Occidental. Most records are from high elevation pine-oak forest.

Colubridae. *Gyalopion canum* Cope, 1860 (Chihuahuan Hook-nosed Snake) is found from southeastern Arizona east to northwestern Texas and south in the Chihuahuan Desert on the Mexican Plateau to San Luis Potosí and Zacatecas (Degenhardt et al. 1996). In Arizona, it is most common in Cochise and Santa Cruz Counties (Babb 2020). The only previous Sonoran records are from Cananea, Rancho El Valle in the Animas Valley, and near Yécora in the Sierra Madre Occidental. The new Sierra La Púrica record is 71 km southeast of Cananea, 129 km southwest of Rancho El Valle, and 252 km north-northwest of the Yécora localities. Rorabaugh and Lemos-Espinal (2016) postulated that future inventory would document its continuous range between El Valle and Yécora because it has been found in oak woodland in the Santa Rita Mountains in Arizona, and now the Sierra La Púrica. Considering that its preferred Chihuahuan desertscrub-desert grassland habitat throughout most of its distribution is not typical of the Sky Islands in that area (Van Devender and Reina-Guerrero 2016) and that it has not been reported in subsequent herpetofaunas, it is more likely that the two areas are the separate western limits of the Texas-Arizona and the central Chihuahua populations (Lemos-Espinal and H.M. Smith 2009).

Records: Municipality of Agua Prieta: 21.5 mi (by rd) E of Rancho San Bernardino on MEX 2 [Rancho El Valle, 56 km E of Agua Prieta], 31.324°N 108.937°W, 1600 m elev., 14 August 2007. Plains grassland. E.F. Enderson, R.L. Bezy, K. Bonine. [UAZ 57669-PSV, photo voucher; Fig. 6A]. Municipality of Cananea: Cananea, 30.9895°N 110.256°W, 1534 m elev., 1 December 1957. A.J. Ruff [UAZ 20736]. Municipality of Fronteras: Rancho Los Alisos, 21.4 km (by air) N of Nacozeni de García, Sierra La Púrica, 30.565°N 109.715°W, 1448 m elev., 2 November 2025. Desert grassland-oak woodland transition. G. Molina-Padilla, J.A. Salazar-Martínez. [UAZ 57668, photo voucher; Fig 6B]. Municipality of Yécora: 11.9 (by MEX 16) W of Yécora, 28.363°N 109.133°W, 1821 m elev., 6 August 2006. E.F. Enderson, K. Bonine, R.L. Bezy [Enderson et al. 2006; UAZ 56041-PSV; Fig. 6C].

Colubridae. *Heterodon nasicus* Baird and Girard, 1852 subsp. *kennerlyi* Kennicott, 1860 (Mexican Hognose Snake) is found from southeastern Arizona to western Texas and south throughout the Mexican Plateau as far south as Aguascalientes and San Luis Potosí. Cochran (1961) reported that a syntype for *H. n. kennerlyi* in the U. S. National Museum (USNM 1282) was collected by Darius Nash Couch (1822-1897) from ‘Sonora.’ Couch was a career soldier who rose to the rank of Major General in the Union Army in the Civil War. He took a one-year leave of absence from the army in 1853 to conduct a zoological expedition for the Smithsonian Institution, where he collected the types of *Scaphiopus couchii* (Couch’s Spadefoot Toad) and *Tyrannus couchii* (Couch’s Kingbird) in northeastern Mexico. The Expedition’s route was from Brownsville, Texas, west to the Río Nazas in Durango (Conant 1968). He did not reach Sonora. He probably collected the syntype of *H. n. kennerlyi* in the town of Sonora, Texas (30.565°N 100.644°W, 648 m elev.), in route to Brownsville. Smith et al. (2003) elevated the subspecies to full species based on the agygous and loreal scales, although the latter was clinal and not diagnostic. Considering that the two taxa are only differentiated by a single character, their distributions are continuous (Fig. 1 in Smith et al. 2003), and Degenhardt et al. (1996) reported intergradation between *H. n. kennerlyi* and *H. n. nasicus* in southeastern New Mexico, they are best considered subspecies. Lemos-Espinal (2007) and Rorabaugh and Lemos-Espinal (2016) did not include this species in Sonora. The Sonoran records in Enderson et al. (2009, 2010b), Lemos-Espinal et al. (2019), Rorabaugh (2008), and probably Smith et al. (2003) appear to be based on Couch’s syntype from Texas. In Sonora, it is found only just south of the Arizona border. Rorabaugh et al. (2013) reported it in plains grassland at Rancho Los Fresnos near the Arizona border. Here, we report records for the Municipalities of Agua Prieta, Cananea, Fronteras, and Santa Cruz, Sonora.

Records: Municipality of Agua Prieta: Rancho Nuevo, 55.5 km (by air) E of Agua Prieta, Cajón Bonito, 31.260°N 108.951°W, 1361 m elev., 25 July 2023. Desert grassland near riparian deciduous forest. A. Verver. [iNaturalist; Fig. 7A]; Municipality of

Gyalopion canum Cope, 1860 (Chihuahuan Hook-nosed Snake) is found from southeastern Arizona east to northwestern Texas and south in the Chihuahuan Desert on the Mexican Plateau to San Luis Potosí and Zacatecas (Degenhardt et al. 1996).



Fig. 6. *Gyalopion canum*. **A.** East of Rancho San Bernardino and Agua Prieta. Photo by E.F. Enderson. **B.** Rancho los Alisos, Sierra la Púrica. Photo by G. Molina-Padilla. **C.** West of Yécora. Photo by Erik F. Enderson (Enderson et al. 2006).

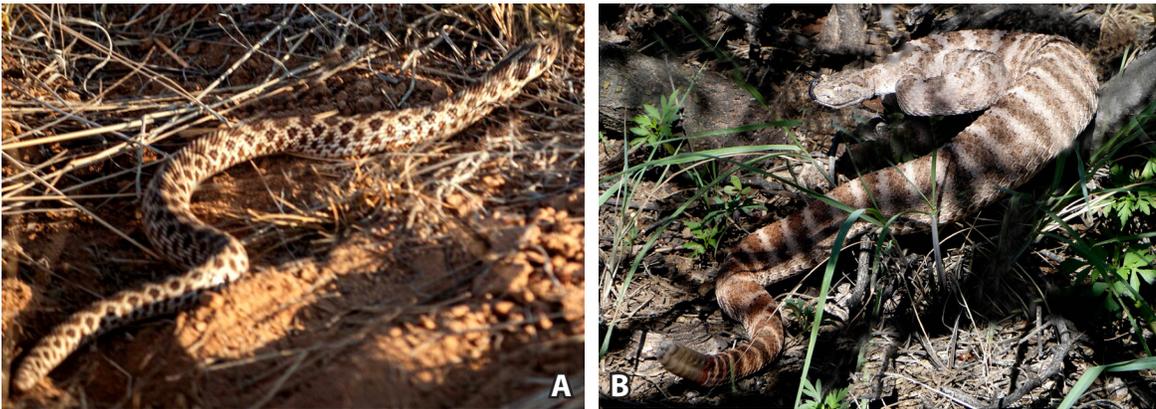


Fig. 7. A. *Heterodon nasicus* subsp. *kennerlyi*. Rancho Nuevo. East of Agua Prieta. Photo by A. Verver. **B.** *Crotalus tigris*. West-northwest of La Galerita. Photo by Ana L. Reina-Guerrero.

Cananea: Cananea and vic., 30.993°N 110.288°W, 1588 m elev., 1 August 1946, A. Taleporos, P. Taleporos, V. Walters, E.A. Williams [AMNH 67260-67261]; Ejido Zapata, 12.0 km (by air) ENE of Cananea, 31.031°N 110.169°W, 1449 m elev., 30 July 2017. Desert grassland. G. Molina-Padilla; Rancho los Álamos, ca. 6 mi E of Cananea, 30.967°N 110.205°W, 1419 m elev., 26 September 1954. Desert grassland. A. Ruff [UAZ 24946]. Municipality of Fronteras: Ca. 1.5 mi N of Esqueda, 30.746°N 109.585°W, 1193 m elev., 29 May 1967. Riparian desert grassland. J.W. Wright [LACM 1088840]. Municipality of Santa Cruz: Rancho Los Fresnos, 15.5 km (by air) NE of Santa Cruz, 31.318°N 110.467°W, 1543 m elev., April 2015. Plains grassland. Universidad de Sonora student (Rorabaugh et al. 2013).

Typhlopidae. *Indotyphlops braminus* (Daudin, 1803) (Braminy Blind Snake) is likely native to southern India but is widely introduced around the world in soil in pots of cultivated plants, including 24 Mexican states and Guatemala (Rorabaugh and Lemos-Espinal 2016, Servoss and Boundy 2020, Wallach 2020). It has been reported from states adjacent to Sonora, including Arizona, California, Baja California, Baja California Sur, and Sinaloa. In Sonora, it is known from Hermosillo (Quijada-Mascareñas and Enderson 2007) and Agua Prieta in those Municipalities. In Arizona, it is known from the Phoenix area, Casa Grande, and possibly Tucson (Servoss and Boundy 2020).

Selected records: Municipality of Agua Prieta, Agua Prieta, 31.314°N 109.565°W, 1190 m elev., 18 July

Indotyphlops braminus (Daudin, 1803) (Braminy Blind Snake) is likely native to southern India but is widely introduced around the world in soil in pots of cultivated plants, including 24 Mexican states and Guatemala (Rorabaugh and Lemos-Espinal 2016, Servoss and Boundy 2020, Wallach 2020).

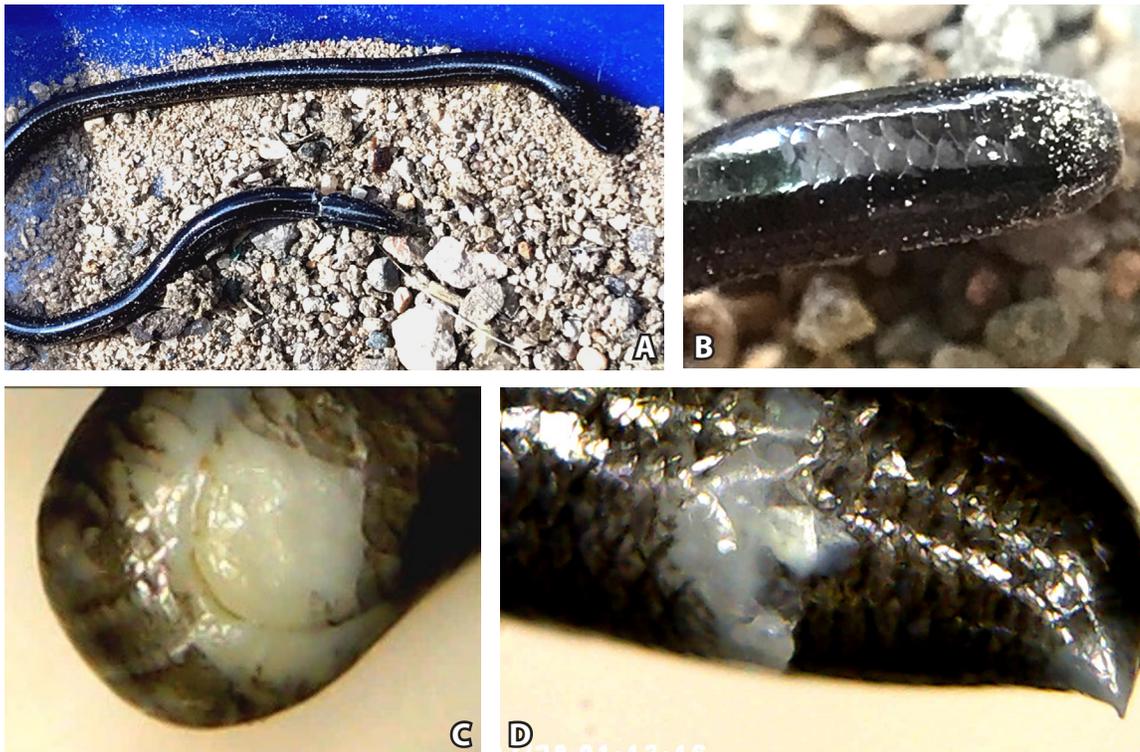


Fig. 8. *Indotyphlops braminus*. A. B. C. D. Agua Prieta. Photos by H. Daniel Pinto-Santana.

2022. Urban. H.D. Pinto-Santana (UABC 2619; Figs. 8A, B, C, D). Municipality of Hermosillo: Restaurant Viva Sonora, 11.2 km NE of Hermosillo on Carretera Hermosillo-Ures, 29.177°N 110.875°W, 478 m elev., 31 July 2017. Urban. J.H. Valdez-Villavicencio and A. Peralta-García (CH-UABC 2452).

Viperidae. *Crotalus tigris* Kennicott, 1859 (Tiger Rattlesnake). A 1962 m elevation locality in oak woodland in the Sierra San Luis extends the elevation range for the species above the 1555 record in the Santa Rita Mountains in southern Arizona (Goode and Parker 2020). The records from the Sierra San Luis (108.828°W), Bavispe (108.946°W), and Rancho El Valle (108.956°W) are the easternmost records for the species. Records here are from the Municipalities of Agua Prieta, Bavispe, and Cananea.

Selected records: Municipality of Agua Prieta: Rancho El Valle, 53.8 km (by air) E of Agua Prieta, 31.307°N 108.956°W, 1603 m elev., 1 July 2019. Oak woodland along an arroyo in plains grassland. B. Dietrich. [iNaturalist]; Sierra San Luis, 67.8 km (by air) E of Agua Prieta, 31.245°N 108.828°W, 1962 m elev., 1 July 2024. Oak woodland. J. Chacón. [iNaturalist]. Municipality of Bavispe: Bavispe, 30.4675°N 108.946°W, 720 m elev., 26 July 2008. Desert grassland. T.R. Van Devender, A.L. Reina-Guerrero; Cañada El Salto, 7.2 km (by air) WSW of Bavispe, 30.459°N 109.010°W, 1155 m elev., 16 September 2024. Sycamore riparian vegetation in rocky stream canyon in desert grassland. R. Martinez, L. Ramsey, D.S. Turner (Turner et al. 2025); 8.4 km WNW of La Galerita, 30.446°N 109.016°W, 1386 m elev., 30 July 2024. Overgrazed desert grassland. G. Molina-Padilla, T.R. Van Devender, A.L. Reina-Guerrero (Fig. 7B). Municipality of Cananea: Cuitaca, 31.075°N 110.495°W, 1254 m elev., 29 September 2018. E. Burrola.

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Literature Cited

Babb, R.D. 2020. *Gyalopion canum*. Chihuahuan Hook-nosed Snake. Pp. 149-154 in: A.T. Holycross and J.C. Mitchell (eds.). Snakes of Arizona. ECO Publishing, Rodeo, NM.

Brennan, T.C., and A.T. Holycross. 2006. Amphibians and Reptiles of Arizona. Arizona Game and Fish Department, Phoenix.

Cochran, D.M. 1961. Type specimens of reptiles and

amphibians in the U. S. National Museum. Bulletin of the U. S. Natural History Museum (22), 291 pp.

Conant, R. 1968. Zoological expedition in Mexico – the route of Lieut. Couch in 1853. American Museum Novitates No. 1350, 14 pp.

Degenhardt, W.G., C.W. Painter, and A.H. Price. 1996. Amphibians and Reptiles of New Mexico. University of New Mexico Press, Albuquerque.

Enderson, E.F., K. Bonine, and R.L. Bezy. 2006. Geographic Distribution. *Gyalopion canum*. Herpetological Review 37:362.

Enderson, E.F., A. Quijada-Mascareñas, D.S. Turner, P.C. Rosen, and R.L. Bezy. 2009. The herpetofauna of Sonora, Mexico, with comparisons to adjoining states. Check List 5:632-672.

Enderson, E.F., A. Quijada-Mascareñas, D.S. Turner, R.L. Bezy, y P.C. Rosen. 2010a. Una sinopsis de la herpetofauna con comentarios sobre las prioridades en investigación y conservación. Pp. 357-383 in: F. Molina-F. and T.R. Van Devender (eds.). Diversidad Biológica de Sonora, Universidad Nacional Autónoma de México, Hermosillo.

Enderson, E.F., A. Quijada-Mascareñas, D.S. Turner, R.L. Bezy y P.C. Rosen. 2010b. Una sinopsis de la herpetofauna con comentarios sobre las prioridades en investigación y conservación. Apéndice II in: F. Molina-F. and T.R. Van Devender (eds.). Diversidad Biológica de Sonora, Universidad Nacional Autónoma de México, Hermosillo.

Enderson, E.F., T.R. Van Devender, and R.L. Bezy. 2014. Amphibians and reptiles of Yécora, Sonora and the Madrean Tropical Zone of the Sierra Madre Occidental in northwestern Mexico. Check List 10:913-926.

Goode, M., and M.R. Parker 2020. *Crotalus tigris*. Tiger Rattlesnake. Pp. 612-625 in: A.T. Holycross and J.C. Mitchell (eds.). Snakes of Arizona. ECO Publishing, Rodeo, NM.

Heringhi, H.L. 1969. An ecological survey of the herpetofauna of Alamos, Sonora, Mexico. Master's thesis, Arizona State University, Tempe.

Lara-Resendiz, R.A., B.C. Larrain-Barrios, and J.H. Valdez-Villavicencio. 2017. *Hemidactylus turcicus* (Linnaeus, 1758), Mexico, Sonora. Mesoamerican Herpetology 4:198-199.

Legler, J.M., and R.G. Webb. 1970. A new slider (*Pseudemys scripta*) from Sonora, Mexico. Herpetologica 26:159-168.

Lemos-Espinal, J.A. 2007. Anfíbios y reptiles del estado de Sonora. Universidad Nacional Autónoma de México. Informe final SNIB-CONABIO proyecto No. CE001, México, D.F.

Lemos-Espinal, J.A. 2015. Amphibians and Reptiles of the US Mexico Border States. Texas A and M University Press, College Station, TX.

Lemos-Espinal, J.A., and G.R. Smith. 2016. Amphibians and reptiles of the state of Coahuila, Mexico, with comparison with adjoining states.

Crotalus tigris Kennicott, 1859 (Tiger Rattlesnake). A 1962 m elevation locality in oak woodland in the Sierra San Luis extends the elevation range for the species above the 1555 record in the Santa Rita Mountains in southern Arizona (Goode and Parker 2020).

- ZooKeys 593:117-137.
- Lemos-Espinal, J.A., G.R. Smith, J.C. Rorabaugh. 2019. A conservation checklist of the amphibians and reptiles of Sonora, Mexico, with updated species lists. *ZooKeys* 829:131-160.
- Lemos-Espinal, J.A., and H.M. Smith. 2009. *Anfibios y Reptiles de Chihuahua, México*. Universidad Autónoma de México, Tlalnepantla.
- O'Brien, C., A.D. Flesch, E. Wallace, M.D. Bogan, S.E. Carrillo-Percástegui, S. Jacobs, and C. van Riper III. 2006. Biological inventory of the Río Áros, Sonora, Mexico: A river unknown. Final Report to T and E, Inc.
- Peralta-García, A., and J.H. Valdez-Villavicencio. 2008. Geographic Distribution: *Hemidactylus turcicus* (Mediterranean Gecko). *Herpetological Review* 39:367.
- Quijada-Mascareñas, A., and E.F. Enderson. 2007. Geographic Distribution, *Ramphotyphlops braminus* (Braminy Blind Snake). *Herpetological Review* 38:490.
- Rorabaugh, J.C. 2008. An introduction to the herpetofauna of mainland Sonora, with comments on conservation and management. *Journal of the Arizona-Nevada Academy of Science* 40:2-65.
- Rorabaugh, J.C., and J.A. Lemos-Espinal. 2016. A Field Guide to the Amphibians and Reptiles of Sonora, Mexico. ECO Publishing and Distribution, Rodeo, NM.
- Rorabaugh, J.C., and T.R. Van Devender. 2020. Amphibians and reptiles in wildlife cameras. *Sonoran Herpetologist* 33:40-48.
- Rorabaugh, J.C., J.M. Servoss, V.L. Boyarski, E. Fernandez, D. Duncan, C. Robles-Eliás, and K.E. Bonine. 2013. A comparison of the herpetofaunas of Ranchos Los Fresnos and El Aribabi in northern Sonora. Pp. 103-109 in: G.J. Gottfried, P.F. Ffolliott, B.S. Gebow, L.G. Eskew, and L.C. Collins (compilers), *Merging Science and Management in a Rapidly Changing World: Biodiversity and Management of the Madrean Archipelago III and 7th Conference on Research and Resource Management in the Southwestern Deserts*; 2012 May 1-5; Tucson, AZ, Proceedings RMRS-P-67, Fort Collins, CO: U. S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- Rorabaugh, J.C., D.S. García Turner, T.R. Van Devender, V.H. Cabrera, R.J. Maynard, R.W. Van Devender, R.A. Villa, P. Hamilton, S.F. Hale, C. Aguilar-Morales, A.C. Blanco-Gutiérrez, E. Wallace, and C. Hedgcock. 2019a. Herpetofauna of the Mesa Tres Ríos area in the northern Sierra Madre Occidental of Sonora, Mexico. *Herpetological Review* 50:251-259.
- Rorabaugh, J.C., T.R. Van Devender, and G. Molina-Padilla. 2019b. *Sceloporus cowlesi* (Southwestern Fence Lizard). Geographic Distribution: Squamata – Lizards. *Herpetological Review* 50:329.
- Servoss, J.M., and J. Boundy. 2020. *Indotyphlops braminus*. Brahminy Blindsnake. Pp. 672-677 in: A.T. Holycross and J.C. Mitchell (eds.). *Snakes of Arizona*. ECO Publishing, Rodeo, NM.
- Smith, H.M., D. Chiszar, C.M. Eckerman, and H.D. Wallace. 2003. The taxonomic status of the Mexican hognosed snake *Heterodon kennerlyi* Kennicott (1860). *Journal of the Kansas Herpetological Society* 5:17-20.
- Turner, D.S., J.C. Rorabaugh, T.R. Van Devender, and S.F. Hale. 2025. Amphibians and reptiles of the Sierra El Tigre Region, Sonora, Mexico. *Sonoran Herpetologist* 38:81-95.
- Van Devender, T.R., and A.L. Reina-Guerrero. 2016. The tropical Madrean flora of Yécora, Sonora, Mexico. *Phytoneuron* 7:1-23.
- Van Devender, T.R., A.M. Rea, and M.L. Smith. 1985. The Sangamon interglacial vertebrate fauna from Rancho La Brisca, Sonora, Mexico. *Transactions of the San Diego Natural History Museum* 21:23-56.
- Van Devender, T.R., A.L. Reina-Guerrero, and J.M. Galaz-Galaz. 2024. Wildlife camera records in the lower Río Bavispe Valley and the core mammal fauna of eastern Sonora, Mexico. *Journal of the Arizona-Nevada Academy of Science* 50:44-54.
- Wallach, V. 2020. First appearance of the Brahminy Blindsnake, *Virgotyphlops braminus* (Daudin 1803) (Squamata: Typhlopidae), in North America, with reference to the states of Mexico and the USA. *Reptiles and Amphibians* 27:326-330.

