RESEARCH ARTICLE

Amphibians and Reptiles of Rancho Las Playitas area, Sonora, Mexico

Dale S. Turner, 2802 E. Presidio Road, Tucson, AZ; *dale.turner2021@gmail.com*

Thomas R. Van Devender, Greater Good Charities, 6262 N. Swan Road, Suite 165, Tucson, AZ; *yecora4@comcast.net*

Stephen F. Hale, EcoPlan Associates, Inc., 139 W. Suffolk Drive, Tucson, AZ; *SFHale1950@gmail.com*

Ryan Zach, Zoo Miami, 12400 SW 152nd Street, Miami, FL; *razzoomnp@yahoo.com*

Ryan Martínez, Zoo Miami, 12400 SW 152nd Street, Miami, FL; *reptileryan@hotmail.com*

R. Wayne Van Devender, Appalachian State University, Boone, NC; *vandevenderr@appstate.edu*

José Abel Salazar-Martínez, Calle 5 de Mayo s/n, Bacoachi, Sonora, México; *joseabelsm2000@gmail.com*

Guillermo Molina-Padilla, Av. Juárez No. 14, Cananea, Sonora, México; *guimopa@hotmail.com*

Wade C. Sherbrooke, Southwestern Research Station, American Museum of Natural History, P.O. Box 16553, Portal, AZ; *wcs@amnh.org*

Cecilia Aguilar-Morales, Av. Ángel García Abuto 102, Hermosillo, Sonora, México; *littleprime11@gmail.com*

Jorge H. Valdez-Villavicencio, Conservación de Fauna del Noroeste, A.C., Ensenada, Baja California, México; *j_h_valdez@yahoo.com.mx*

Anny Peralta-García, Conservación de Fauna del Noroeste, A.C., Ensenada, Baja California, México; *anny.peralta@faunadelnoroeste.org*

Stephen L. Minter, Greater Good Charities, 6262 N. Swan Road, Suite 165, Tucson, AZ; *slminter@greatergood.org*

Hugo Silva-Kurumiya, Universidad de la Sierra, Carretera Moctezuma-Cumpas km 2.5, Moctezuma, Sonora, México; *hsilva@unisierra.edu.mx*

Robert A. Villa, Tucson Herpetological Society, P.O. Box 709, Tucson, AZ; *cascabel1985@gmail.com*

Gertrudis Yanes-Arvayo, Universidad de la Sierra, Carretera Moctezuma-Cumpas km 2.5, Moctezuma, Sonora, México; *gyanes@unisierra.edu.mx*

María de la Paz Montañez-Armenta, Universidad de la Sierra, Carretera Moctezuma-Cumpas km 2.5, Moctezuma, Sonora, México; *mariafriede@hotmail.com*

Casey Paholski, 1710 Brannocks Neck Road, Cambridge, MD; *caseypaholski@greatergood.org*

Introduction

For much of Sonora, Mexico, our scientific knowledge of reptile and amphibian communities is limited. Despite public interest in the state's remarkable diversity, records and inventories have been scarce. To address this issue in the Sky Island region, a multiyear project, now known as the Madrean Discovery Expedition (MDE) program at Greater Good Charities, has been focused on the biodiversity of Sonoran Sky Islands. Each year large groups of biologists visit two additional mountain ranges to document the animals and plants.

One outcome was the collaboration with Rancho Las Playitas, an outstanding site just 80.5 kilometers (50 miles) south of the U.S./Mexico border. While the owners of the cattle ranch had known its beauty and diversity, the area had been overlooked by scientists and is generally inaccessible to the public. When the Salazar family invited MDE biologists to visit in 2019, we began an exciting collaboration to better understand the landscape.

Study Area

The northern limits of the New World tropics are in Sonora with tropical deciduous forest (TDF) as far north as the Sierra San Javier (26°N) and foothills thornscrub (FTS) as far north as the Arizpe-Sinoquipe area (30.4°N; Van Devender and Reina-Guerrero 2021). Decreasing winter temperatures control the transition from FTS to desert grassland at the same elevations and rainfall regimes about 70-120 km south of the Arizona border – the transition into the southern edge of the Northern Temperate zone.

Rancho Las Playitas (30.598°N, 110.094°W) is near Bacoachi north of Arizpe (30.4°N) and south of Cananea (31.0°N) between the Ríos Sonora and Bacanuchi (Fig. 2). It has been in the Salazar family for four generations. The ranch includes 3,230 hectares, with portions in both Arizpe and Bacoachi municipalities. It ranges in elevation from 1,060 to 1,590 m and is adjacent to the dramatic 1,650-m Cerro El Picacho (Fig. 1).

The vegetation of Rancho Las Playitas is a FTS-desert grassland transition. On rocky slopes a shrubby overstory is dominated by shrubs such as feather tree/*tepeguaje* (*Lysiloma watsonii*), velvet mesquite (*Prosopis velutina*), velvetpod mimosa/*gatuño* (*Mimosa dysocarpa*), and ocotillo (*Fouquieria splendens*), as well as desert hackberry/*garambullo* (*Celtis pallida*), kidneywood/*palo dulce* (*Eysenhardtia orthocarpa*), narrowleaf

Fig. 1. The Picacho de Bacoachi towers over Rancho Las Playitas. Photo by Ana L. Reina-G.

desert olive (*Forestiera angustifolia*), and Goodding's ash/*fresnillo* (*Fraxinus gooddingii;* Van Devender et al. in press). In areas with gentler slopes below, perennial grasses are dominant, including sprucetop, sideoats, and hairy gramas (*Bouteloua chondrosioides, B. curtipendula,* and *B. repens*) and cane beardgrass (*Bothriochloa barbinodis*). Rocky canyons with permanent water and riparian plants are scattered around the ranch, including Arroyo Padercitas, a deep narrow canyon with a perennial stream reach shaded by Sonoran cottonwood trees/*huérigos* (*Populus monticola*).

Methods

The MDE program was first associated with Rancho Las Playitas when Molina-Padilla and Salazar-Martínez installed and maintained a network of wildlife cameras to document the mammal fauna, including ocelot (*Leopardus pardalis*) and American black bear (*Ursus americanus*). Salazar-Martínez's natural history observations were supported by a MDE Scholarship. In July 2019, a MDE Mini-Expedition went to Las Playitas. In September-October 2021, MDE Rancho Las Playitas Expedition I was focused on studying the Rock Horned Lizard (*Phrynosoma ditmarsi*; Fig. 3), a species endemic to Sonora. The summer monsoon rains in 2021were exceptionally strong from July to early September, followed by warm dry days – the ideal sequence for maximum reptile activity. The Rock Horned Lizard project was continued on MDE Rancho Las Playitas Expedition II in April 2022.

Inventory methods included general walking surveys, nighttime road hunting on the network of dirt roads, and a limited set of funnel and pitfall trap days. These efforts were supplemented with additional visits by Van Devender and others, along with incidental observations by Salazar-Martinez and Molina-Padilla. All these records were documented by georeferenced photographs, which along with MDE Wildlife camera records, were uploaded to the Madrean Discovery Expeditions database (*madreandiscovery.org*).

Results

The herpetofaunal diversity documented so far includes 5 amphibian species, all anurans (Fig. 4), and 33 reptile species with 1 turtle, 13 lizards, and 19 snakes (Table 1).

The herpetofaunal diversity documented so far includes 5 amphibian species, all anurans (Fig. 4), and 33 reptile species with 1 turtle, 13 lizards, and 19 snakes (Table 1).

Notable Discoveries

Boa sigma. Rancho Las Playitas is at the northern known limits of this species' range, sitting on a line between the two previously known northernmost localities at Palm Canyon southeast of Magdalena to the west and near Esqueda to the east (Van Devender et al. 2020). It was found in a desert grassland canyon near a permanent bedrock tank (*tinaja*) in keeping with the Sonoran indigenous belief that it is the *guardiana del agua* (guardian of the water). If the *corúa* is killed, the spring will dry up.

Coleonyx fasciatus. This tropical gecko (*salamanquesa*) is at or near the northwesternmost locality at Rancho Las Playitas (Fig. 5A), being southwest of a previous record near Esqueda and north of a previous record at Arizpe. Grismer (1988, cited *in* Shedd and Murray 2020) mentioned two specimens from 32 km southeast of Cananea, but did not provide coordinates. These specimens do not appear to be otherwise published or included in any museum collection or online database.

Phrynosoma ditmarsi. Rancho Las Playitas is near the northernmost populations and fills in gaps in the known distribution of this rare Sonoran endemic lizard (Turner et al. 2017, Molina-Padilla et al. 2019; Fig. 3). It was rediscoverd after 71 years in the Sierra Manzanal (now the Sierra Alacrán) southeast of Cananea (Lowe et al. 1971).

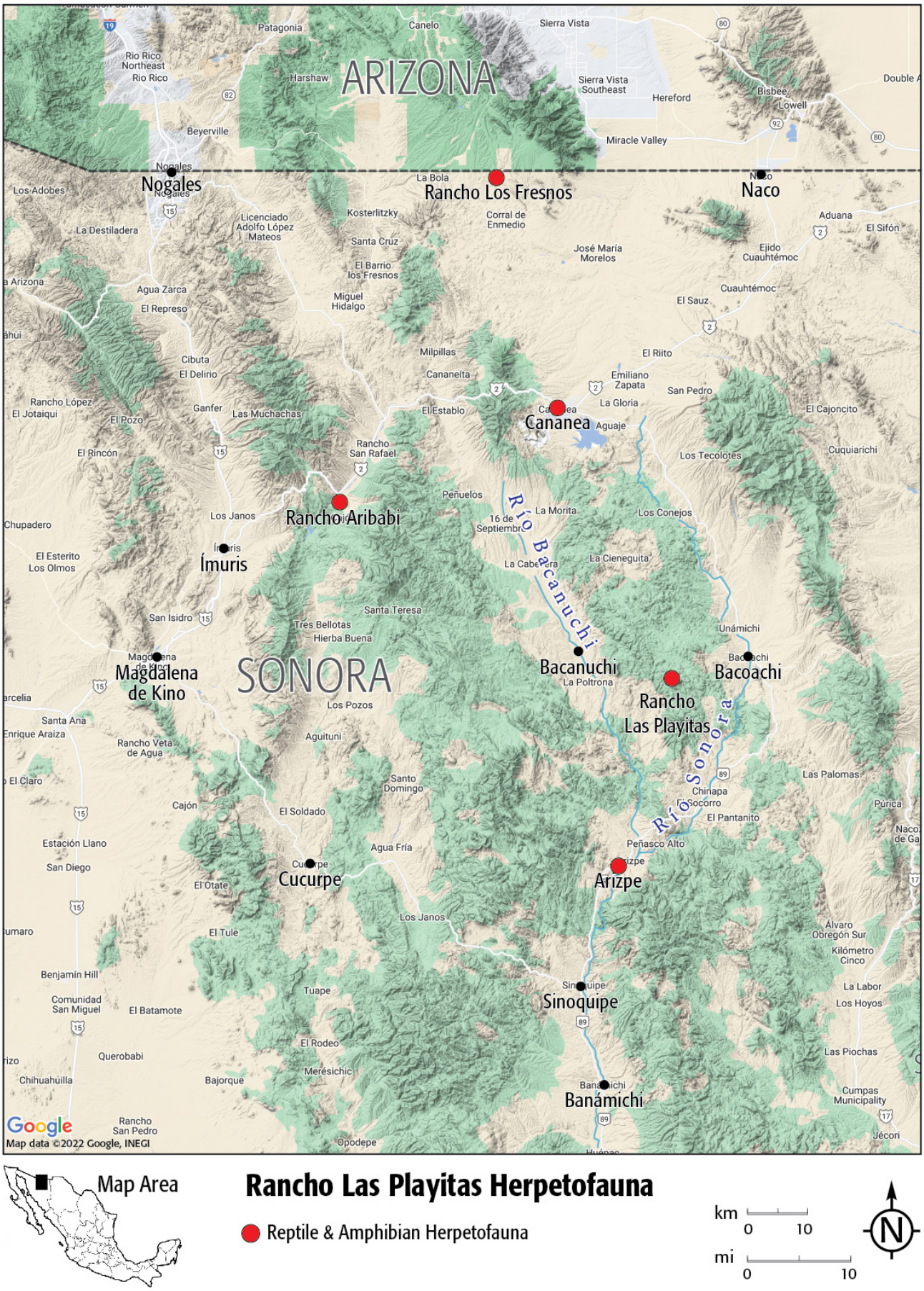

Fig. 2. Map of the areas of interest in Sonora.

Table 1. Observations of amphibians and reptiles on the Rancho Las Playitas and potential species observed nearby. Nomenclature follows Bonett et al. (2017). Spanish common names used in Sonora (Van Devender and Reina-G., unpublished data) are in italics. Species found on Rancho Las Playitas: =. Charles H. Lowe UAZ collection near Arizpe in August 1958: *shared with Rancho Las Playitas, **not shared. Arthur J. Ruff UAZ collection near Cananea in 1955-1958: +shared with Rancho Las Playitas, ++not shared. Other records for Cananea (xx) or the Arizpe (xy) areas.

Order Family	Scientific name	Common name	Rancho Las Playitas	Lowe and Ruff collections	Arizpe	Cananea	MDE
Anura							
Bufonidae	*Anaxyrus cognatus*	Great Plains Toad, *sapo*					xx
	Anaxyrus punctatus	Red-Spotted Toad, *sapo*	=	UAZ 12059	*		
	Anaxyrus woodhousii	Woodhouse's Toad, *sapo*		UAZ 12743	**		xx
	Incilius alvarius	Sonoran Desert Toad, *sapo*	=	UAZ 08241	*		
Hylidae	*Hyla arenicolor*	Canyon Treefrog, *ranita*	=				
Microhylidae	*Gastrophryne mazatlanensis*	Sinaloan Narrow-Mouthed Toad, *rana*	=				
Ranidae	*Lithobates yavapaiensis*	Lowland Leopard Frog, *rana*	=	UAZ 33706	*		
Scaphiopodidae	*Scaphiopus couchii*	Couch's Spadefoot		UAZ 07736	**		
	Spea multiplicata	Mexican Spadefoot		UAZ 08059	**	++	
Testudines							
Emydidae	*Terrapene nelsoni*	Spotted Box Turtle, *tortuga*					xy
	Terrapene ornata	Ornate Box Turtle, *tortuga*		UAZ 13097	**		
	Trachemys yaquia	Yaqui Slider, *tortuga del agua.*		UAZ 28107	**		
Kinosternidae	*Kinosternon sonoriense*	Sonora Mud Turtle, *tortuga del agua.*	=	UAZ 27976	*		
Testudinidae	*Gopherus morafkai*	Sonoran Desert Tortoise, *tortuga de los cerros, juan*		UAZ 35402	**		
Squamata							
Anguidae	*Elgaria kingii*	Madrean Alligator Lizard, *salamanquesa, sabandija*	=	UAZ 07261 & 01105	*	+	
Crotaphytidae	*Crotaphytus collaris*	Eastern Collared Lizard		UAZ 00708 & 00699	**	++	
Eublepharidae	*Coleonyx fasciatus*	Black Banded Gecko, *salamanquesa*	=		*		
	Coleonyx variegatus	Western Banded Gecko, *salamanquesa*		UAZ 01176	**		
Helodermatidae	*Heloderma suspectum*	Gila Monster, *escorpión*	=	UAZ 07229	*		
Phrynosomatidae	*Holbrookia elegans*	Elegant Earless Lizard, *perrita*	=	UAZ 01741 & 01740	*	+	
	Phrynosoma ditmarsi	Rock Horned Lizard, *camaleón*	=			++	
	Phrynosoma hernandesi	Greater Short-horned Lizard, *camaleón*		UAZ 02008		++	
	Phrynosoma solare	Regal Horned Lizard, *camaleón*	=	UAZ 02192	*		
	Sceloporus albiventris	Western White-bellied Spiny Lizard, *cacharón*	=				
	Sceloporus clarkii	Clark's Spiny Lizard, *cacharón*	=	UAZ 02351 & 02345	*	+	
	Sceloporus cowlesi	Southwestern Fence Lizard, *cachora, lagartija*					xx
	Sceloporus slevini	Slevin's Bunchgrass Lizard, *cachora, lagartija*					xx
	Urosaurus ornatus	Ornate Tree Lizard, *cachora, lagartija*	=	UAZ 03744 & 03815	*	+	
Scincidae	*Plestiodon callicephalus*	Mountain Skink, *ajolote, salamanquesa*	=	UAZ 03471 & 03469	*	+	
	Plestiodon obsoletus	Great Plains Skink, *salamanquesa*	=				
Teidae	*Aspidoscelis sonorae*	Sonoran Spotted Whiptail, *huico*	=	UAZ 04991 & 05025	*	+	
	Aspidoscelis stictogrammus	Giant Spotted Whiptail, *huico*	=				
	Aspidoscelis tigris	Tiger Whiptail, *huico*		UAZ 06411	**		
	Aspidoscelis uniparens	Desert Grassland Whiptail, *huico*		UAZ 05125		++	

Table 1 (continued). Observations of amphibians and reptiles on the Rancho Las Playitas and potential species observed nearby. Nomenclature follows Bonett et al. (2017). Spanish common names used in Sonora (Van Devender and Reina-G., unpublished data) are in italics. Species found on Rancho Las Playitas: =. Charles H. Lowe UAZ collection near Arizpe in August 1958: *shared with Rancho Las Playitas, **not shared. Arthur J. Ruff UAZ collection near Cananea in 1955-1958: +shared with Rancho Las Playitas, ++not shared. Other records for Cananea (xx) or the Arizpe (xy) areas.

Order Family	Scientific name	Common name	Rancho Las Playitas	Lowe and Ruff collections	Arizpe	Cananea	MDE
Boidae	*Boa sigma*	Mexican West Coast Boa Constrictor, *corúa, culebrón, limacoa*	=	UAZ 36084	*		
Colubridae	*Diadophis punctatus*	Ring-necked Snake, *culebra*	=	UAZ 15554		+	
	Gyalopion canum	Chihuahuan Hook-nosed Snake, *culebra*		UAZ 20736		++	
	Gyalopion quadrangulare	Thornscrub Hook-nosed Snake, *coralillo corto, culebra*	=				
	Heterodon kennerlyi	Mexican Hog-nosed Snake, *culebra de cochi*		UAZ 24946		++	
	Hypsiglena chlorophaea	Desert Nightsnake, *culebra*	=	UAZ 25041 & 25034	*	+	
	Lampropeltis getula	Common Kingsnake, *culebra negra*		UAZ 25104 & 25129	**	++	
	Masticophis bilineatus	Sonoran Whipsnake, *alicantre, chirrionera. chicotera, setahui*	=	UAZ 20806		+	
	Masticophis flagellum	Coachwhip, *alicantre, chirrionera. chirrión, chicotera, setahui*	=	UAZ 25658 & 25660	*	+	
	Masticophis mentovarius	Neotropical Whipsnake, *setahui*	=				
	Oxybelis aeneus	Neotropical Vinesnake, *jara, bejuquilla, huirotilla*	=				
	Pituophis catenifer	Gophersnake, *víbora sorda, víbora ratonera*	=				
	Rhinocheilus lecontei	Long-nosed Snake, *falso coralillo*		UAZ 04560		++	
	Salvadora deserticola	Big Bend Patch-nosed Snake, *culebra*	=	UAZ 26298		+	
	Senticolis triaspis	Green Ratsnake, *culebra verde, huirotillo*	=	UAZ 24924	*		
	Sonora aemula	File-tailed Groundsnake, *falso coralillo*	=				
	Sonora semiannulata	Western Groundsnake, *culebra*		UAZ 15589		++	
	Thamnophis cyrtopsis	Black-Necked Gartersnake, *culebra de agua*	=	UAZ 26687 & 26694	*	+	
	Thamnophis eques	Mexican Gartersnake, *culebra del agua*		UAZ 26837	**		
	Thamnophis marcianus	Checkered Gartersnake, *culebra del agua*		UAZ 26877		++	
	Trimorphodon lambda	Sonoran Lyresnake, *culebra*	=				
Elapidae	*Micruroides euryxanthus*	Sonoran Coralsnake, *coralillo*	=				
Leptotyphlopidae	*Rena humilis*	Western Threadsnake, *culebrita del agua*	=				
Viperidae	*Crotalus atrox*	Western Diamond-backed Rattlesnake, *víbora de cascabel*	=	UAZ 27351 & 27345	*	+	
	Crotalus molossus	Black-tailed Rattlesnake, *víbora de cascabel*	=	UAZ 13650	*		
	Crotalus scutulatus	Mohave Rattlesnake, *víbora de cascabel*		UAZ 27355		++	
	Crotalus tigris	Tiger Rattlesnake, *víbora de cascabel*	=				

Plestiodon obsoletus. While widely distributed in the United States and northern Mexico, this species is poorly known in Sonora. Rancho Las Playitas is about 85 km north of the Sierra Aconchi population (Rorabaugh and Lemos-Espinal 2016), and is the northernmost record in Sonora (Fig. 5B).

Sceloporus albiventris. Rancho Las Playitas is about 65 km north of the previous northern record near Banámichi for this tropical spiny lizard (Van Devender et al. 2019; Fig. 6C).

Gyalopion quadrangulare. Rancho Las Playitas fills in the distribution of this snake rarely seen in northern Sonora (Rorabaugh and Lemos-Espinal 2016; Fig. 7B).

Masticophis mentovarius. Rancho Las Playitas is slightly south of the two northernmost localities in the Sierra Azul near Ímuris and the Sierra de la Madera near Magdalena de Kino (Rorabaugh et al. 2009) and the furthest northeast locality known. It needs additional documentation.

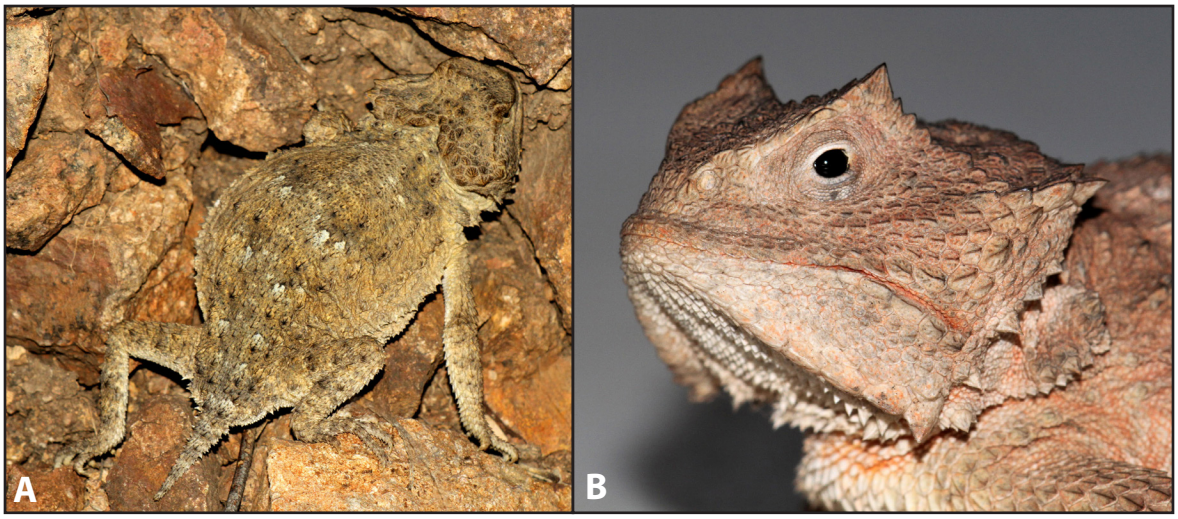

Fig. 3. *Phrynosoma ditmarsi* on Rancho Las Playitas. Photos by R. W. Van Devender.

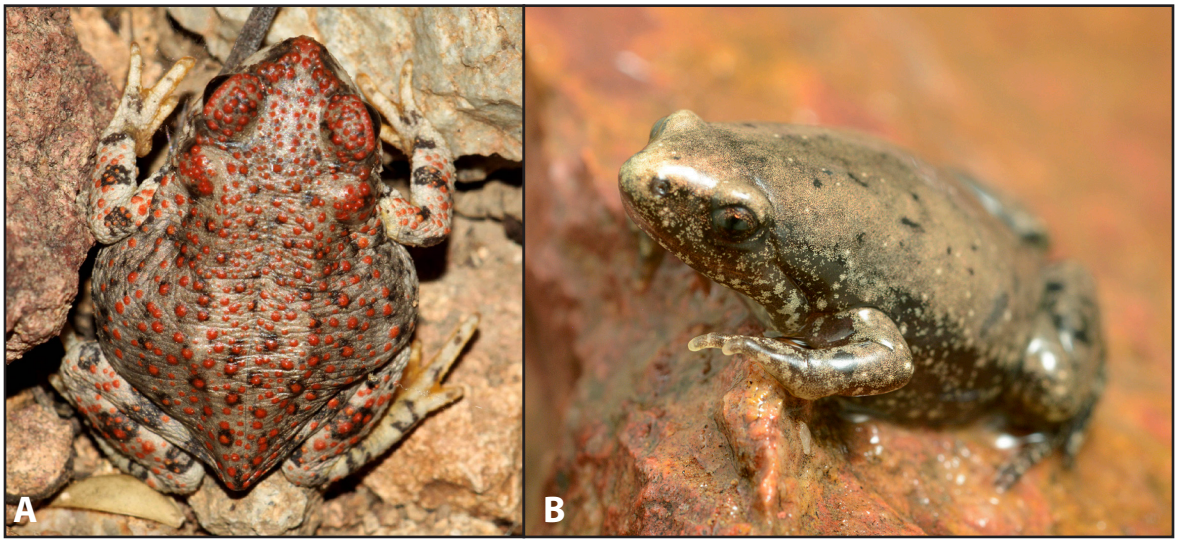

Fig. 4. Amphibians from Rancho Las Playitas. **A.** *Anaxyrus punctatus*. Photo by R. W. Van Devender. **B.** *Gastrophryne mazatlanensis*. Photo by Charles Hedgcock.

Sonora aemula. This colorful little snake is best known in TDF near Álamos in southern Sonora. The northern published records are in FTS at Tónichi on the Río Yaqui (Nevares and Parra-Salazar 1990; 28.60°N) and in the Sierra de la Madera (Oposura) near Moctezuma (Van Devender et al. 2014; 29.85°N). On June 8, 1978, R. Crombie collected a specimen in the Municipality of Mazatán, 31.1 mi E of Hermosillo (29.04°N; USNM 214124) and in January 2012, T. R. Van Devender found one in the Municipality of Hermosillo at Rancho Shanghai, 31.7 E of Hermosillo (Van Devender et al. 2014; 29.06°N); both localities are in Sonoran desertscrub. In October 2021, José Adolfo Salazar-E., owner of Rancho Las Playitas (30.61°N), saw a dead *falso coralillo* pinned to an ocotillo spine. He identified it as *S. aemula* (Fig. 9A), distinguishing it from *Micruroides euryxanthus* (Fig. 9B) and *Rhinocheilus lecontei* in a photo spread. This is a major northern range extension of a secretive tropical species that is likely more widespread in FTS than previously thought. It needs additional documentation.

Discussion

Few inventories of amphibians and reptiles for Sonora have been previously published. Herpetofaunas are available from the Sky Island Region (= Madrean Archipelago) for Ranchos El Aribabi and Los Fresnos near the border in Sonora (Rorabugh et al. 2013) and the Rincon Mountains, Coronado National Memorial, Fort Bowie National Historical Site, and Whetstone Mountains north of the border in Arizona (Flesch et al. 2010, Schmidt et al. 2007, Swann et al. 2001, Turner et al. 2003). Bezy and Cole (2014) summarized the amphibians and reptiles of the Madrean Archipelago in Arizona and New Mexico. Herpetofaunas have been studied in more distant Sky Islands in the Sierras Bacadéhuachi and la Madera (Van Devender et al. 2013) and the Northern Jaguar Reserve north of Sahuaripa in Sonora (Rorabaugh et al. 2011). Herpetofaunas in the Sierra Madre Occidental in eastern Sonora have been reported for the Mesa Tres Ríos area (Rorabaugh et al. 2019a) and the Municipality of Yécora (Enderson et al. 2014).

Sonora aemula. This colorful little snake is best known in TDF near Álamos in southern Sonora. The northern published records are in FTS at Tónichi on the Río Yaqui (Nevares and Parra-Salazar 1990; 28.60°N) and in the Sierra de la Madera (Oposura) near Moctezuma (Van Devender et al. 2014; 29.85°N).

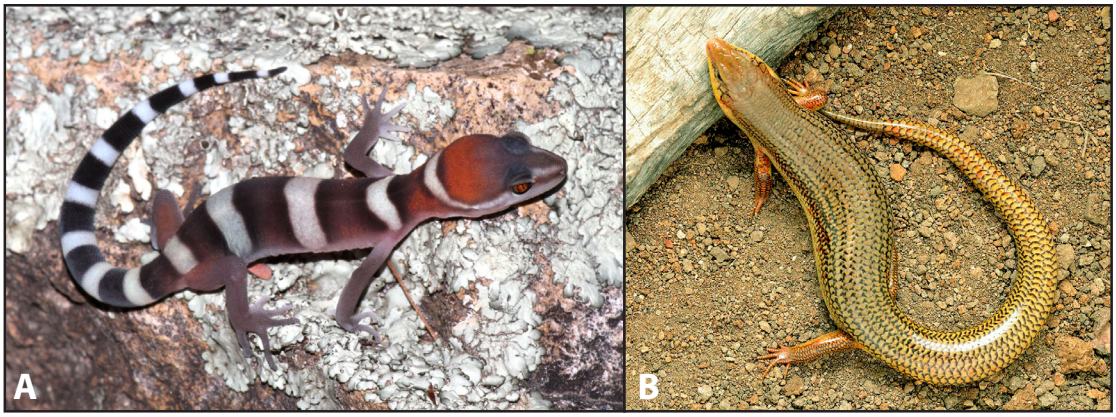

Fig. 5. Lizards from Rancho Las Playitas. **A.** *Coleonyx fasciatus*. Photo by R. W. Van Devender. **B.** *Plestiodon obsoletus*. Photo by Charles Hedgcock.

Fig. 6. Lizards from Rancho Las Playitas. **A.** *Elgaria kingii*. Occasionally seen in riparian habitats. Photo by R. W. Van Devender. **B.** *Holbrookia elegans*. Common and variable. Photo by G. Molina-P. **C.** *Sceloporus albiventris*. Note the long tail. Photo by Charles Hedgcock. **D.** Juvenile *Heloderma suspectum*. Photo by Charles Hedgcock.

Fig. 7. Snakes from Rancho Las Playitas. **A.** *Diadophis punctatus*. Uncommon and secretive. **B.** *Gyalopion quadrangulare*. Photos by R. W. Van Devender.

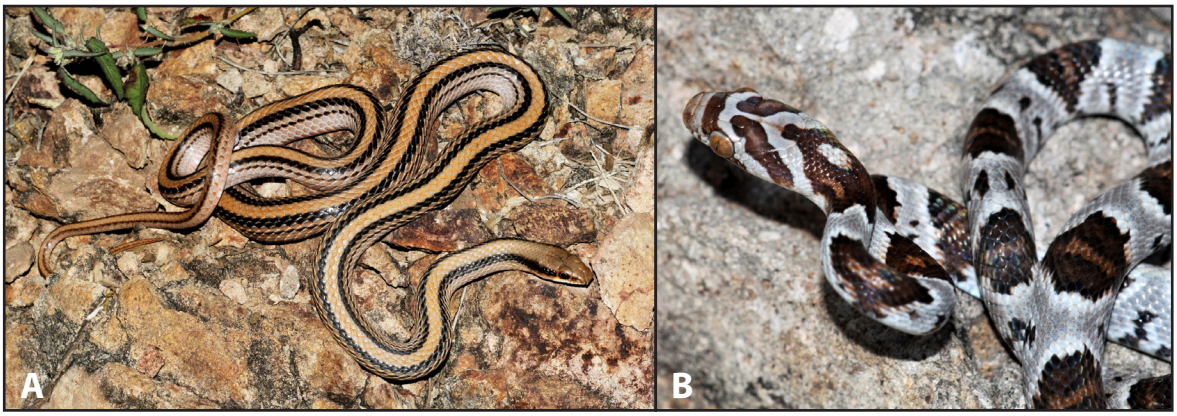

Fig. 8. Snakes of Rancho Las Playitas. **A.** *Salvadora deserticola*. **B.** *Trimorphodon lambda* juvenile. Photos by R. W. Van Devender.

Fig. 9. A. *Sonora aemula* from Rancho Agua Caliente, east of San Pedro de la Cueva (Van Devender et al. 2014). Photo by Erik F. Enderson. **B.** *Micruroides euryxanthus* from Rancho Las Playitas. Photo by R. W. Van Devender.

The herpetofauna of Rancho Las Playitas with 38 species is remarkably diverse (Table 1), given its distance from the tropics and lack of higher montane habitats. It includes many species with more southern distributions reaching their northern limits. In August 1958, Charles Lowe and his students made a collection of 29 species of amphibians and reptiles for the University of Arizona Herpetological Collection (UAZ) from near Arizpe (50 km south of Rancho Las Playitas) in FTS and the wetlands of the Ríos Bacanuchi-Sonora

The herpetofauna of Rancho Las Playitas with 38 species is remarkably diverse (Table 1), given its distance from the tropics and lack of higher montane habitats.

junction area (Table 1; records available in the MDE database), which included 10 species not found at Las Playitas. One of those (*Trachemys yaquia*) is a riverine species. *Anaxyrus woodhousii*, *Scaphiopus couchii*, *Spea multiplicata*, *Gopherus morafkai*, *Coleonyx variegatus*, *Crotaphytus collaris*, and *Thamnophis eques* will likely be found further north in FTS with additional field work. *Terrapene nelsoni*, a tropical box turtle, recently found in desert grassland-oak woodland in the Arizpe area (Van Devender and Hale, unpublished data), could be found further north as well.

Also in 1955-1958, Arthur J. Ruff collected 27 species of amphibians and reptiles for UAZ from Cananea (50 km north of Rancho Las Playitas; records available in the MDE database), including 14 species not found at Las Playitas. Three of these (*Crotalus willardi*, *Lampropeltis pyromelana*, and *Sceloporus jarrovi*) are species only found in upland oak woodland and pine-oak forest habitats that do not occur in Las Playitas. Species that may occur in Las Playitas were the spadefoot toad *Spea multiplicata*, the lizards *Aspidoscelis uniparens, Crotaphytus collaris*, and *Phrynosoma hernandesi*, and the snakes *Crotalus scutulatus*, *Gyalopion canum*, *Heterodon kennerlyi*, *Lampropeltis getula*, *Rhinocheilus lecontei*, *Sonora semiannulata*, and *Thamnophis marcianus. Anaxyrus cognatus*, *A. woodhousii*, *Phrynosoma ditmarsi* (Fig. 3; Lowe et al. 1971), *Sceloporus cowlesi* (Rorabaugh et al. 2019b), and *S. slevini* have also been seen in grassland near Cananea.

Taken together, the potential herpetofauna in the desert grassland-FTS transition from Cananea to Arizpe is about 58 species. Fourteen species, including *Gastrophryne mazatlanensis* (Fig. 4B), *Sceloporus albiventris* (Fig. 6C), *Plestiodon obsoletus* (Fig.5B), *Aspidoscelis stictogrammus*, *Gyalopion quadrangulare* (Fig. 7B), *Masticophis mentovarius*, *Oxybelis aeneus*, *Sonora aemula* (Fig.9A), *Micruroides euryxanthus* (Fig. 9B), *Rena humilis*, and *Crotalus tigris* were only found at Rancho Las Playitas.

Acknowledgements—Ana Lilia Reina-Guerrero and Charles Hedgcock are always keen observers on MDE Expeditions. Mario Cirett, Pedro Rodríguez, Nora Villanueva, Guadalupe Morales, and Imelda Martínez set up the base camp and provided food for the MDE Rancho Las Playitas Expeditions. Daniel Pinto-S, Gerardo Martínez, Maybeth Pinto-S., and Gabriel Ramírez searched for reptiles. Jim Rorabaugh, Ross Maynard, Betsy Wirt, and Robert Johnson helped on the bi-weekly *Phrynosoma ditmarsi* monitoring trips. Norberto (Choro) Medina-Terán provided local common names for Rancho Las Playitas herps. Greater Good Charities supports the MDE biodiversity programs. Zoo Miami and the Tucson Herpetological Society provided additional support for the Rock Horned Lizard study. Animals were handled under a permit from the Secretaría de Medio Ambiente y Recursos Naturales, Subsecretaría Gestión para Protección Ambiental, Dirección General de Vida Silvestre of Mexico (No. SGPA/DGVS/05201/21 to J. Mario Cirett-Galán). Dennis Caldwell drafted the map in Figure 1. Ana Lilia Reina-Guerrero, Charles Hedgcock, and Erik F. Enderson provided photographs. The hospitality, encouragement, and friendship of José Adolfo Salazar-E. were essential to explore Rancho Las Playitas and greatly appreciated. Natural historians José Abel Salazar and Guillermo Molina led the way at every step.

Literature Cited

Bezy, R.L., and C.J. Cole. 2014. Amphibians and reptiles of the Madrean Archipelago of Arizona and New Mexico. American Museum Novitates 3810. American Museum of Natural History, New York.

Bonett, R.M., J. Boundy, F.T. Burbrink, B.I. Crother, K. de Queiroz, D.R. Frost, R. Highton, J.B. Iverson, E.L. Jockusch, F. Kraus, and K.L. Krysko. 2017. Scientific and Standard English Names of Amphibians and Reptiles North of Mexico, with Comments Regarding Confidence in Our Understanding, eighth edition. Society for the Study of Amphibians and Reptiles, Herpetological Circulars No. 43.

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.

Flesch, A.D., D.E. Swann, D.S. Turner, and B.F. Powell. 2010. Herpetofauna of the Rincon Mountains, southeastern Arizona. The Southwestern Naturalist 55:240-253.

Grismer, L.L. 1988. Phylogeny, taxonomy, classification, and biogeography of eublepharid geckos. Pp. 367-469 *in*: R. Estes and G. Pregill (eds.). Phylogenetic Relationships of the Lizard Families. Stanford University Press, Stanford, CA.

Lowe, C.H., M.D. Robinson, and V.D. Roth. 1971. A population of *Phrynosoma ditmarsi* from Sonora, Mexico. Journal of the Arizona Academy of Science 6:275-277.

Molina-Padilla, G., T. R. Van Devender, and J. A. Salazar-Martínez. 2019. *Phrynosoma ditmarsi* (Rock Horned Lizard). Geographic Distribution: Squamata – Lizards. Herpetological Review 50:527.

Nevares, M., and I.E. Para-Salazar. 1990. *Sonora aemula* (Filetail Ground Snake). Geographic Distribution: Squamata – Snakes. Herpetological Review 21:97.

Rorabaugh, J.C., D.S. 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. Blanco-Gutiérrez, E. Wallace, and C. Hedgcock. 2019a. Herpetofauna of the Mesa Tres Ríos área 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.
Rorabaugh, J.C., and J.A. Lemos-Espinal. 2016. A Field Guide to the Amphibians and Reptiles of Sonora, Mexico. Eco Herpetological Publishing and Distribution, Rodeo, NM.
Rorabaugh, J.C., M.A. Gómez-Ramírez, C.E. Gutiérrez-González, J.E. Wallace, and T.R. Van Devender. 2011. Amphibians and reptiles of the Northern Jaguar Reserve and vicinity, Sonora, Mexico: A preliminary evaluation. Sonoran Herpetologist 24:123-131.
Rorabaugh, J.C., S. Avila, C. Robles-Elías, and G.M. Ferguson. 2009. An addition to the 100-Mile Circle: Neotropical whipsnake (*Coluber mentovarius*). Sonoran Herpetologist 22:2-5.
Rorabaugh, J.C., J.M. Servoss, V.L. Boyarski, E. Fernandez, D. Duncan, C.R. Elías, and K.E. Bonine, 2013. A comparison of the herpetofaunas of Ranchos Los Fresnos and El Aribabi in northern Sonora, Mexico. 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: US Department of Agriculture, Forest Service, Rocky Mountain Research Station.
Schmidt, C.A., B.F. Powell, D.E. Swann, and W.I. Halvorson (eds.). 2007. Vascular plant and vertebrate inventory of Coronado National Memorial: U.S. Geological Survey Open-File Report 2007-1393, 114 p.
Shedd, J.D., and S.S. Murray. 2020. *Coleonyx fasciatus* (Boulenger 1885): Regional, ontogenetic, and temporal color pattern variation and a current summary of geographic distribution. Sonoran Herpetologist 33:69-78.
Swann, D.E., M.J. Goode, and C.R. Schwalbe. 2001. Inventory and recommendations for long term monitoring of reptiles and amphibians at Fort Bowie National Historic Site, Arizona. Report to Southern Arizona Office, National Park Service, Phoenix, AZ.
Turner D.S., T.R. Van Devender, H. Silva-Kurumiya, N. León Del Castillo, C. Hedgcock, C. Roll, M. Wilson, and F.I. Ochoa-Gutierrez. 2017. Distribution of *Phrynosoma ditmarsi* Stejneger, 1906, with notes on habitat and morphology. Mesoamerican Herpetology 4:979-985.
Turner, D.S., P.A. Holm, E.B. Wirt, and C.R. Schwalbe. 2003. Amphibians and reptiles of the Whetstone Mountains, Arizona. The Southwestern Naturalist 48:347-355.
Van Devender, T.R., E.F. Enderson, D.S. Turner, R.A. Villa, S.F. Hale, G.M. Ferguson, and C. Hedgcock. 2013. Comparison of preliminary herpetofaunas of the Sierras la Madera (Oposura) and Bacadéhuachi with the mainland Sierra Madre Occidental in Sonora, Mexico. Pp. 110-116 *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. 2012 May 1-5, Tucson, AZ. Proceedings RMRS-P-67. Fort Collins, CO: U.S.D.A., Forest Service, Rocky Mountain Research Station.
Van Devender, T.R., J.R. Hernández-Jimenez, and H. Silva-Kurumiya. 2014. Geographic Distribution: Squamata – Snakes. *Sonora aemula* (File-tailed Ground Snake). Mexico: Sonora. Herpetological Review 45:96-97.
Van Devender, T.R., and A.L. Reina-Guerrero. 2021. The vegetation of Sonora, Mexico. Phytoneuron 2021:67:1-22.
Van Devender, T.R., A.L. Reina-Guerrero, and S.F. Hale. In press. Flora and vegetation of Rock Horned Lizard (*Phrynosoma ditmarsi*) sites, Rancho Las Playitas, Municipio de Bacoachi, Sonora, Mexico. Canotia.
Van Devender, T.R., J.C. Rorabaugh, B. Dietrich, J.A. Salazar-Martínez, H. Silva-Kurumiya, G. Yanes-Arvayo., P.C. Rosen, G.M. Ferguson, S.J. Trageser, J.M. Galaz-Galaz, S. Jacobs, J.H. Valdez-Villavicencio, R.W. Van Devender, G. Molina-Padilla, A.L. Reina-Guerrero, and R.A. Villa. 2020, Distribution and ecology of the northernmost Mexican West Coast Boa Constrictor (*Boa sigma*). Herpetological Review 51:433-438.
Van Devender, T.R., J.A. Salazar- Martínez, E.E. Martínez-Valenzuela, G. Molina-Padilla., R.A. Villa, S.F. Hale, and D.S. Turner. 2019. *Sceloporus albiventris* (Western White-bellied Spiny Lizard). Geographic Distribution: Squamata – Lizards. Herpetological Review 50:747.