

**Table 1 (continued).** Amphibians and reptiles of the Río Moctezuma basin and nearby areas.

Leptotyphlops	<i>Rena humilis</i>	Culebrilla ciega		x	x		x			
Viperidae	<i>Crotalus atrox</i>	Cascabel de diamantes			x	x	x			Pr
Viperidae	<i>Crotalus lepidus klauberi</i>		x					x	x	Pr
Viperidae	<i>Crotalus molossus</i>	Cascabel cola negra			x	x	x	x	x	Pr
Viperidae	<i>Crotalus tigris</i>	Cascabel		x	x	x	x	x		Pr
Viperidae	<i>Crotalus willardi silus</i>	Cascabel	x					x	x	Pr
Total species			9	43	52	38	28	41	26	24
% Moctezuma (64 species)			14.1	67.2	81.2	59.4	43.8	64.1	40.6	37.5

## RANGE EXTENSION

# New Northern Records of *Drymarchon melanurus* in Sonora, México

**Gabriel Peralta-Franco**, Domicilio Conocido S.N., Buena Vista y Buena Vista, C.P. 84524, Jécori, Sonora, Mexico; [gabriel.peralta.f@gmail.com](mailto:gabriel.peralta.f@gmail.com)

**Thomas R. Van Devender**, Greater Good Charities, 236 S. Scott Ave., Suite 140, Tucson, AZ; [yecora4@comcast.net](mailto:yecora4@comcast.net)

**J. Gerardo Martínez-Valenzuela**, Calle Allende y 5 de mayo S/N, Colonia Las Liebres, C.P. 84560, Moctezuma, Sonora, Mexico; [geradopr17@hotmail.com](mailto:geradopr17@hotmail.com)

**Sky Jacobs**, P.O. Box 508, Tucson, AZ; [skyjacobs@gmail.com](mailto:skyjacobs@gmail.com)

**Amelia Miranda-Lugo**, Francisco Moreno entre Galeana y Riyito S/N, Colonia el Colegio, C.P. 84560, Moctezuma Sonora, Mexico; [ameliamirandalugo24@gmail.com](mailto:ameliamirandalugo24@gmail.com)

## Introduction

*Drymarchon melanurus* is a large, non-constricting snake in the Colubridae found on the western Pacific coast of Mexico from Nayarit north to Sonora (Rorabaugh and Lemos-E 2019). Villa et al. (2015) discussed its western, eastern, and northern distributional limits in Sonora. The northernmost record was at El Carrizoso (29.516°N 109.150°W; Fig. 1) in the Municipality of Nácori Chico on the Río Áros near the junction with the Río Bavispe where the Río Yaqui proper begins. This is the northern edge of the Northern Jaguar Reserve herpetofauna area (Rorabaugh et al. 2011).

Here we present seven additional observations of *D. melanurus* that further define its northern distributional limits in Sonora.

## Methods

Our knowledge of the distributions of amphibians and reptiles in Sonora has continually increased since the Universidad de la Sierra was founded in 2002, and with the biotic inventories of Sonoran Sky Island mountain ranges in Sky Island Alliance's Madrean Archipelago Biodiversity Assessment (MABA, 2009-2014) and Greater Good Charities' Madrean Discovery Expeditions (MDE, 2015-2023) programs. All of the observations and images are publicly available in the UNISIERRA-Observations Portal and MDE ([madreandiscovery.org](http://madreandiscovery.org)) databases. Images were deposited as photovouchers in the University of Texas at Arlington Herpetological Collection (UTADC).

Seven recent observations of *D. melanurus* from the northern part of its range were made by the authors

and participants on MDE Expedition Rancho El Aguaje in April 2023 (Fig. 1). Additional records were from *iNaturalist*.

**Specimen records. Mexico: Sonora: Municipality of Cumpas:** Río Jamaica, Jécori, 5 km (by air) SSE of Cumpas (29.953°N 109.748°W), 730 m elev., October 19, 2022, Gabriel Peralta-Franco. UTADC 9881 (Fig. 2); **Municipality of Huásabas:** Río Bavispe, 1.0 km (by air) NNE of Huásabas (29.923°N, 109.292°W), 544 m elev., April 3, 2020, J. Gerardo Martínez-Valenzuela. UTADC 9879; **Municipality of Moctezuma:** 8.5 km (by air) S of Moctezuma (29.655°N 109.655°W), 615 m elev., October 21, 2017, David Gastellum. UTADC 9877; 13.1 km (by air) NE of Mazocahui (29.626°N 109.891°W), 962 m elev., July 19, 2020, Gambusino. UTADC 9878a-9878b; Río Moctezuma 1.8 km (by air) W of Moctezuma (29.815°N 109.714°W), 640 m elev., October 13, 2019, J. Gerardo Martínez-Valenzuela. UTADC 9880; **Municipality of San Pedro de la Cueva:** Arroyo Palmarito, 10.4 km (by air) NW of Huépari, Rancho El Aguaje (29.467°N 109.895°W), 763 m elev., April 12, 2023, Sky Jacobs. Shed skin identified by Dale S. Turner. UTADC 9876a-9876b (Fig. 3); 17.8 km (by air) NNE of Huépari (29.555°N, 109.777°W), 748 m elev., March 31, 2023, Amelia Miranda-Lugo. Video identified by Ryan Martínez. UTADC 9882.

## Discussion

The new locality records further refine the northern distribution limits of *D. melanurus* (Fig. 1) and are the first records for the Municipalities of Cumpas, Huásabas, Moctezuma, and San Pedro de la Cueva.

Here we present seven additional observations of *D. melanurus* that further define its northern distributional limits in Sonora.

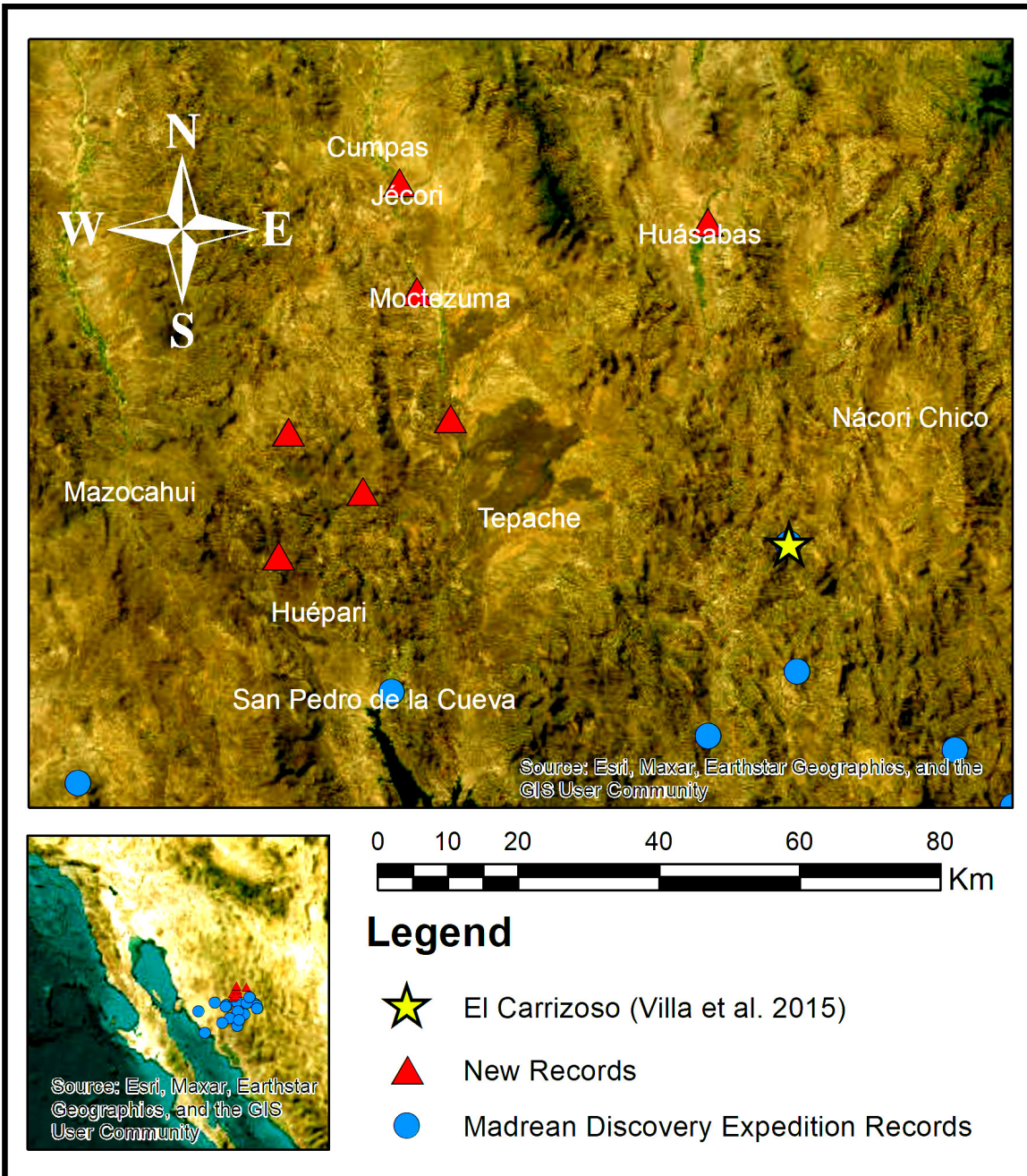


Fig. 1. Northern records of *Drymarchon melanurus* in Sonora.



Fig. 2. *Drymarchon melanurus* at Río Jamaica. Photo by Gabriel Peralta-F.





**Fig. 3.** Shed skin of *D. melanurus* in Arroyo Palmarito. Photo by Charles Hedgcock.

The observation from the Río Jamaica (part of the *Río Moctezuma*) near Jécori (29.953°N) is the northern distributional limit for this species, a range extension of 72 km to the northwest of El Carrizoso (Villa et al. 2015).

All of the new localities are in riparian habitats (Fig. 4). We have observed *D. melanurus* swimming on top and underneath water. It is interesting that the Parrot Snake (*Leptophis diplotropis*), a green vinesnake more typically found in tropical deciduous forest near Álamos in southern Sonora, was also reported from near Jécori (McCoy 1964).

We have seen a pattern of tropical species using riparian river corridors to enter more temperate or arid habitats. A specimen of *D. melanurus* collected

by Theodore J. Pappenfuss in 1963 from west of Hermosillo near the modern agricultural center Miguel Alemán (Villa et al. 2015) is an excellent example. Before the construction of two dams, the Río Sonora was a corridor from foothills thornscrub into Sonoran desertscrub.

**Acknowledgments**—We thank professors Hugo Silva-K., Gertrudis Yanes-A., and María de la paz Montañez of UNISIERRA for their support, encouragement and sharing their passion for natural history. Gregory Pandelis provided photovoucher numbers in the University of Texas at Arlington Herpetological Collection. Greater Good Charities through the MDE program has contributed greatly to the knowledge of the biodiversity and conservation of the Sonoran Sky Islands.

#### Literature Cited

- McCoy, C.J. 1964. Notes on snakes from northern Mexico. *The Southwestern Naturalist* 9:46-48.
- Rorabaugh, J.C., M.A. Gómez-R., C.E. Gutiérrez-G., 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., and J.A. Lemos-E. 2016. *A Field Guide to the Amphibians and Reptiles of Sonora, Mexico*. ECO Herpetological Publishing and Distribution, Rodeo, New Mexico.
- Villa, R.A., T.R. Van Devender, C.M. Valdéz-C., and T.R. Burkhardt, 2015. Peripheral and elevational distribution and a novel prey item for *Drymarchus melanurus* in Sonora, Mexico. *Mesoamerican Herpetology* 2:378-380.

All of the new localities are in riparian habitats (Fig. 4). We have observed *D. melanurus* swimming on top and underneath water.



**Fig. 4.** Cottonwood-willow riparian habitat along Río Jamaica. Foothills thornscrub on mountain slope on ridge behind. Photo by Gabriel Peralta-F.