

## Family Viperidae

***Crotalus culminatus* (Klauber, 1952).** MEXICO: ESTADO DE MÉXICO: Municipio de Malinalco, Ciudad de Malinalco (18.92511°N, -99.51848°W; WGS84); elev. 1,734 m; 16 May 2015; Zabdiel A. Peralta-Fonseca. This adult specimen was found coiled on a trail 2 m from a stream in tropical deciduous forest. A photograph of the snake is deposited at the University of Texas at El Paso Digital Collection (Photo voucher UTEP G-2015.3). This individual represents the first record for the state, with the closest known locality ca. 25 km to the N (airline distance) in the vicinity of Xochicalco, Morelos (USNM-110610; www.vertnet.org; accessed 18 May 2015).

**Acknowledgments.**—We thank Balam Peralta Fonseca, Jose Luis Bárcenas and Equipo de Ecoturismo Maliemociones for field assistance, and Naturalista-CONABIO (www.naturalista.mx) for allowing the posting of the photograph for species confirmation by its visitors. Arthur Harris kindly provided the photo voucher number.

ZABDIEL A. PERALTA-FONSECA<sup>1</sup> AND ELÍ GARCÍA-PADILLA<sup>2</sup>

<sup>1</sup>Comisión Nacional para el Conocimiento y Uso de la Biodiversidad, México. Liga Periférico-Insurgentes Sur # 490. Colonia Parques del Pedregal, Delegación Tlalpan, México, D. F. 14010. E-mail: zperalta@conabio.gob.mx

<sup>2</sup>Av. Panamericana # 240 Colonia Pedregal de Carrasco, Delegación Coyoacán, México D.F. 04700, Mexico. E-mail: quetzalcoat186@gmail.com

## New records and distributional range extensions for amphibians and reptiles from Tamaulipas, Mexico

The herpetofaunal richness of Tamaulipas probably is the least known of the states in northern Mexico. In the last decade, however, knowledge of the herpetofauna of Tamaulipas has increased with the description of new species (Bryson and Graham, 2010; Campbell et al., 2014), new distributional records for the state, and several distributional range extensions (Farr et al., 2007, 2009, 2013; Flores-Benabib and Flores-Villela, 2008; García-Padilla and Farr, 2010; García-Padilla and Villegas-Ruiz, 2010; Terán-Juárez and García-Padilla, 2014). Nonetheless, distributional data for many species are scarce, and significant distributional gaps likely remain within the state. In this note we report new distributional information for 20 herpetofaunal species (one anuran, two turtles, seven lizards, and 10 snakes), including three new records for the state. The following accounts are based on independent and collaborative fieldwork by the authors, photographs made available for our use, and from specimens examined in the newly formed Colección de Anfibios y Reptiles del Instituto Tecnológico de Ciudad Victoria (CAR-ITCV). We reviewed the published literature to determine new state and municipality records, as well as distributional range extensions. We determined the coordinates for each locality by using a GPS device (datum WGS84), obtained elevations from a digital elevation model (Continuo de Elevaciones Mexicano 3.0) with a grid size of 15 m (INEGI, 2013), and express all the distances between records in air km. Finally, we deposited photographic vouchers at The University of Texas at Arlington Digital Collection (UTADC).

### Amphibia: Anura Family Eleutherodactylidae

***Eleutherodactylus longipes* (Baird, 1859).** MIQUIHUANA: Ejido La Marcela (23.736558°N -99.819058°W), elev. 2,496 m; 26 August 2009; Elí García-Padilla, Gustavo Arnaud-Franco, and Marcio Martins; UTADC-8516. VICTORIA: 500 m N of Pino Solo, Ejido Sierra Madre (23.631253°N, -99.245035°W), elev. 1,548 m; 21 October 2014; Sergio A. Terán-Juárez, Francisco E. Leyto-Delgado, and Ernesto A. García-Cárdenas; CAR-ITCV 201,202. Cueva El Tullidor, Ejido Alta Cumbres (23.606399°N, -99.205705°W), elev. 1,278 m; 29 November 2014; Sergio A. Terán-Juárez, Francisco E. Leyto-Delgado, and Ernesto A. García-Cárdenas; CAR-ITCV 212, 213. Inside a cave at Cañón de la Peregrina (23.776853°N, -99.208410°W), elev. 393 m; 28 March 2015; Francisco E. Leyto-Delgado,

Sergio A. Terán-Juárez, Carlos A. Flores-Torres, and Ernesto A. García-Cárdenas; CAR-ITCV 228. The above specimens and the photo voucher represent records for the corresponding municipalities, and range extensions of ca. 43 km SW, 31 km SE, 36 km SE, and 24 km SE, respectively, from the nearest locality, El Chihue (23°52'N, 99°25'W, see Farr et al., 2007) to the northwest of Ciudad Victoria (Martin, 1958). Moreover, CAR-ITCV 228 and UTADC-8516 represent the lowest and highest elevational extremes (390–2,503 m) reported for this species (Stuart, et al., 2008).

**Reptilia: Testudines**  
**Family Kinosternidae**

***Kinosternon integrum* (Le Conte, 1854).** VICTORIA: Ejido 7 de Noviembre (23.685328°N, -99.199898°W), elev. 455 m; 21 November 2014; Francisco E. Leyto-Delgado and Víctor M. Pérez-Hernández; UTADC-8513. This photo voucher represents a new municipality record, and a range extension of ca. 17 km NE of the Río Chihue, located to the northeast of the municipality of Jaumave (Iverson and Berry, 1979). This voucher is the only record we are aware of from the eastern portion of the Sierra Madre Oriental, and represents the northernmost locality in eastern Mexico (Legler and Vogt, 2013). The turtle is an adult male found in a slow flowing stream with temporary ponds, in an area consisting of mixed tropical forest and riparian vegetation.

**Family Staurotypidae**

***Staurotypus triporcatus* (Wiegmann, 1828).** OCAMPO: 2.4 km NE of Ocampo, in Las Albercas watering place (22.851156°N, -99.313225°W), elev. 336 m; 10 September 2012; Fernando Eligio; UTADC-8506. In a stream, 1.8 km SE of Ocampo (22.839736°N, -99.318209°W), elev. 340 m; Fernando Eligio; 19 October 2013; UTADC-8507. These photo vouchers represent a new record for the state, and the northernmost localities for this species. The northern distributional limit for *Staurotypus triporcatus* has been reported as central Veracruz (Legler and Vogt, 2013), ca. 524 km to the south of the records presented here. The presence of *S. triporcatus* in Tamaulipas likely is the result of an introduction, due to the large gap in the distribution of this species. The habitat of this turtle in Ocampo includes shallow, slow moving streams, the same characteristics found in the natural habitat of this species (Legler and Vogt, 2013). In the locality of Las Albercas, this species cohabits with *Trachemys ornata* (McCranie et al., 2013). Although suitable habitat is present at Ocampo, we are unaware if *S. triporcatus* has been established in this area. Additional studies are necessary to evaluate the status of this species in the state, as well as its interactions with other species.

**Reptilia: Squamata (lizards)**  
**Family Anguinae**

***Abronia taeniata* (Wiegmann, 1828).** JAUMAVE: ca. 500 m NNW of Montecarlo (23.272434°N, -99.239229°W), elev. 1,606 m; 1 July 2014; Leccinum J. García Morales; UTADC-8511. This photo voucher represents a new municipality record, and a range extension of 19.7 km N of the closest known locality, Rancho del Cielo in the municipality of Gómez Farías (Martin, 1958). This record also represents the northernmost locality for this species (Martin, 1958), as well as for the genus (Campbell and Frost, 1993). UTADC-8511 is a photograph of a juvenile found in cloud forest, on the leaves of a bush (*Salvia* sp.) at a height of 80 cm. A second individual (photo voucher UTADC-8500) from the municipality of Gómez Farías was found 1.5 km SE of Joya de Manantiales (23.005646°N, -99.269156°W) on 11 October 2005, and represents the southernmost record for this species in the state, with a range extension of 9.5 km to the SE of Rancho Viejo (= Alta Cima) (Martin, 1958).

***Gerrhonotus infernalis* Baird, 1859.** GONZÁLEZ: Rancho La Saucedá (23.106221°N, -98.336229°W), elev. 753 m; June 2003; Gilberto Herrera-Patiño; CAR-ITCV 108. This specimen represents a new municipality record, and a range extension of 61 km S from the only known locality for this species in the Sierra de Tamaulipas, ca. 14 km SW of Soto La Marina on the “old” Highway 70 (Farr et al., 2009). The specimen is an adult male found in tropical deciduous forest. The boundaries of the municipalities of Aldama and Casas are 400 and 600 m from this locality, respectively, and thus the presence of this species in tropical deciduous forest at these municipalities can be anticipated.

### Family: Dactyloidae

***Anolis carolinensis* Voigt, 1832.** VALLE HERMOSO: Ciudad de Valle Hermoso (25.678787°N, -97.824717°W), elev. 18 m; 3 May 2015; Víctor M. Pérez-Hernández; UTADC-8527 and UTA DC-8528. The photo vouchers of this individual are the first to confirm the occurrence of this species in the state (see Conant and Collins, 1991), and represent a range extension of ca. 50 km to the SW from the closest known locality in Cameron County, Texas, United States (Dixon, 2000). The lizard was photographed in a courtyard, where the species has been known to occur for at least 10 years (V. Pérez-Hernández, pers. comm.). Additional individuals have been observed in the city of Matamoros.

***Norops sagrei* Duméril & Bibron, 1837.** ALTAMIRA: Ciudad de Altamira (22.395905°N, -97.935582°W), elev. 12 m; 13 December 2015; Francisco E. Leyto-Delgado; CAR-ITCV 215. MADERO: Ciudad de Madero (22.251861°N, -97.854339°W), elev. 21 m; 9 May 2015; Sergio A. Terán-Juárez; CAR-ITCV 231. These specimens represent new records for the state, and a range extension of 580 km to the NW from the closest known locality we are aware of in Mexico, ca. 1 km N of Minatitlán, Veracruz (Zamora-Abrego et al., 2006). *Norops sagrei* is an invasive species that has received little attention in Mexico. Currently, stable populations are known to occur in several southern states in the country, including Quintana Roo, Campeche, Tabasco (Lee, 1996), and Veracruz (Vogt et al., 1997; Zamora-Abrego et al., 2006). Additionally, museum records include specimens from the states of Chiapas (Muñoz-Alonso and March, 2003; Escobar-Ocampo et al., 2006) and Yucatán (Gómez-Escamilla, 2004). Thus, Tamaulipas is the seventh state from which the presence of this lizard has been confirmed, and Altamira is the northernmost locality for this species in Mexico. Numerous individuals have been observed in abandoned lots and gardens in the urban areas of these municipalities, as well as in the municipality of Tampico. Interviewees indicated that this species first was observed in this region about four years ago.

***Norops sericeus* Hallowell, 1856.** GONZÁLEZ: Cerro Pedregoso (23.098443°N, -98.353414°W), elev. 760 m; December 2003; Gilberto Herrera-Patiño; CAR-ITCV 97. VICTORIA: Cañón de la Peregrina (23.773005°N, -99.250433°W), elev. 454 m; 28 March 2014; Sergio A. Terán-Juárez, Francisco E. Leyto-Delgado, and Ernesto A. García-Cárdenas; CAR-ITCV 174. These specimens represent new records for each municipality, although the one for the municipality of Victoria confirms a visual report from Cañón del Novillo (Terán-Juárez, 2006). CAR-ITCV 174 was collected in a riparian habitat, and represents a range extension of 63 km to the SW of the northernmost locality, ca. 13 km SE Padilla (Martin, 1958; Lee, 1983). CAR-ITCV 97 was found in pine-oak forest, and this specimen extends the distributional range ca. 14 km to the SE of Acuña, in the Sierra de Tamaulipas (Martin, 1958).

### Family Phrynosomatidae

***Sceloporus parvus* Smith, 1934.** JAUMAVE: Ejido La Asunción (= La Chona) (23.742135°N, -99.330929°W), elev. 1,698 m; 5 May 2014; Víctor M. Pérez-Hernández, Francisco E. Leyto-Delgado, Aldair A. Morales-García, Alejandro A. Pedraza-Méndez, José G. Reyna-Cabrera, and Víctor E. Rodríguez-Maldonado; UTADC-8508. This photo voucher represents a new municipality record, and a range extension of ca. 63 km to the N of La Joya de Salas (Martin, 1958). The individual was observed in pine forest.

### Family Xantusidae

***Lepidophyma micropholis* Walker, 1955.** GÓMEZ FARÍAS: Cueva del Tigre (23.038056°N -99.162519°W), elev. 317 m; 12 August 2010; Elí García-Padilla; UTADC-8515. This photo voucher represents a new municipality record, with a range extension of 45 km to the N from the closest known locality at Gruta de Quintero, in the municipality of Mante (Bezy and Camarillo, 2002). Moreover, this record represents the northernmost locality for this species (Bezy and Camarillo, 2002). The individual was found inactive in a hole inside a cave, in tropical deciduous forest.

## Reptilia: Squamata (snakes)

### Family Boidae

***Boa imperator* Linnaeus, 1758.** GONZÁLEZ: 5.5 km SE of González, on Hwy 80 (22.793056°N, -98.394294°W), elev. 87 m; 24 July 2013; Sergio A. Terán-Juárez; CAR-ITCV 169 (head only). The occurrence of this species in Tamaulipas is widely accepted, although its distribution has not been documented in detail in the state. Records have been published from Soto La Marina, Jaumave (Farr et al., 2007), as well as from Gómez Farías (Martin, 1958). In addition, the species is known from the municipalities of Aldama, Altamira, Llera, Nuevo Morelos, and Xicoténcatl (Flores-Villela, 1998; Lazcano, 1999).

### Family Colubridae

***Lampropeltis mexicana* (Garman, 1884).** BUSTAMANTE: 3 km W of Bustamante (23.432631°N, -99.790961°W), elev. 1,981 m; 4 September 2014; Sergio I. Yobal-Gallardo; UTADC-8512. This photo voucher represents a new municipality record, and a range extension of ca. 16 km to the SW of the closest known locality in Miquihuana (Loveridge, 1924). This record is only the third for the state; to date this species has been reported from xerophytic valleys and canyons in the municipalities of Jaumave, Miquihuana and Bustamante.

***Oxybelis aeneus* (Wagler, 1824).** VICTORIA: Cañón del Novillo (23.696932°N, -99.195178°W), elev. 399 m; 27 April 2004; Miguel A. Terán-Juárez; UTADC-8509. El Huizachal (23.593297°N, -99.242550°W), elev. 907 m; 31 May 2014; Aldair A. Morales-García, Francisco E. Leyto-Delgado, Sergio A. Terán-Juárez, and Ernesto A. García-Cárdenas; UTADC-8510. These photo vouchers represent the first records to confirm the occurrence of this species in this municipality, as the original voucher specimen presumably is lost (Farr et al., 2013). UTADC-8510 represents the northernmost record for Tamaulipas, and a range extension of ca. 65 km to the N of Pano Ayuctle (= El Azteca), in the municipality of Gómez Farías (Martin, 1958). The two localities reported for the municipality of Casas by Farr et al. (2013) actually are in the municipality of Soto La Marina; each of these localities is ca. 7 km from the border with the municipality of Casas.

### Family Dipsadidae

***Rhadinaea gaigeae* Bailey, 1937.** CASAS: Rancho San Miguel (23.176910°N, -98.333565°W), elev. 900 m; November 2004; Gilberto Herrera-Patiño; CAR-ITCV 107. VICTORIA: ca. 400 m S of Pino Solo, on a dirt road (23.623864°N, -99.244352°W), elev. 1,606 m; 22 November 2014; Ernesto A. García-Cárdenas, Francisco E. Leyto-Delgado, and Sergio A. Terán-Juárez; CAR-ITCV 208. CAR-ITCV 107 represents a new record for the municipality of Casas. CAR-ITCV 208 is the first museum record that confirms the occurrence of this species from the municipality of Victoria (the voucher specimen presumably is lost; Farr et al., 2013); it also represents the northernmost record for this species in Tamaulipas, and a range extension of 54 km to the N from the closest known locality, at ca. 4 km N of Rancho del Cielo (Martin, 1958).

### Family Elapidae

***Micrurus tamaulipensis* Lavin-Murcio and Dixon, 2004.** CASAS: Ejido Eduardo Benavides (23.155298°N, -98.345111°W), elev. 829 m; July 2004; Gilberto Herrera-Patiño; CAR-ITCV 103. Ejido Eduardo Benavides (23.155833°N, -98.344722°W), elev. 835 m; July 2008; Erick Rodríguez; CAR-ITCV 190. These two specimens represent a new municipality record, and a range extension of ca. 5 km to the N from the closest known locality, at Rancho La Saucedá in the municipality of González (Lavin-Murcio and Dixon, 2004). Previously, this species was known only from Hacienda Acuña, in the municipality of Llera, and from Rancho La Saucedá, in the municipality of González (Lavin-Murcio and Dixon, 2004). This note represents the third municipality record for this species in Tamaulipas; we are aware of an additional individual found in the municipality of Casas, at Rancho San Miguel (23.176910°N, -98.333565°W), ca. 2.5 km NE of Ejido Eduardo Benavides (G. Herrera-Patiño, unpublished). CAR-ITCV 103 was killed by local people and CAR-ITCV 190 was found dead on a dirt road.

### Family Typhlopidae

***Indotyphlops braminus* (Daudin, 1803).** OCAMPO: 2.3 km SE of Ejido Canoas (22.895057°N, -99.360819°W), elev. 397 m; 25 October 2013; Sergio A. Terán-Juárez; CAR-ITCV 163. This specimen represents a new municipality record, and a range extension of ca. 43 km to the NW of the only known locality in Tamaulipas, Hwy 85, ca. 4 km S of Ciudad Mante (Farr et al., 2013). The snake was found active at night on the side of a dirt road, which passed through fields of sugarcane interspersed with remnants patches of tropical deciduous forest.

### Family Viperidae

***Crotalus molossus* (Gloyd, 1936).** JAUMAVE: Carabanchel (23.3225°N -99.2780°W), elev. 2,003 m; 23 May 2010; Jean Louis Lacaille-Muzquiz and Arnulfo Moreno-Valdez; UTADC-8501. This photo voucher represents a new municipality record, and the first confirmed record from El Cielo Biosphere Reserve (Sierra de Guatemala) (Farr et al., 2013). The closest known locality is 31.5 km to the W, at 7 km N of Palmillas, in the municipality of Palmillas (Burchfield et al., 1982). The specimen was found in dry oak-pine forest, coiled and basking on the side of a dirt road.

***Crotalus totonacus* Gloyd and Kauffeld, 1940.** VICTORIA: ca. 1 km W of Rancho El Tejocote (La Reja) (23.689446°N, -99.282907°W), elev. 1,341 m; 21 March 2010; Leccinum J. García-Morales; UTADC-8505. Cañón de la Peregrina (23.7708°N, -99.2605°W), elev. 492 m; 4 November 2012; Arnulfo Moreno-Valdez; UTADC-8502. GONZÁLEZ: Cerro del Bernal (22.755278°N, -98.578611°W), elev. 280 m; 7 January 2009; Jean Louis Lacaille-Muzquiz; UTADC-8503. These photo vouchers represent new municipality records; UTADC-8505 and UTADC-8502 represent a range extension of ca. 80 km from the closest known locality at Gómez Farías (Martin, 1958), and UTADC-8503 represents a range extension of ca. 70 km from the closest known locality near Rancho Nuevo, Aldama (USNM-209855; www.vertnet.org; accessed 19 May 2015).

***Crotalus lepidus* Kennicott, 1861.** GÜEMEZ: Las Chinas (23.864440°N, -99.452432°W), elev. 2,610 m; 11 November 2005; Leccinum J. García-Morales; UTADC-8504. This photo voucher represents a new municipality record, and a range extension of ca. 88 km to the N from the closest known locality at Rancho del Cielo (Martin, 1958). The rattlesnake was photographed early in the morning, while it was sunning on a rock in oak forest (*Quercus mexicana*).

**Acknowledgments.**—We thank to Ernesto A. García-Cardenas, Víctor M. Pérez-Hernández, Carlos A. Flores-Torres, Aldair A. Morales-García, Gustavo Arnaud-Franco, Marcio Martins, and Emiliano Méndez-Salinas, for field assistance. We also thank Fernando Eligio, Arnulfo Moreno-Valdez, Jean Louis Lacaille Múzquiz, Erick Rodríguez, Sergio I. Yobal-Gallardo, Antonio Guerra-Pérez, and Miguel A. Terán-Juárez for logistical support. We are indebted to Louis W. Porras for helping us improve the manuscript, and to Carl Franklin for kindly providing the photo voucher numbers.

## LITERATURE CITED

- BEZY, R. L., AND J. L. CAMARILLO R. 2002. Systematics of xantusid lizards of the genus *Lepidophima*. *Contributions in Science* 493: 1–41.
- BRYSON R. W., JR., AND M. R. GRAHAM. 2010. A new alligator lizard from northeastern Mexico. *Herpetologica* 66: 92–98.
- BURCHFIELD, P. M., T. F. BEIMLER, AND C. S. DOUCETTE HAIRSTON. 1982. A range extension for *Crotalus molossus nigrescens* in Tamaulipas, Mexico. *Herpetological Review* 13: 131–132.
- CAMPBELL, J. A., AND D. R. FROST. 1993. Anguid lizards of the genus *Abronja*: revisionary notes, descriptions of four new species, a phylogenetic analysis, and key. *Bulletin of the American Museum of Natural History* 216: 1–121.
- CAMPBELL, J. A., J. W. STREICHER, C. L. COX, AND E. D. BRODIE, JR. 2014. A new salamander of the genus *Chiropterotriton* (Caudata: Plethodontidae) from the Sierra Madre Oriental of Tamaulipas, Mexico. *South American Journal of Herpetology*. 9: 228–234.
- CONANT, R., AND J. T. COLLINS. 1991. *A Field Guide to Reptiles and Amphibians of Eastern and Central North America*. Houghton Mifflin, Boston, Massachusetts, United States.
- DIXON, J. R. 2000. *Amphibians and Reptiles of Texas: With Keys, Taxonomic Synopses, Bibliography, and Distribution Maps*. Texas A&M University Press, College Station, Texas, United States.
- ESCOBAR-OCAMPO, M. C., J. E. MORALES-PÉREZ, E. HERNÁNDEZ-GARCÍA, J. GUZMÁN-HERNÁNDEZ, A. RIECHERS-PÉREZ, AND E. E. ESPINOZA-MEDINILLA. 2006. Sistematización de las Colecciones Científicas del Instituto de Historia Natural y Ecología, (IHNE) Chiapas. Instituto de Historia Natural y Ecología. Bases de datos SNIB-CONABIO. IHNE\_Vertebrados proyectos No. V050, L018 y P060, México, D.F., Mexico.
- FARR, W. L., P. A. LAVÍN-MURCIO, AND D. LAZCANO. 2007. New distributional records for amphibians and reptiles from the state of Tamaulipas, México. *Herpetological Review* 38: 226–233.
- FARR, W. L., D. LAZCANO, AND P. A. LAVÍN MURCIO. 2009. New distributional records for amphibians and reptiles from the state of Tamaulipas, México II. *Herpetological Review* 40: 459–467.
- FARR, W. L., D. LAZCANO, AND P. A. LAVÍN MURCIO. 2013. New distributional records for amphibians and reptiles from the state of Tamaulipas, México III. *Herpetological Review* 44: 631–645.
- FLORES-BENABIB, J., AND O. FLORES-VILLELA. 2008. Nuevo registro estatal de *Leptotyphlops goudotii* en Tamaulipas. *Boletín de la Sociedad Herpetológica Mexicana* 16: 13–14.
- FLORES-VILLELA, O. 1998. Formación de Una Base de Datos y Elaboración de Un Atlas de la Herpetofauna de México. Universidad Nacional Autónoma de México. Facultad de Ciencias. Bases de datos SNIB-CONABIO proyecto No. A014, México, D.F., Mexico.
- GARCÍA-PADILLA, E., AND W. L. FARR. 2010. Geographic Distribution. *Anelytropis papillosus* (Mexican Blind Lizard). *Herpetological Review* 41: 511.
- GARCÍA-PADILLA, E., AND F. VILLEGAS-RUIZ. 2010. Geographic Distribution. *Gerrhonotus ophiurus* (Snake Lizard). *Herpetological Review* 41: 512.
- GÓMEZ-ESCAMILLA, M. 2004. Anfibios, Reptiles y Mamíferos del Corredor Biológico del Norte de Yucatán Depositados en las Colecciones de la Escuela Nacional de Ciencias Biológicas. Instituto Politécnico Nacional. Escuela Nacional de Ciencias Biológicas. Bases de datos SNIB-CONABIO proyecto No. Y013, México, D.F., Mexico.
- INEGI (INSTITUTO NACIONAL DE ESTADÍSTICA Y GEOGRAFÍA). 2013. Continuo de Elevaciones Mexicano 3.0 (CEM 3.0). ([www.inegi.org.mx/geo/contenidos/datosrelieve/continental/descarga.aspx](http://www.inegi.org.mx/geo/contenidos/datosrelieve/continental/descarga.aspx); accessed 10 May 2015).
- IVERSON, J. B., AND J. F. BERRY. 1979. The mud turtle genus *Kinosternon* in Northeastern Mexico. *Herpetologica* 35: 318–324.
- LAVIN-MURCIO, P. A., AND J. R. DIXON. 2004. A new species of Coral Snake (Serpentes: Elapidae) from the Sierra de Tamaulipas, Mexico. *Phyllomedusa* 3: 3–7.
- LAZCANO V., D. 1999. Anfibios y Reptiles del Estado de Tamaulipas, México. Universidad Autónoma de Nuevo León, Facultad de Ciencias Biológicas, Bases de datos SNIB-CONABIO proyecto No. H104, México D.F., Mexico.
- LEE, J. C. 1983. *Anolis sericeus*. *Catalogue of American Amphibians and Reptiles* 340.1–2.
- LEE, J. C. 1996. *The Amphibians and Reptiles of the Yucatán Peninsula*. Comstock Publishing Associates, Cornell University Press, Ithaca, New York, United States.
- LEGLER, J. M., AND R. C. VOGT. 2013. *The Turtles of Mexico: Land and Freshwater Forms*. University of California Press, California, United States.
- LOVERIDGE, A. 1924. A new snake of the genus *Lampropeltis*. *Occasional Papers of the Boston Society of Natural History* 5:137–139.
- MARTIN, P. S. 1958. A biogeography of reptiles and amphibians in the Gómez Farías region, Tamaulipas, Mexico. *Miscellaneous Publications of the Museum of Zoology, University of Michigan* 101: 1–102.
- MCCRANIE, J. R., F. KÖHLER, A. GUTSCHE, AND L. VALDÉS-ORELLANA, 2013. *Trachemys grayi emolli* (Testudines, Emydidae) in Honduras and its systematics relationships based on mitochondrial DNA. *Zoosystematics and Evolution, Museum für Naturkunde* 89: 21–29
- MUÑOZ-ALONSO, L. A., AND I. J. MARCH M. 2003. Actualización y Enriquecimiento de las Bases de Datos del Proyecto de Evaluación y Análisis Geográfico de la Diversidad Faunística de Chiapas. El Colegio de la Frontera Sur. Bases de datos SNIB-CONABIO proyectos No. U014 y P132, México, D.F., Mexico.
- STUART S. N., M. HOFFMANN, J. S. CHANSON, N. A. COX, R. J. BERRIDGE, P. RAMANI, AND B. E. YOUNG. 2008. *Threatened Amphibians of the World*. Lynx Edicions, Barcelona, Spain; IUCN, Gland, Switzerland; Conservation International, Arlington, United States, Barcelona, Spain.
- TERÁN-JUÁREZ S. A. 2006. Nuevo registro de *Norops sericeus* Hallowell 1856 (Sauria: Polychrotidae) en el Área Natural Protegida “Altas Cumbres” en la Sierra Madre Oriental de Tamaulipas. *TecnoINTELECTO* 3: 6–7.
- TERÁN-JUÁREZ, S. A., AND E. GARCÍA-PADILLA. 2014. Geographic Distribution. *Agkistrodon taylori* (Taylor’s cantil). *Herpetological Review* 45: 284.

VOGT, R. C., J. L. VILLARREAL-BENÍTEZ, AND G. PÉREZ-HIGAREDA. 1997. Lista anotada de anfibios y reptiles. Pp. 507–522 In E. González-Soriano, R. Dirzo, and R. C. Vogt (Eds.), *Historia Natural de Los Tuxtlas*. Instituto de Biología, UNAM; Instituto de Ecología, UNAM; and Comisión Nacional para

el Conocimiento y Uso de la Biodiversidad (CONABIO); México, D.F., Mexico

ZAMORA-ABREGO, J. G., U. O. GARCÍA-VÁZQUEZ, L. CANSECO-MÁRQUEZ, AND A. NIETO MONTES DE OCA. 2006. Geographic Distribution. *Anolis sagrei* (Brown Anole). *Herpetological Review*. 37: 493.

**SERGIO A. TERÁN-JUÁREZ<sup>1</sup>, ELÍ GARCÍA-PADILLA<sup>2</sup>, FRANCISCO E. LEYTO-DELGADO<sup>3</sup>, AND LECCINUM J. GARCÍA-MORALES<sup>4</sup>**

<sup>1</sup>*División de Estudios de Posgrado e Investigación. Instituto Tecnológico de Ciudad Victoria, Boulevard Emilio Portes Gil No. 1301, C.P. 87010, Ciudad Victoria, Tamaulipas, Mexico. Email: sergioatj@gmail.com*

<sup>2</sup>*Av. Panamericana # 240 Colonia Pedregal de Carrasco, Delegación Coyoacán, México D.F. 04700, Mexico. E-mail: quetzalcoatl86@gmail.com*

<sup>3</sup>*Instituto Tecnológico de Ciudad Victoria, Boulevard Emilio Portes Gil No. 1301, C.P. 87010, Ciudad Victoria, Tamaulipas, Mexico.*

<sup>4</sup>*Departamento de Investigación, Museo de Historia Natural de Tamaulipas, TAMUX, Boulevard Fidel Velázquez M1, L1, C.P. 87030, Ciudad Victoria, Tamaulipas, Mexico. Email: lexgarcia@yahoo.com*

## **Records for the Mourning Gecko (*Lepidodactylus lugubris*) and its expansion in Costa Rica**

The Mourning Gecko, *Lepidodactylus lugubris*, a native of south Asia and the Pacific islands, has been introduced in many parts of the world through urbanization and human activities, as have other geckos primarily of the genus *Hemidactylus* (Savage, 2002; Köhler, 2003; Bauer et al., 2007). The spread of *L. lugubris* likely has been facilitated by its parthenogenetic reproductive strategy, as well as by the high resistance of its eggs to desiccation and salt-water spray (Cuellar and Kluge, 1972; Brown and Duffy, 1992; Hanley et al., 1994; Sierra et al., 2012). These traits make *L. lugubris* an ideal disperser, and this species has had a long presence in the Americas; its introduction has been attributed to the abundance of cargo ships crossing the Pacific Ocean, especially after the opening of the Panama Canal, and also as a consequence of repeated colonization events from different sources at numerous localities (Smith and Grant, 1961; Ineich, 1999; Daza et al., 2012). In the New World, *L. lugubris* primarily has been introduced into coastal areas of Mexico, Nicaragua, Costa Rica, Panama, Colombia, Ecuador, the Galapagos Islands, Peru, Chile, Venezuela, Suriname, and Guadeloupe (Villa, 1993; Sengoku, 1998; Savage, 2002; Bauer et al., 2007; Guerreiro and Graterol, 2011; Lorvelec et al., 2011; Daza et al., 2012; Uetz, 2013).

The herpetofauna of Costa Rica has been well documented (Savage, 2002; Sasa et al., 2010), and six species of non-native lizards (*Ctenonotus cristatellus*, *L. lugubris*, *Norops sagrei*, *Hemidactylus frenatus*, *H. garnotii*, and *H. mabouia*) have been introduced into the country (Bolaños et al., 2011). To date, no concerted effort has been made to document the expansion of these nonnative species, and by understanding their distribution and rate of expansion it may be possible to begin addressing their impacts on native species. With regard to *L. lugubris*, only a general idea of its distribution in Costa Rica is available due to the few records in the country, the dispersal of this information, and the lack of a monitoring program for introduced geckos. Consequently, the distribution of this invasive species remains unclear, and the purpose of this note is to conduct a review of all available records of *L. lugubris* from two national zoological museums (Universidad de Costa Rica, Universidad Nacional), literature reports, collections linked to the Global Biodiversity Information Facility (GBIF, 2013), and published and unpublished records to obtain their geographic coordinates and generate a new locality map using R version 3.1.3 (R Development Core Team, 2015) with the package ggplot2 (Wickham, 2009). This information will help better understand the extent of invasion of *L. lugubris* in Costa Rica, and provide new information for future studies with introduced geckos.