

NEW DISTRIBUTIONAL RECORDS OF TREEFROGS (AMPHIBIA: HYLIDAE) FROM GUERRERO, MEXICO

NUEVOS REGISTROS DE DISTRIBUCIÓN DE RANAS ARBORÍCOLAS (AMPHIBIA: HYLIDAE) DE GUERRERO, MÉXICO

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Received: 2024-10-31. Accepted: 2025-01-21. Published: 2025-05-05.

Editor: Ernesto Raya García, México.

Hylid frogs represent one of the most diverse and important biotical components of Mexican herpetofauna and contribute more species and endemism than any other anuran family in the country (Parra-Olea et al., 2014; Johnson et al., 2017). The southern state of Guerrero, harbors 25 hylid species, and seven of them are restricted to the region (Palacios-Aguilar & Flores-Villela, 2018; Kaplan et al., 2020; Bautista-del Moral et al., 2021). Here, we present new geographic records of three species of hylid treefrogs with restricted distributions in the state of Guerrero, Mexico.

The information presented herein is product of our fieldwork or shared by colleagues. Coordinates were taken by handheld GPS devices, distances between sites are expressed as airline kilometers, and map datum is WGS-84. Specimens are deposited at the herpetological collections of the University of Texas at Arlington (UTA A), Colección Nacional de Anfibios y Reptiles, (CNAR-IBH), or accessioned as photographic vouchers at the digital collection of the Museo de Zoología “Alfonso L. Herrera”, Universidad Nacional Autónoma de México (MZFC-IMG).

***Sarcohyla toyota* (Toyota's Treefrog).**

This species of treefrog was initially reported as *Hyla thorectes* by Duellman (2001), based on specimens from the road to Puerto del Gallo, north of Atoyac, Guerrero. The species was subsequently included in the molecular phylogenetic tree of Faivovich et al. (2005) and recognized as an undescribed taxon related to *S. thorectes* until Grünwald et al. (2019) described it. Currently, the species is only known from a handful of specimens from the surroundings of the type locality.

On 30 June 2004, a specimen of *S. toyota* (UTA A-62031, Figure 1B) was obtained by Eric N. Smith at Municipality of Coyuca de Catalán, Carretera Vallecitos-El Durazno (17.79033° N, 101.09989° W), 1,886 m a.s.l. The specimen is an adult male, found calling on a leaf 2 m above the edge of a small stream. This record extends the known distribution 102.4 km WNW from the type locality at 11.4 km (by road) SW of Puerto del Gallo, Municipio de Atoyac de Álvarez, 2,020 m a.s.l. (Grünwald et al., 2019).

***Sarcohyla chryses* (Golden Treefrog).**

This species was originally described from specimens obtained near Puerto Chico and El Asoleadero, two lumber camps located W of the city of Chilpancingo (Adler, 1965), and from Carrizal de Bravo, near the type locality (Mendelson & Toal, 1996). Despite being known from more than half a century, currently known localities and specimens have been obtained within a 10 km radius of the type locality (Mendelson & Toal, 1996; Kaplan et al., 2016).

On 11 May 2019 an adult specimen (MZFC-IMG 58, Fig. 1C) was found about 100 m inside a cave near El Calvario (17.45916° N, 99.50745° W), Municipio de Chilpancingo de los Bravo, 1,926 m a.s.l. No other specimens were found outside the cave, but several tadpoles we presume belong to the species were observed in a small pool inside the cave. The new locality extends the species range by 37.8 km E from the nearest published locality at 5.5 km SW Carrizal de Bravo, 2,523 m a.s.l (Mendelson & Toal, 1996) and is the first outside of the surroundings of the type locality.

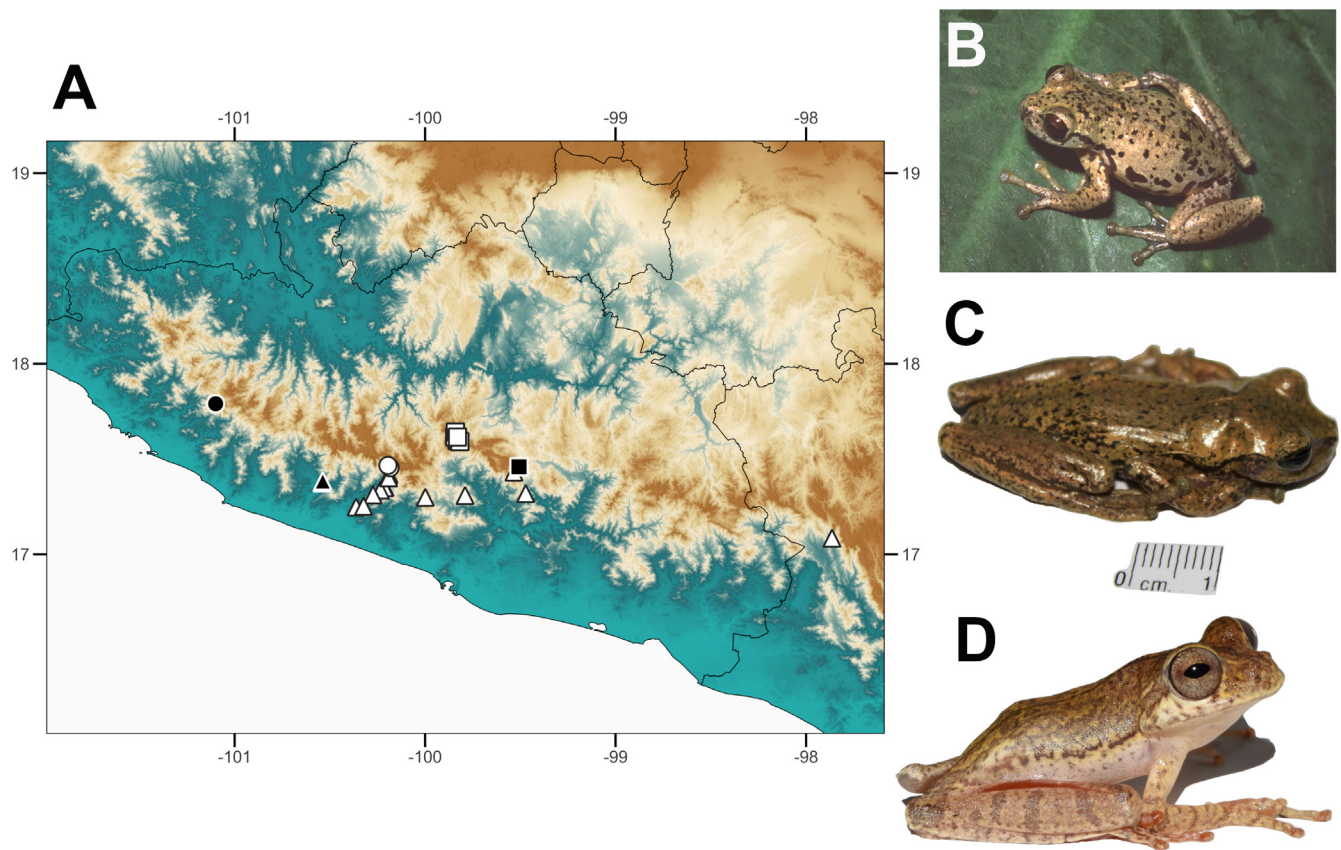


Figure 1. Geographic distribution (A) of the species mentioned in the text. Circles correspond to *Sarcohyla toyota* (B), squares to *S. chryses* (C), and triangles to *Charadrahyla pinorum* (D). White symbols represent previous known localities, black symbols correspond to the new records reported herein. Photos (B) Eric N. Smith, (C) Enrique Vázquez Arroyo, (D) F. Sebastian Palacios Resendiz.

Figura 1. Distribución geográfica (A) de las especies mencionadas en el texto. Los círculos corresponden a *Sarcohyla toyota* (B), cuadros a *S. chryses* (C) y triángulos a *Charadrahyla pinorum* (D). Los símbolos blancos representan localidades previamente conocidas, símbolos negros corresponden a los nuevos registros aquí reportados. Fotos: (B) Eric N. Smith, (C) Enrique Vázquez Arroyo, (D) F. Sebastian Palacios Resendiz.

***Charadrahyla pinorum* (Pine Wood Treefrog).**

This species was described from Agua de Obispo, a spring located next to the old Mexico-Acapulco highway in the ecotone between pine and tropical semievergreen forests (Taylor, 1937; Lips et al., 2004). It is distributed from several mid-elevation localities in the central portion of the Sierra Madre del Sur of Guerrero and a disjunct locality in extreme eastern Oaxaca (Duellman, 2001).

Six male specimens (CNAR-IBH 36397-401, Fig. 1D) were found calling on vegetation on the edge of a stream in a

tropical semideciduous forest patch surrounded by grassland on 26 December 2021 at El Ocotal, ejidal land of Rio Chiquito, municipality of Tecpan de Galeana (17.37624° N, 100.54104° W), 658 m a.s.l. and 1 km N on 27 December 2021 (17.38545° N, 100.53766° W; CNAR-IBH 36457). These are the westernmost recorded localities, extending its known distribution 23.5 km WNW from the nearest records at 1 km SW San Andrés de la Cruz (Duellman, 2001).

The checklist of Palacios-Aguilar & Flores-Villela (2018) set the elevation interval of the species (as *Exerodonta pinorum*) at

700–1820 m. This statement was based on the locality data of a specimen (UTA A-4113) collected by Jonathan A. Campbell on 22 May 1974 “WNW of Chilpancingo, 29.7 km W of Asoleadero (17.4867°N, -100.2430°W), 1820 m”. However, the correct locality information of this specimen is “8.6 mi (by road) N from San Vicente (17.352°N, 100.211°W), 842 m”. Duellman (2001) reported a specimen from “2 km N Mazatlán on Mexican Hwy. 95, then 13 km W (by dirt road) Sierra Madre del Sur” (MVZ 146861). Following this verbatim locality, the specimen apparently was secured near the town of El Tejocote, at 2,185 m a.s.l. (estimated coordinates at 17.4316°N, 99.5339°W). However, based on our field observation and collections at the zone and its surroundings, the presence of the species or suitable habitat for it seems unlikely. Thorough much of its distribution the species is associated with mid-elevations (650–1,400 m) and tropical semievergreen forest, or its ecotone with pine forest; whereas the habitat on the inner slopes of the Sierra at El Tejocote and the highlands west of the city of Chilpancingo harbor dry tropical deciduous forest, pine forest, or pine-oak forest. After a revision of museum specimens and fieldwork, we consider that the highest locality known for the species correspond to an uncatalogued specimen (RPA 1348) collected at Municipality of Chilpancingo de los Bravo, Arroyo bajo campamento La Cima, San Cristóbal (17.29921°N, 99.99928°W), 1,632 m a.s.l on 11 May 2024.

The knowledge on the distribution and diversity of hylid frogs in Guerrero has grown considerably in the last decade, owing to recent explorations, revision of specimens at scientific collections, or taxonomic treatments (e.g., Palacios-Aguilar et al., 2018; Grünwald et al., 2019; Kaplan et al., 2020; Bautista-del Moral et al., 2021; Vázquez-Arroyo et al., 2023). Most of these new records, as the ones reported herein, have been obtained in the highlands of the Sierra Madre del Sur. Given the role that highlands have played in the speciation processes of Neotropical amphibians (Rovito, 2017), it is to be expected that this trend will continue as previously under-sampled areas began to become accessible to researchers

Acknowledgements. – We would like to thank to Diana L. Fuentes de la Rosa for her help accessioning photographic vouchers at MZFC-IMG. Jonatan A. Campbell was extremely generous by sharing the photograph and data of *S. toyota*, and Eric N. Smith provided body measurements of it. Enrique Vázquez Arroyo kindly took and shared the photograph of *S. chryses*. Fieldwork was conducted under collecting permits issued by Secretaría de Medio Ambiente y Recursos Naturales, División de Vida Silvestre with an extension to RPA.

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