

# FIRST RECORD OF THE ZONGOLICA EARTH SNAKE *GEOPHIS LORANCAI* (SQUAMATA: DIPSADIDAE) IN THE STATE OF OAXACA, MEXICO

## PRIMER REGISTRO DE LA SERPIENTE MINERA DE ZONGOLICA *GEOPHIS LORANCAI* (SQUAMATA: DIPSADIDAE) EN EL ESTADO DE OAXACA, MÉXICO

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**Resumen.**– Reportamos el primer registro de la serpiente *Geophis lorancai* para el estado mexicano de Oaxaca. La especie se conocía previamente solamente de las localidades tipo en la Sierra de Zongolica en Veracruz y la Sierra de Quimixtlán en Puebla, así como de algunas localidades adicionales descubiertas más recientemente en el centro de Veracruz. El hallazgo de *G. lorancai* en el estado de Oaxaca eleva la lista de la herpetofauna estatal a 481 especies al año 2022.

**Palabras claves.**– Serpiente minera de Zongolica, primer registro estatal, Oaxaca, México.

**Abstract.**– We report the first record of the snake *Geophis lorancai* for the Mexican state of Oaxaca. The species was previously known only from the type localities in the Sierra de Zongolica in Veracruz and the Sierra de Quimixtlán in Puebla, as well as from some additional recently-discovered localities in central Veracruz. The discovery of *G. lorancai* in Oaxaca brings the state herpetofaunal list up to 481 species as of 2022.

**Key words.**– Zongolica miner snake, first state record, Oaxaca, Mexico.

The Zongolica Miner Snake *Geophis lorancai* (Canseco-Márquez et al., 2016), is a species endemic to Mexico, characterized by being medium-sized (largo hocico-cloaca, LHC: 268 mm), with a robust body, a head easily distinguished from the elongate body, with an oval snout, and small eyes; the coloration of the head up to the 12th mid-dorsal scale is black, the rest of the body up to the tail has black bands on an orange or reddish background color. It is a species of fossorial habits and can be found in microhabitats such as leaf litter and under rotten trunks. This snake is known to inhabit montane cloud forest and pine-oak forest association

ecotone sites, as well as secondary vegetation (Canseco-Márquez et al., 2016; Domínguez-Mendoza et al., 2021).

*Geophis lorancai* has been registered previously in the state of Puebla in the municipality of Chichiquila and in Veracruz in the municipalities of Los Reyes, Zongolica (Canseco-Márquez et al., 2016), Mixtla de Altamirano, San Juan Texhuacán, and Tequila (De La Torre-Loranca et al., 2020), and Coscomatepec (Domínguez-Mendoza et al., 2021); the known elevational range





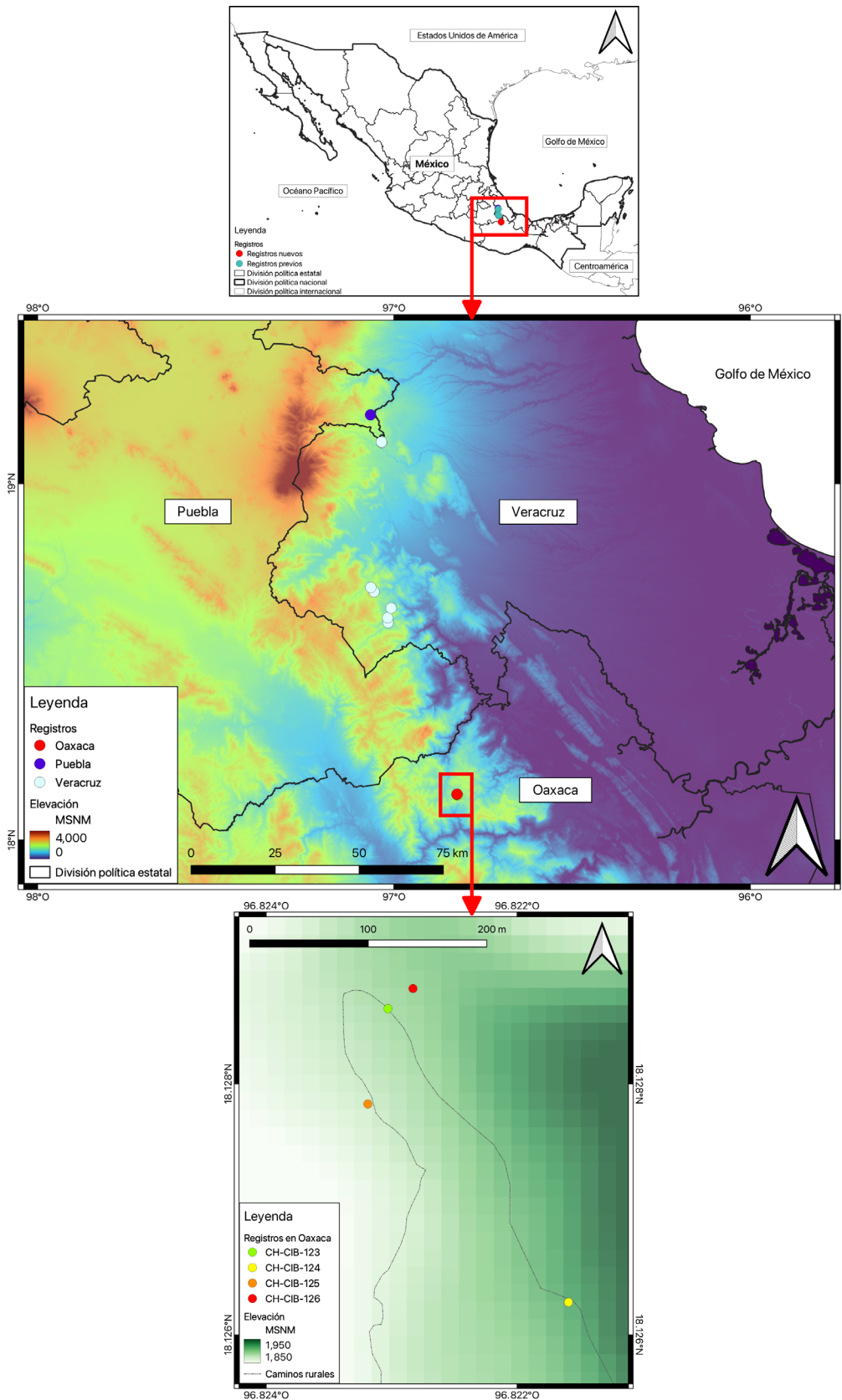
**Figura 1.** Individuo de *Geophis lorancai* en las inmediaciones de Huautla de Jiménez, Oaxaca, encontrado muerto por pobladores locales (CH-CIB 126). Foto: Elia Yesenia Arrazola-García.  
**Figure 1.** An individual of *Geophis lorancai* from the vicinity of Huautla de Jiménez, Oaxaca, found dead by local villagers (CH-CIB 126). Photo: Elia Yesenia Arrazola-García.



**Figura 2.** Acercamiento a la cabeza de *Geophis lorancai* de las inmediaciones de Huautla de Jiménez, Oaxaca. Nótese la presencia de la escama supraocular que es un carácter diagnóstico de esta especie. Foto: Elia Yesenia Arrazola-García.

**Figure 2.** Close up of the head of *Geophis lorancai* from the vicinity of Huautla de Jiménez, Oaxaca. Note the presence of the supraocular scale which is a diagnostic character of this species. Photo: Elia Yesenia Arrazola-García.





**Figura 3.** Mapa que representa los registros anteriores y nuevos de *Geophis lorancai*. Los círculos azules y blancos representan a los registros previos en Veracruz y Puebla y los círculos dentro del cuadro rojo a los nuevos registros dentro de Oaxaca.

**Figure 3.** Map representing the old and new records of *Geophis lorancai*. The blue and white circles represent the previous records in Veracruz and Puebla and the circles inside the red square the new records within Oaxaca.

is between 1,210 and 1,887 m a.s.l. (Canseco-Márquez et al., 2021.; De La Torre-Loranca et al., 2020).

Herein, we report the first record of *Geophis lorancai* in the state of Oaxaca in southern Mexico. Four individuals were observed and photo-documented by JDPM and EYAG between 2020 and 2021 in the vicinity of Huautla de Jiménez within the cloud forest of the mountain range known as Sierra Mazateca inside the physiographic region known as Sierra Madre de Oaxaca (Mata-Silva et al., 2015). The 4 specimens with the accompanying photo vouchers were deposited in the digital collection of the Centro de Investigaciones Biológicas of the Universidad Autónoma de Hidalgo (CH-CIB 123-126). With the addition of *G. lorancai* to the Oaxaca state list the total of species comprising the herpetofauna of the state is currently 481 (see Mata-Silva et al., 2021).

**Record # 1:** September 18th of 2020, colonia Llano Ocote, Huautla de Jiménez in the municipality of the same name (18.128604° N 96.823025° W; WGS84; 1,895 m a.s.l.). A dead individual was found on the road and badly smashed (CH-CIB 123).

**Record # 2:** 30th of April 2021, colonia Cerro Clarín, Huautla de Jiménez in the municipality of the same name (18.126258° N 96.821588° W; WGS84; 1,926 m a.s.l.). A dead individual was found on the road (CH-CIB 124).

**Record # 3:** 16th May 2021, colonia Llano Ocote, Huautla de Jiménez in the municipality of the same name (18.127835° N 96.823186° W; WGS84; 1,877 m a.s.l.). A dead individual was found on the road (CH-CIB125).

**Record # 4:** 30th de September 2021, colonia Llano Ocote, Huautla de Jiménez in the municipality of the same name (18.128761° N 96.822833° W; WGS84; 1,901 m a.s.l.). An individual recently killed by local villagers who confused the specimen with a coral snake (CH-CIB 126).

All the specimens were identified following the diagnosis available in the original description by Canseco-Márquez et al. (2016) where not just the color patterns coincide but also the scutellation with the presence of the supraocular scale a diagnostic character that distinguished this species from other close congeners such as *G. duellmani*. These records increase the known range of distribution of *G. lorancai* along the southern portion of the Sierra Madre Oriental ca. 57 kilometers from

the nearest records in the vicinity of Zongolica, Veracruz. The municipality of Zongolica Veracruz is close to the border with the state of Oaxaca, so the discovery of *G. lorancai* inside the state of Oaxaca was not unexpected following the corridor of the cloud forest where this species inhabits. Most of the individuals were found dead by local people which draws the attention in terms of the lack of protection and conservations programs inside this anthropogenic context.

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