

NEW ALTITUDINAL RECORD OF *HELODERMA HORRIDUM* (WIEGMANN, 1829) (SQUAMATA: HELODERMATIDAE)

NUEVO REGISTRO ALTITUDINAL DE *HELODERMA HORRIDUM* (WIEGMANN, 1829) (SQUAMATA: HELODERMATIDAE)

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Heloderma horridum (Beaded Lizard) is a venomous lizard of large size distributed along the Pacific Coast of Mexico from Sinaloa to Chiapas, and in lowlands of the states of Estado de México, Morelos and Puebla (Reiserer et al., 2013). The known distribution of this species is mainly associated with lowland tropical forests; however, it occasionally occurs in temperate habitats at high elevation up to 1800 m (Guadarrama et al., 2020). In this study, we extend the altitudinal range of *H. horridum* more than 200 m elevation.

On August 10, 2021 at 15:35 h we observed a juvenile male individual of *H. horridum* in a pine-oak forest at Sierra La Yesca, Nayarit (20.71319° N, 101.28454° W, datum: WGS84, 2108 m elevation; Fig. 1). The specimen measured 340 mm of snout-vent-length. Before capture, we observed the lizard walking on a dirt road ~3 m from the edge of the forest. The individual was released after data collection, nevertheless, we deposited two photographs of the lizard in the digital collection of the Amphibian and Reptile Diversity Research Center of the University of Texas Arlington (UTADC 9739a, b; Fig. 2). The study area has an annual mean temperature of 17.7°C, minimum temperature on the coldest month is 5.7°C, maximum mean temperature of the warmest month is 29.3°C and annual precipitation is 930 mm (climatic data obtain through WorldClim version 2, with 2.5 min resolution; Fick & Hijmans, 2017). The vegetation of the site includes species such as *Pinus lumholtzii*, *P. teocote*, *Quercus castanae*, *Q. eduardii*, *Q. magnifolia*, *Arbustus sp.* and *Calliandra sp.* (Fig. 3).

The closest distribution record of the species is 21 km in straight line. This record was found in a dry forest habitat at an

altitude of 1125 m south of Huajimic (Museum of Comparative Zoology Reptile collection, 6935). On the other hand, the highest elevation record previously documented for this species is 1861 m in the Reserva Estatal Sierra Nanchititla, Estado de México (Monroy-Vilchis et al., 2005). Consequently, our record extends the altitudinal distribution of *H. horridum* by 247 m. Furthermore,

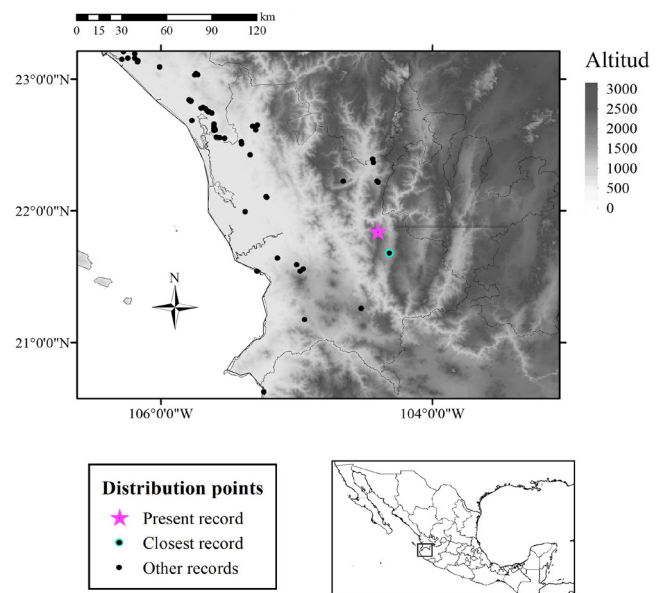


Figure 1. Mapa del presente registro y otros registros de distribución cercanos de *Heloderma horridum* de Nayarit y Sinaloa, México. Datos de distribución obtenidos de VERNET (<http://vertnet.org>, consultada en septiembre, 2021).

Figure 1. Map of the present record and other close distribution records of *Heloderma horridum* from Nayarit and Sinaloa, Mexico. Distribution data obtained through VERNET (<http://vertnet.org>, consulted in September, 2021).



Figura 2. Individuo de *Heloderma horridum* documentado para este trabajo. UTADC 9739a (top); UTADC 9739b (bottom).

Figure 2. Individual of *Heloderma horridum* documented for this study. UTADC 9739a (arriba); B) UTADC 9739b (abajo).

this new record was higher to the maximum elevation range documented in the Helodermatidae family (2089 m; Beckman et al., 2021). Therefore, we present the highest altitudinal record for *H. horridum* and the family Helodermatidae. Nevertheless, further explorations are required for greater elevations, given that there are a considerable number of localities of *H. horridum* around the new present record. Furthermore, these new explorations might be useful to estimate if this species has been shifting its altitudinal range due to climatic change, as observed in other organisms (Chen et al., 2011; Trochet et al., 2018).

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Figura 3. Vista panorámica del bosque de encino-pino en la Sierra de la Yesca, Nayarit (A) y hábitat de *Heloderma horridum* en el sitio registrado (B).

Figure 3. Panoramic view of the oak pine forest in the Sierra de la Yesca, Nayarit (A) and habitat of *Heloderma horridum* in the recorded site (B).

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