GEOGRAPHIC RANGE EXTENSION OF *ABRONIA MELEDONA* TO THE PACAYA VOLCANO, ESCUINTLA, GUATEMALA

EXTENSIÓN DE RANGO GEOGRÁFICO DE *ABRONIA MELEDONA* AL VOLCÁN DE PACAYA, ESCUINTLA, GUATEMALA

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Abronia meledona is an arboreal lizard endemic to Guatemala which is considered as Endangered according to the IUCN red list categories (Ariano-Sánchez et al., 2013). An adult male of *A. meledona* Campbell & Brodie, 1999 was found at 11:00 h on 12 April, 2024 on the northern slope of the Pacaya volcano crater, within Parque Nacional Volcán de Pacaya y Laguna de Calderas (14.3918° N, 90.6040° W; WGS84; 2,252 m a.s.l.). This specimen was measured, photographed (Fig. 1a b; UVGF00094) and subsequently released back into the wild. It had a snout–vent length of 120 mm and a tail length of 170 mm. A second specimen, an adult female, was found on 22 May, 2024, at 15:15 h, approximately 550 m from the first individual (14.3960° N, 90.6016° W; WGS84; 2,163 m a.s.l.). The lizard was lying motionless on the leaf litter (Fig. 1c). It measured 114 mm in snout–vent length, with a tail length of 95 mm (the tip of the tail was regenerated). Upon examination, the specimen showed no visible external injuries but was panting and in a near-death state. A few hours later, it became unresponsive and died of unknown causes. This lizard has been deposited as a voucher specimen at Colecciones Biológicas at Universidad del Valle de Guatemala (UVGR008416), along with a photographic voucher (Fig. 1c, d; UVGF00095). The species' taxonomic identity was confirmed based on diagnostic scale characteristics measured on the preserved specimen, including the presence of 9–11 spinelike supra-auricular scales, black scales on the ventral side of the fingers, a parietal scale in contact with the last median supraocular, and a subocular scale not in contact with the inferior primary temporal scale following Campbell & Brodie (1999) and Sánchez-Herrera et al. (2017). Additionally, coloration patterns of the overall body, head and eyelids were used also for taxonomic determination following Sánchez-Herrera et al. (2017) and Köhler (2003).

Given that a heatwave affected southern Guatemala during May of 2024 and considering the panting behavior observed prior to death of the female specimen (UVGR008416), overheating may have contributed to the mortality, though the exact cause remains undetermined. Both individuals were found in a humid mixed forest dominated by *Cedrela pacayana*, *Ilex discolor*, *Litsea glaucescens*, *Nectandra membranacea*, *Leandra melanodesma*, *Quercus tristis*, and *Q. pacayana*. These records represent the first confirmed occurrence of *A. meledona* in the Escuintla Department and extend the known range 55 km southwest in a straight line from the nearest known localities based on voucher specimens (UTA-R31041–53) from Soledad Grande, Municipality of Jalapa, Jalapa Department (Campbell & Brodie, 1999), and a record from 32 km southwest in a straight line from Las Nubes, Municipality of San José Pinula, Guatemala reported by Acevedo (2023) (Fig. 2).

Unfortunately, the areas surrounding the collection sites are undergoing rapid deforestation and habitat degradation due to agricultural expansion and recurring forest fires. This highlights the urgent need to enhance forest protection and promote habitat restoration in and around Parque Nacional Volcán de Pacaya y Laguna de Calderas. The situation is further aggravated by the extreme isolation of this southernmost population of *A. meledona*, along with the persistent threats of volcanic eruptions and increasingly frequent heat waves intensified by climate change—factors that may heighten its risk of extinction. While volcanic activity remains beyond human control, establishing an ex-situ conservation program aimed at population reinforcement or future reintroduction may offer a viable path toward securing the species' long-term survival.

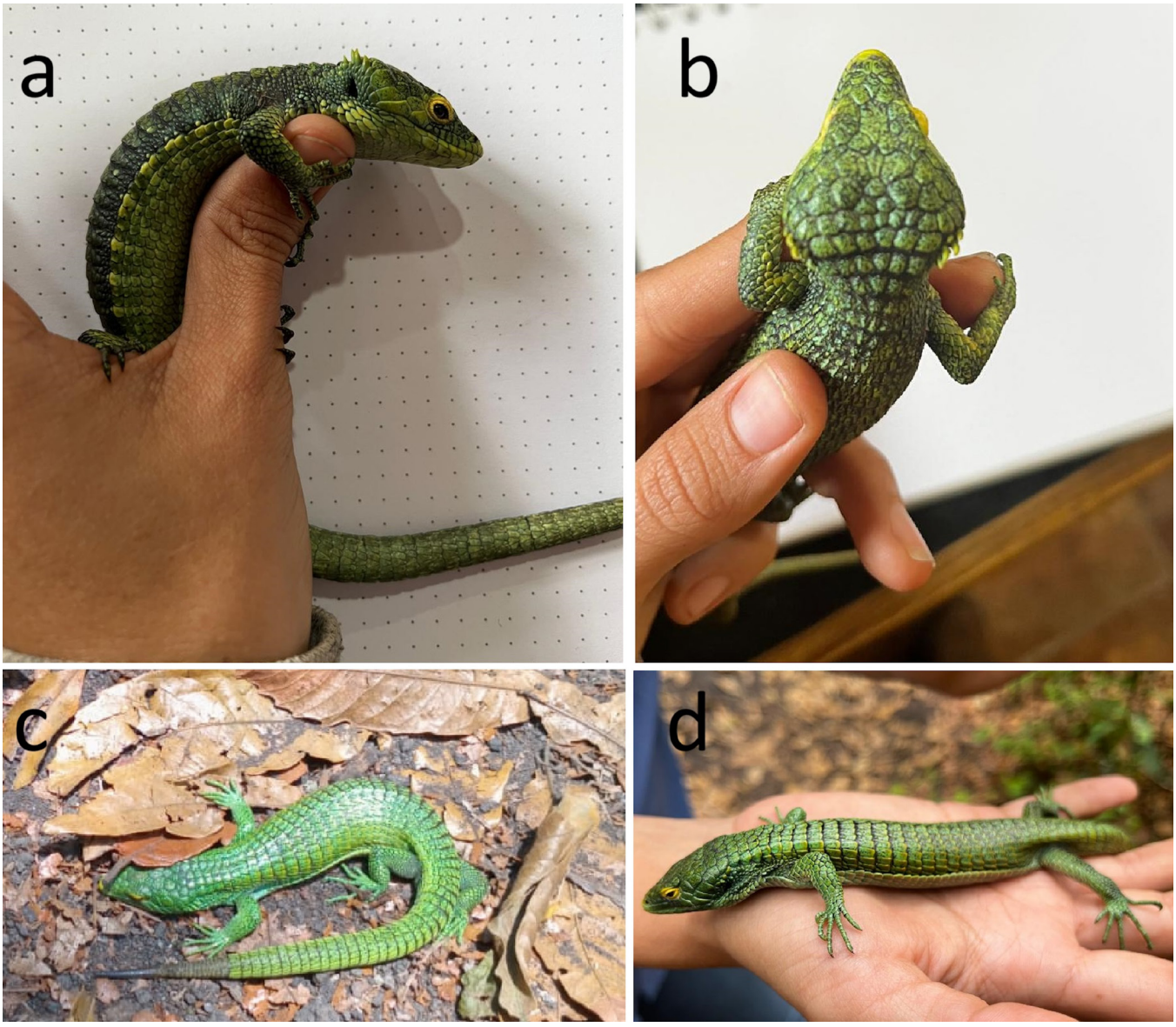

Figura 1. Vistas lateral (a) y cefálica (b) del macho adulto de *Abronia meledona* UVGF00094. Vistas dorsal (c) y lateral (d) in situ de la hembra adulta de *A. meledona* en estado agonizante UVGR008416. Ambas lagartijas fueron registradas en la ladera norte del cráter del volcán Pacaya, dentro del Parque Nacional Volcán de Pacaya y Laguna de Calderas. Fotos: Elizabeth Aguilar.

Figure 1. Lateral (a) and cephalic (b) views of the adult male *Abronia meledona* UVGF00094. In situ dorsal (c) and lateral (d) views of the adult female *A. meledona* in near-death state UVGR008416. Both lizards were recorded at the northern slope of the crater of the Pacaya volcano, within Parque Nacional Volcán de Pacaya y Laguna de Calderas. Photos: Elizabeth Aguilar.

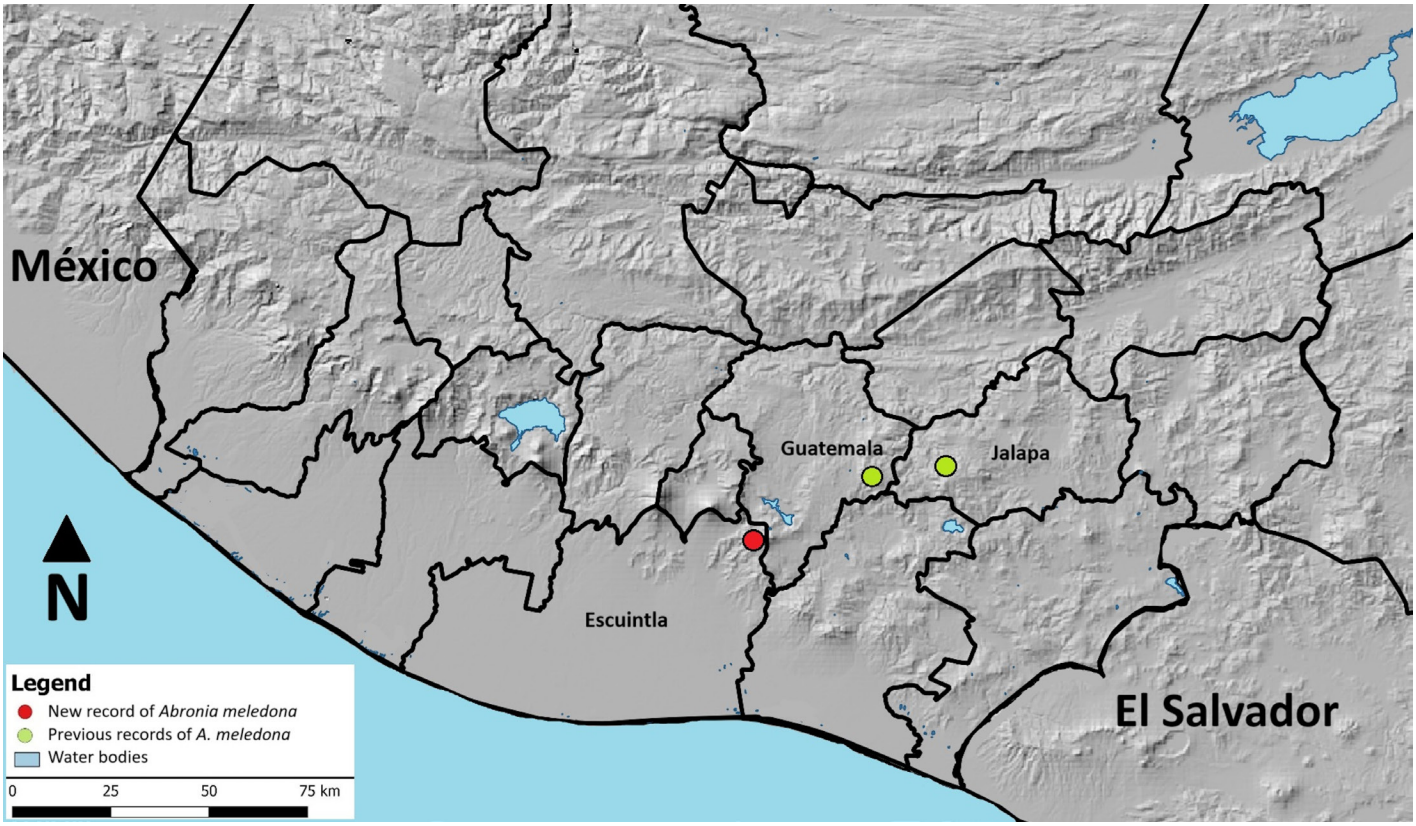

Figura 2. Distribución geográfica de *Abronia meledona*. Los puntos verdes corresponden a las localidades previamente conocidas. El punto rojo corresponde a nuestro nuevo registro en el Parque Nacional Volcán de Pacaya y Laguna de Calderas, Escuintla, Guatemala.

Figure 2. Geographic distribution of *Abronia meledona*. The green dots correspond to previously known localities. The red dot corresponds to our new record from Parque Nacional Volcán de Pacaya y Laguna de Calderas, Escuintla, Guatemala.

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