

## ABRONIA FUSCOLABIALIS (ANGUIDAE; GERRHONOTINAE)

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Received: 2020-06-22. Accepted: 2021-10-16.

Editor: Oscar A. Flores-Villela, México.

The lizard genus *Abronia* is composed of 37 recognized species (Uetz et al., 2020). Most species inhabit *Pinus*, *Pinus-Quercus*, *Quercus*, and cloud forests, mainly between 1500 and 2800 meters above sea level (m a.s.l.), although some species are found at lower elevation ranges: *A. bogerti* (760-1540 m a.s.l.; Bille, 2001; Clause et al., 2016), *A. chiszari* (660-800 m a.s.l.; Flores-Villela & Vogt, 1992; Pérez-Higareda et al., 2002), *A. ramirezi* (probably

between 800-1350 m a.s.l.; Campbell, 1994; Campbell & Muñoz-Alonso, 2007) and *A. reidi* (1000-1635 m a.s.l.; Thesing et al., 2017). The known distribution of the genus extends from Tamaulipas and Michoacán on the Atlantic and Pacific slopes of Mexico, respectively, south and east to western Panama, although most species have small geographic distributions (Campbell & Frost, 1993; Centenero-Alcalá et al., 2009; Gutiérrez-Rodríguez et

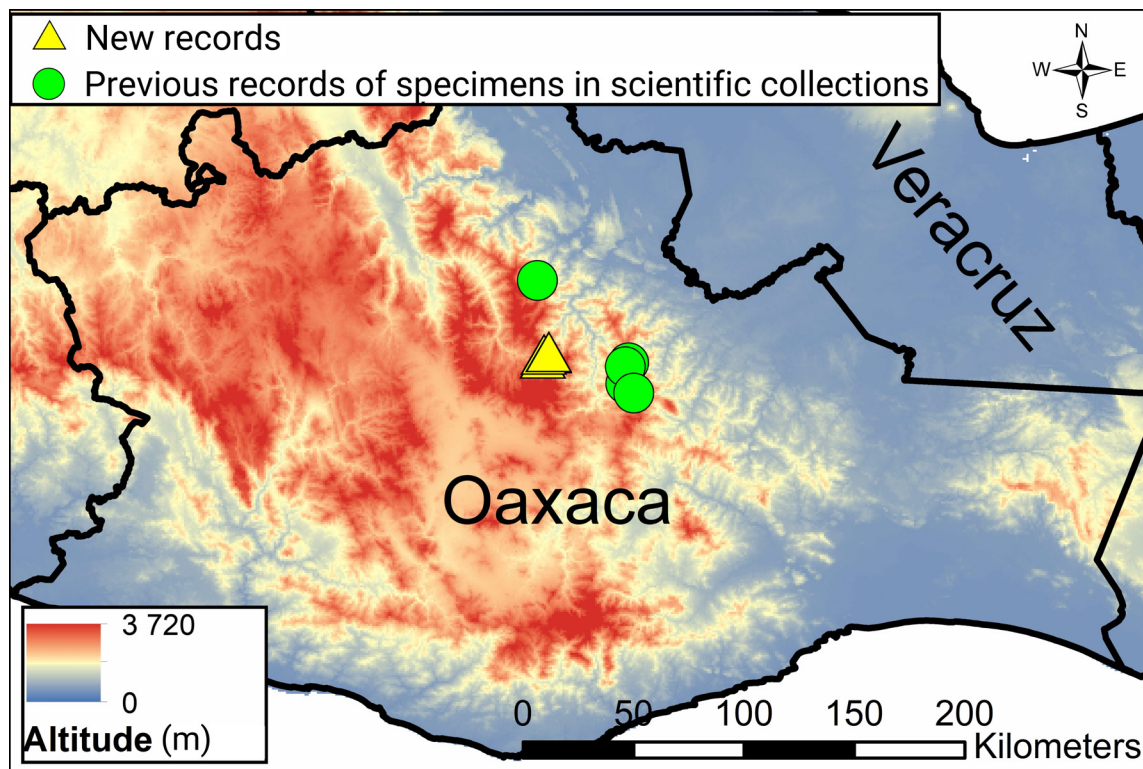


Figura 1. Registros previos y nuevos de *A. fuscolabialis*. / Figure 1. Previous and new records of *A. fuscolabialis*.



**Figura 2.** *Abronia fuscolabialis* descansando sobre un pino caído en Llano Verde (MZFZ-IMG-353).

**Figure 2.** *Abronia fuscolabialis* resting over a fallen pine tree in Llano Verde (MZFZ-IMG-353).

al., 2021; Solano-Zavaleta & Nieto-Montes de Oca, 2018). The *Abronia* species with arboreal habits (see Gutiérrez-Rodríguez et al., 2021) exhibit cryptic coloration, have secretive habits, and usually are found in remote habitats that used to be considered inaccessible, all of which hamper their study (Bogert & Porter, 1967; Campbell & Frost, 1993); even basic information about their natural history and distribution remains unknown. Moreover, their natural reduced extent of occurrence, together with a continuous habitat reduction because of land use change, have led to a conservation concern for most species of this family (Campbell, 2007; Campbell & Frost, 1993).

The Mount Zempoaltepec alligator lizard, *Abronia fuscolabialis* (Tihen, 1944), is one of the 22 endemic *Abronia* species of Mexico (Uetz et al., 2020). Its distribution is restricted to the northern Sierra of Oaxaca (Campbell, 2007; Güizado Rodríguez & Porto Ramírez, 2018). To date there exist six specimens of *A. fuscolabialis* deposited in herpetological collections, one from Sierra Juárez (MVZ-177806) and five from Sierra Mixe (AMNH-



**Figura 3.** *Abronia fuscolabialis* desplazándose por el suelo en Arroyo Cuache (MZFZ-IMG-354).

**Figure 3.** *Abronia fuscolabialis* moving on the ground in Arroyo Cuache (MZFZ-IMG-354).





**Figura 4.** *Abronia fuscolabialis* descansando sobre una bromelia en La Aplanada (MZfZ-IMG-355).

**Figure 4.** *Abronia fuscolabialis* resting over a bromeliad in La Aplanada (MZfZ-IMG-355)

85634, LACM-15132, MZFC-26562, UTA R-14147, UTA R-9899). The species is highly vulnerable (Campbell, 2007; Güizado Rodríguez & Porto Ramírez, 2018) and its population is decreasing (Campbell, 2007). It is considered as Threatened by the Mexican Government (SEMARNAT, 2010) and Endangered by the IUCN (Campbell, 2007). Thus, more information on its distribution and ecology urges to protect, study, and preserve the species (Güizado Rodríguez & Porto Ramírez, 2018).

Here, we describe four new records of *A. fuscolabialis* at Sierra Juárez, northern Oaxaca (Fig. 1). No specimen was collected. All records' photographs (Figs. 2-5) were catalogued at the Colección digital de Vertebrados de la Facultad de Estudios Superiores Zaragoza, UNAM (MZfZ-IMG). These records are separated by 33-35 km to the south of the previously reported specimen from Sierra Juárez (MVZ-177806), and 34-36 km to the west of the nearest specimen reported from Sierra Mixe (UTA R-9899). Following Clause et al. (2020) we have masked the locality data by rounding coordinates to the nearest hundredth of a decimal degree and rounded all reported linear distances to the nearest kilometer. Despite being reported only for cloud forests (Campbell, 2007; Campbell & Frost, 1993) we recorded it in pine-oak forests.

The first individual was observed on May 26th, 2015 (Fig. 2). It was resting over a fallen tree on the ground, in the locality named Llano Verde (17.31° N, 96.37° W, WGS 84, 2280 m a.s.l.), within the municipality of Santiago Xiacuí. This area is under forestry management, and it is covered by humid oak-pine forests with *Quercus laurina* and the Mexican Weeping Pine (*Pinus patula*) as dominant species. Particularly, *P. patula* is extracted from the site to produce boards.

A second individual was found in the municipality of Santiago Xiacuí by May 10th, 2016 (Fig. 3). It was moving on the ground at a site known as Arroyo Cuache (17.28° N, 96.40° W, WGS 84, 2456 m a.s.l.), 150 m away from a stream. This locality was covered by pine-oak forests, mainly dominated by *P. patula* and *Q. laurina*, but there was also an important presence of laurel (*Laurus* sp.), miconia (*Miconia* sp.), madrone (*Arbutus* sp.), alder (*Alnus* sp.), and Neatleaf Oak (*Quercus rugosa*). This site was under forestry management over 10 years ago, for the use of *P. patula* and Smooth-bark Mexican Pine (*Pinus pseudostrabus*).

By June 15th, 2016, we found a third individual of the species at the site named La Aplanada (17.30° N, 96.39° W, WGS 84, 2399 m a.s.l.), in the municipality of Santiago Xiacuí (Fig. 4).



Figura 5. *Abronia fuscolabialis* asoleándose en una rama en la punta de un *Q. laurina* en El Embudo (MZFZ-IMG-356).

Figure 5. *Abronia fuscolabialis* basking on a branch at the top of a *Q. laurina* in El Embudo (MZFZ-IMG-356).

It was resting on a bromeliad attached to a madrone, at 1.5 m over the ground. Pine-oak forests covered the area, which were intensively managed for timber extraction. *Pinus rudis*, Douglas Pine (*Pinus douglassiana*), *P. patula*, Leather Leaf Mexican Oak (*Quercus crassifolia*), and *Arbutus* sp. represented the dominant tree species in the site.

Finally, we came across a fourth individual in June 25th, 2016 (Fig. 5), at the municipality of Capulálpam de Méndez, in the locality named El Embudo (17.31° N, -96.37° W, WGS 84, 2345 m a.s.l.). It was basking on a branch at the top of a *Q. laurina*. The tree was already dead and dry, it was approximately 15 m height and was covered with bromeliads, orchids, liquens, and ferns. A small river ran about 10 m from the tree. The area was covered with humid pine-oak forests, and it was located nearby an area that was under intensive forestry management. The dominant

tree species in the area were *Q. laurina*, *P. pseudostrobus*, and *P. patula*.

The local conservation of *A. fuscolabialis* depends on communities through the preservation and sustainable management of forests, given that there are no federal protected areas across the region. More support to communal conservation initiatives might aid in the preservation of the species. Community-based monitoring might help reduce the fear that local people show to the lizard, as well as to increase the ecological and distributional knowledge of the species.

**Acknowledgements.** We are grateful with the UZACHI and the communities of Capulálpam de Méndez, Santiago Xiacuí, Santiago Comaltepec, and La Trinidad de Ixtlán for supporting and making possible fieldwork development. We are thankful



to Laura Jiménez, Leonel Bautista, and Tío Toño for all their assistance, and to U.O. García-Vázquez for cataloging the photographs. ISZ wants to thank Nefrali Camacho (Natural History Museum of Los Angeles) for his valuable help. The associated project to this manuscript was supported by the Rufford Foundation and the Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO; SPSB project). As part of the Posgrado en Ciencias Biológicas of the Universidad Nacional Autónoma de México, RO-A received a Ph. D. scholarship from CONACYT (327503). RO-A received the support from the DGAPA-UNAM Postdoctoral Fellowship 2021-2022 during which this article was completed. Photo credits: VW (Figure 2), LVC (Figures 3 and 4), and EBB & IMM (Figure 5).

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