

# MISCELLANEOUS NOTES

## A new Mexican locality for the endangered salamander *Nyctanolis pernix* (Caudata: Plethodontidae)

The monotypic salamander genus *Nyctanolis* Elias and Wake, 1983 is known from only a few localities in western Guatemala and one in extreme southeastern Chiapas, Mexico. *Nyctanolis pernix* is one of the most sought after amphibian species by many herpetologists working or visiting the area, owing to its secretive habits and apparent rarity. Since its description from a type series originating at Finca Chiblac, Departamento de Huehuetenango, Guatemala and a single specimen from Lagunas de Montebello, Chiapas, Mexico (Elias and Wake 1983), this species has been reported only from two other localities in Guatemala (AmphibiaWeb, 2016). Here we report a second locality in Chiapas, Mexico, representing the fifth record for this species.

During a herpetofaunal survey in the Sierra Tojolabal (Grünwald et al., *In Press*), we entered a small cave while searching for frogs of the *Craugastor alfredi* complex. In addition to finding several of these frogs, we discovered two specimens of *N. pernix* in and around small crevices in the cave. One was active early in the afternoon (ca. 1400 h) crawling toward a small hole in the cave, and the other was found inactive (ca. 2200 h) coiled in a small cavity in the cave wall. Although we failed to record temperature and relative humidity data, the humidity was high and we estimate the temperature at ca. 12–15°C. The cave is located near the town of Leyva Velázquez, Municipio de Las Margaritas, Chiapas, (16.463240°, -91.792450°; datum WGS 84; elev. 2,145 m) in a humid pine forest–montane cloud forest ecotone. This location lies north-northwest of the only previous record from Mexico, in a cave along a stream draining Laguna Tzisco, Lagunas de Montebello, Chiapas (Elias and Wake, 1983), in an area separated from the highlands surrounding Lagunas de Montebello by a dry valley with a maximum elevation of 1,200 m. This locality constitutes a new municipality record, extends the known distributional range 42 km NNW of the previous northernmost known locality, and extends the elevational distribution 535 m from the previously reported maximum (1,610 m; Parra-Olea 2008).

The local people were aware of this salamander, but never had seen one inside a cave; however, they do not carry flashlights or regularly enter caves. They also mentioned finding this species under logs, while collecting firewood during the rainy season.

The three specimens now known from Mexico (USNM [United States National Museum] 206925, and MZFC [Museo Zoología Facultad de Ciencias, Universidad Nacional Autónoma de México] 29271–72) were found in caves in humid pine forest (Fig. 1), whereas the Guatemalan specimens were collected in cloud forest, under moss and bark on vertical tree trunks (Fig. 2) and under fallen logs.

We noted coloration and proportional size differences in the last two Mexican specimens, when compared to those from Guatemala. Red or



**Fig. 1.** A male *Nyctanolis pernix* (MZFC 29272) as found in a cave near Leyva Velázquez, Municipio de Las Margaritas, Chiapas, Mexico. © César Barrio-Amorós

orange spots with faded edges are present on the anterior part of the body and head of the Guatemalan salamanders (Fig. 2), but the spots are better delimited in the Mexican specimens and range from pale yellow on the tail and posterior part of the body to dark yellow on the anterior part of the body and head (Figs. 1, 3). The proportional size of the eyes also appeared to differ (Table 1), but could not be measured readily. An exercise in measuring the eye diameter length (EDL) and the head length (HL) on photos online revealed a larger proportion in the eye size of the Guatemalan specimens (EDL 28.28– 37.9% of the HL, vs. 17.6–18.68% in the specimens reported herein; Table 1). These external differences and the occurrence of this species in isolated mountain ranges should be examined in more detail through molecular and detailed morphological analyses, to determine the possibility of specific differentiation.



**Fig. 2.** A *Nyctanolis pernix* photographed *in situ* in Municipalidad Barillas, Departamento de Huehuetenango, Guatemala, elev. 1,400 m. © Timothy A. Herman



**Fig. 3.** A female *Nyctanolis pernix* (MZFC 29271) found in a cave near Leyva Velázquez, Municipio de Las Margaritas, Chiapas, Mexico. © Christoph I. Grünwald

**Table 1.** Measurements of the two specimens considered herein. SVL = snout–vent length; TL = tail length; HL = head length; HW = head width; EDL = eye diameter length (horizontal); SL = snout length (measured from anterior edge of eye to tip of snout); HLL = hindlimb length; FLL = forelimb length; MT = number of maxillary teeth; and VT = number of vomerine teeth. All measurements in mm, except EDL/HL (%).

	SVL	TL	HL	HW	EDL	EDL/HL	SL	HLL	FLL	MT	VT
MZFC 29271 (female)	58.97	96.16	14.26	10.70	2.51	16.6%	3.18	22.70	19.63	120	32
MZFC 29272 (male)	58.81	64.31	16.00	10.62	2.99	18.7%	2.47	23.31	20.46	116	38

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## ***Urotheca guentheri* in Darién, Panama, at the northern extreme of the Chocó Biogeographic Region**

The genus *Urotheca* consists of eight Neotropical snake species characterized by a long and thick fragile tail, and a dark brown dorsum with or without lateral white stripes or white spots on the head and nuchal region (Myers, 1974). The systematic status of *Urotheca* has been controversial. Previously, species in *Urotheca* were included in *Rhadinaea* (Dunn, 1944) and clustered as the “*lateristriga*” group (Myers, 1974). Savage and Crother (1989) revived the genus *Urotheca* for the “*lateristriga*” group of *Rhadinaea* and for the species in *Pliocercus*, based on hemipenial and caudal similarities between both sets of species. Myers and Cadle (1994) then suggested that *Pliocercus* and *Urotheca* are monophyletic sister groups, each characterized by color pattern synapomorphies, including *Micrurus*-like rings in *Pliocercus* and white stripes in *Urotheca*. More recently, Sheehy (2012) suggested that *Pliocercus* might need to be synonymized with *Urotheca*, but that more taxon sampling was necessary to verify this conclusion.