NATURAL HISTORY NOTE

Nocturnal Behavior of Clark's Spiny Lizard (*Sceloporus clarkii*; Squamata; Lacertilia) in Acaponeta, Nayarit, México

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There are several documented reports of nocturnal activity in reptiles considered exclusively diurnal (Lara-Resendiz 2020, Perry et al. 2008). Clark's Spiny Lizard (*Sceloporus clarkii*) is considered a diurnal active species, but there is a single observation of an adult male attempting to feed on moths at night over a two-hour period (Martínez-Méndez et al. 2013). Herein we report on additional nocturnal activities of *S. clarkii* and include descriptive thermal data.

On 1 May 2015, during a nocturnal herpetological survey in a tropical dry forest near Acaponeta, Nayarit, Mexico (22.497002°N, 105.386056°W, WGS 84, elev. 27 m) we observed nine adults and one juvenile (five males and five females, mean SVL = 76.3 mm ± 9.23 SD, range = 63-90 mm) between 2053 and 0024 hrs. We observed these lizards for approximately 15-20 minutes each (Fig. 1). We observed the following behaviors:

Foraging—Four females and one male feeding on ants, crickets, and moths on a small rocky outcrop of 5 m^2.

Territory disputes—Displays and head bobs among three males, two adults and one juvenile on two square meters of leaf litter.

Courtship—Display of the male gular fan at a distance of approximately 0.6 m from the female (Fig. 2).

Thermoregulation—All the individuals were active and 60% of them at some point of the observations made panting movements, similar behavior observed in diurnal lizards.

Nocturnal Thermal Observations—After our lizard behavior observations, we recorded cloacal body temperature (T_b), substrate temperature (T_s), and air temperature (T_a) with a quick-reading cloacal thermometer (Miller and Weber, Inc., Ridgewood, New York). After temperature data collection we released all lizards at their capture sites.

The nocturnal T_b range was 25.8-30.0 °C (28.1 ± 1.2 °C, N = 10); males T_b range was 27.0-30.0 °C (28.3 ± 1.2 °C, n = 5); females T_b range was 25.8-29.2 °C (27.9 ± 1.4 °C, n = 5).

The T_a range was 22.0-32.6 °C (24.5 ± 1.8 °C); and T_s range 23.4-29 °C (24.8 ± 1.7 °C). Differences between T_b and T_a were -4.2-8 °C (3.6 ± 3.2 °C) with nine T_b records above and one at T_a. Differences between T_b and T_s were 0-6.4 °C (3.36 ± 1.68 °C) with nine records above and one below T_s.

These records merit comment because the known average T_b of the genus *Sceloporus*, even from the family Phrynosomatidae, is 35.2 ± 0.20 °C (Sinervo et al. 2010), which can vary between 26.8 and 41.5 °C. A previous study of *S. clarkii* (Valdéz-Villavicencio and Peralta-García. 2012) reported a mean T_b of 33.7 ± 2.7 °C (range: 26.9-33.6 °C), which agrees with T_b during the nocturnal observations here presented. It should be noted that the minimum temperature value is similar, and can be interpreted as minimum voluntary temperature. This indicates that *S. clarkii* may be active at low body temperatures to carry out its daily biological activities. This pattern has been found in turtles, lizards, and snakes (Lara-Resendiz 2020).

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Fig. 1. Guillermo A. Woolrich-Piña taking data from *Sceloporus clarkii* with nocturnal behavioral activity (Photo by Jesús Loc).

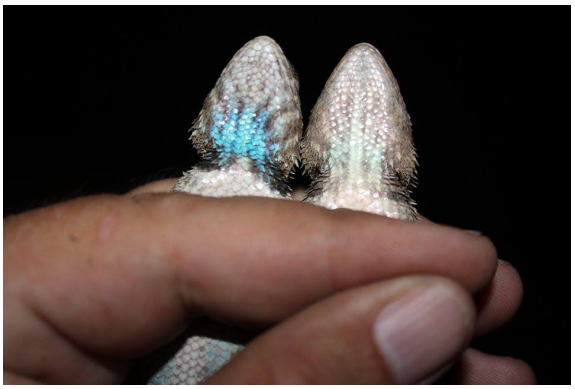

Fig. 2. *Sceloporus clarkii* male and female observed in courtship (display of the male gular fan at a distance of approximately 0.6 m from the female).

NATURAL HISTORY NOTE

First record of *Basiliscus vittatus* (Lacertilia: Corytophanidae) in Nayarit, México

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Resumen (Spanish abstract)—Este reporte representa los primeros registros de *Basiliscus vittatus* para el estado de Nayarit. Uno en el municipio de Bahia de Banderas, representa una extensión geográfica de 11.5 km (línea aérea) al norte desde la localidad más cercana al sur del municipio de Puerto Vallarta, Jalisco..

The Brown Basilisk (*Basiliscus vittatus*) is a large lizard (SVL 170 mm). The head is long, broad and oval, with a vertebral integumentary crest in males. Juveniles do not have a crest on the head. The limbs and fingers are long and slender, the tail is up to three times the size of the body.

Identification — The Brown Basilisk (*Basiliscus vittatus*) is a large lizard (SVL 170 mm). The head is long, broad and oval, with a vertebral integumentary crest in males. Juveniles do not have a crest on the head. The limbs and fingers are long and slender, the tail is up to three times the size of the body. The scales on the extremities are imbricate and strongly keel-shaped and less imbricate than those on the dorsal surface. The ventral scales are smooth or broadly keeled or conspicuously larger than the lateral ones. The vertebral row scales are enlarged and laterally compressed and extend from the base of the head to the tail. It has a distinctive gular fold. In the middle of the back, the scales are flattened from the sides, forming a ridge that extends from the base of the head to the tail. The coloration of the dorsal region of the body is brown to greenish-brown, it has a yellow or cream line that begins at the posterior margin of the eye, continues on the flank, and disappears posteriorly. (Ramírez-Bautista 1994, Calderón-Mandujano et al. 2008).

Distribution — In México, this species is found in low elevations from Jalisco in the north, descending through Colima, Michoacán, Guerrero, Oaxaca and Chiapas on the Pacific slope, and from Tamaulipas in the north, descending through Veracruz, Tabasco, Campeche and Quintana Roo on the Atlantic slope (García and Ceballos, 1994). The Brown Basilisk also occurs in the countries of Nicaragua, Guatemala, El Salvador, Honduras, Belize, Panama, Costa Rica, and Colombia (Reptile-DataBase 2021).

Conservation Status — The IUCN Red List conservation status of *B. vittatus* is LC (Least Concern) (Wilson et al. 2016). Under Mexican wildlife law, the species is listed under NS (No status) (SEMARNAT 2010-2019).