

The number of offspring and the SVL of the neonates in this report was similar to that observed for this species in Tepehuacán de Guerrero, Hidalgo (L. Badillo-Saldaña, pers. comm.), although it is below the reported average for this species (Ramírez-Bautista et al., 2008; Lemos-Espinal and Dixon, 2010). According to the available data, a variable litter size has been reported for *L. sylvaticum*, such as in other species of this genus (e.g., *L. flavimaculatum*, *L. pajapanensis*; see Ramírez-Bautista et al., 2008). The lack of a more structured litter size and the wide variety of environments in which this species occurs suggests that litter size might be determined more by local adaptations than by phylogeny.

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### LITERATURE CITED

- BEZY, R. L., AND J. R. CAMARILLO. 2002. Systematics of Xantusiid Lizards of the genus *Lepidophyma*. *Contributions in Science* 493: 1–41.
- CANSECO-MÁRQUEZ, L. G., G. GUTIÉRREZ-MAYEN, AND J. SALAZAR-ARENAS. 2000. Geographic Distribution. New records and range extensions for amphibians and reptiles from Puebla, México. *Herpetological Review* 31: 259–263.
- LEMOs-ESPINAL, J. A. AND J. R. DIXON. 2010. Anfibios y Reptiles del Estado de Querétaro, México / Amphibians and Reptiles of the State of Querétaro, Mexico. Texas A&M University, College Station, Texas, United States, Universidad Nacional Autónoma de México, Tlalnepantla, Estado de México, and Comisión Nacional para el Conocimiento y Uso de la Biodiversidad, México, D.F., Mexico.
- RAMÍREZ-BAUTISTA, A., L. J. VITT, A. RAMÍREZ-HERNÁNDEZ, F. MENDOZA QUIJANO, AND G. R. SMITH. 2008. Reproduction and sexual dimorphism of *Lepidophyma sylvaticum* (Squamata: Xantusiidae), in a tropical night lizard from Tlanchinol, Hidalgo, México. *Amphibia-Reptilia* 29: 207–216.
- RAMÍREZ-BAUTISTA, A., U. HERNÁNDEZ-SALINAS, R. CRUZ-ELIZALDE, C. BERRIOZABAL-ISLAS, J. D. LARA-TUFIÑO, I. GOYENECHEA MEYER-GOYENECHEA, AND J. M. CASTILLO-CERÓN. 2014. Los Anfibios y Reptiles de Hidalgo, México: Diversidad, Biogeografía y Conservación. Sociedad Mexicana de Herpetología, A.C., Mexico.

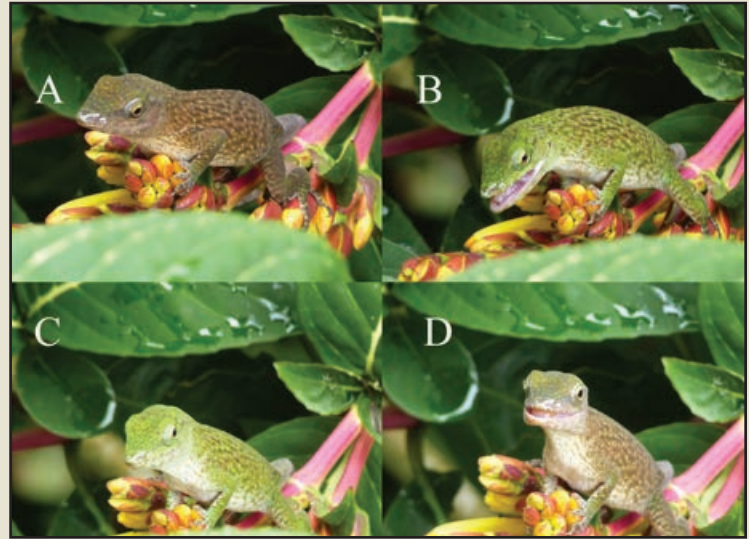
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***Norops biporcatus* (Wiegmann, 1834). Color change during foraging.** Reptiles use body colors for many purposes: camouflage, warning predators, mate choice, and thermoregulation, among others (Cooper and Greenberg, 1992). The body color of anoles results from a combination of three pigments (pteridines, carotenoids, and drosopterines), as well as from structural coloration (Macedonia et al., 2000). These lizards are known for their ability to change color by expanding or contracting melanin in their skin cells (Horowitz, 1958). One of the best-studied cases of color change in anoline lizards involves *Anolis carolinensis*, in which the evidence presented shows that this species changes color to match its background (Hadley, 1929; Kleinholz, 1938; Dores et al., 1987). Nonetheless, Jenssen et al. (1995) found the opposite in that lizards mismatched their background more than would be expected by chance. Other studies also have shown that *A. carolinensis* changes its skin color during sexual interactions, territorial defense, stress, predation, and according to the temperature and light conditions (Greenberg et al., 1984; Cooper and Greenberg, 1992; Jenssen et al., 1995).

On 9 October 2016, at Centro Científico Kekoldi, Talamanca, Provincia de Limón, Costa Rica (09°37'56"N, 82°47'12"W; WGS 84) we observed a female *N. biporcatus* perched on an inflorescence of *Sanchezia parvibracteata* (Acanthaceae), next to the guest house. The lizard was preying on stingless bees (Apidae: Meliponini) that approached the flowers. While perching, the individual's color was dull brown, but when potential prey approached the lizard attempted to catch it, and the lizard turned bright green (Fig. 1). Most of the time the eating attempts were successful, and after eating a bee the lizard returned to its normal dull brown coloration. We observed the lizard changing color at least 10 times in a time period of about 30 min. Little information is available regarding color change in anoles, other than in *A. carolinensis*. To our knowledge this is the first report of color change during prey capture in *N. biporcatus*.



**Fig. 1.** Color change sequence in *Norops biporcatus* at Centro Científico Kekoldi, Talamanca, Provincia de Limón, Costa Rica: (A) a female shows dull brown coloration while perching; (B) the color turns bright green while capturing prey; (C) lizard is green while ingesting prey; and (D) once the prey is ingested, the color returns to dull brown. © Carolina Esquivel

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#### LITERATURE CITED

- COOPER, W., AND N. GREENBERG. 1992. Color and behavior. Pp. 298–422 In C. Gans and D. Crews (Eds.), *Biology of the Reptilia*, Volume 18, Physiology E: Hormones, Brain, and Behavior. The University of Chicago Press, Chicago, Illinois, United States.
- DORES, R. M., M. W. WILHELM, AND D. M. SANDOVAL. 1987. Steady-state analysis of  $\alpha$ -melanotropin in the pars intermedia of *Anolis carolinensis*: effect of background adaptation. *General and Comparative Endocrinology* 68: 153–160.
- GREENBERG, N., T. CHEN, AND D. CREWS. 1984. Social status, gonadal state, and the adrenal stress response in the lizard, *Anolis carolinensis*. *Hormones and Behavior* 18: 1–11.
- HADLEY, C. E. 1929. Color changes in two Cuban lizards. *Bulletin of the Museum of Comparative Zoology* 69: 107–114.
- HOROWITZ, S. B. 1958. The energy requirements of melanin granule aggregation and dispersion in the melanophores of *Anolis carolinensis*. *Journal of Cellular and Comparative Physiology* 51: 341–357.
- JENSSEN, T. A., N. GREENBERG, AND K. A. HOVDE. 1995. Behavioral profile of free-ranging male lizards, *Anolis carolinensis*, across breeding and post-breeding seasons. *Herpetological Monographs* 9: 41–62.
- KLEINHOLZ, L. H. 1938. Studies in reptilian colour changes II. The pituitary and adrenal glands in the regulation of the melanophores of *Anolis carolinensis*. *Journal of Experimental Biology* 15: 474–491.
- MACEDONIA, J. M., S. JAMES, L. W. WITTLE, AND D. L. CLARK. 2000. Skin pigments and coloration in the Jamaican radiation of *Anolis* lizards. *Journal of Herpetology* 34: 99–109.

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