

## Predation Attempt by a Venezuelan Snouted Treefrog (Scinax x-signatus) on a Tropical House Gecko (Hemidactylus mabouia) in Northeastern Brazil

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The Tropical House Gecko, *Hemidactylus mabouia* (Moreau de Jonnès 1818), is native to Africa and has become established in the Americas (Rocha et al. 2011). Apparently, the successful establishment of *H. mabouia* is in part related to its close association with humans and it is now a well-adapted species in urban environments (Carranza and Arnold 2006; Rocha et al. 2011). The Tropical House Gecko is nocturnally active and commonly uses artificial light sources to obtain food, mainly insects, arachnids and other invertebrates (Howard et al. 2001; Borroto-Paéz and Pérez 2020). The species also is common prey for a number of vertebrate predators (73 documented records), of which the most frequent are snakes (41), followed by lizards (13), birds (11), mammals (5), and frogs (3) (Borroto-Paéz and Pérez 2020).

Predator-prey relationships are important ecological factors in how vertebrate and invertebrate assemblages are structured (Vitt and Caldwell 2009), and can alter the utilization of resources among several groups of species (Toft 1985). Reports of predation on Tropical House Geckos usually are based on fortuitous observations of ephemeral nocturnal events. Herein, I report the second observation of predation on *H. mabouia* by the Venezuelan Snouted Treefrog *Scinax x-signatus* (Spix 1824).

The Venezuelan Snouted Treefrog is an endemic South American frog with a wide geographical distribution mainly in Venezuela, Colombia, Guiana, Suriname, French Guiana, and Brazil (Frost 2024), where it inhabits tropical savannahs, forest edges, and open areas, occurring in abundance in temporary bodies of water during the wet season, and it is well adapted to human disturbance (Rodrigues et al. 2010). Regarding its feeding ecology, adult *Scinax* sp. are considered generalist predators with predominately arthropod-based diets composed of insects (Kittel and Solé 2015; Silva et al. 2021).

At 2022 h on 9 September 2023, I observed a *Scinax x-signatus* trying to ingest a Tropical House Gecko (Fig.

1) outside of my house in Boca da Barra, Municipality of Pacatuba, Sergipe, Brazil (-10.571570, -36.599330; elev. 4 m asl). The gecko was almost completely ingested by the treefrog, with only its legs and tail remaining. After several seconds, the treefrog dropped its prey and escaped, apparently disturbed by my camera flash. The gecko also escaped.

Predation on *H. mabouia* by *Scinax x-signatus* was previously documented by Zanchi-Silva and Borges-Nojosa (2017) in a residence at Maracaraú Municipality, Ceará, also in northeastern Brazil. According to the authors, these



**Figure 1.** Venezuelan Snouted Treefrog (*Scinax x-signatus*) preying on a Tropical House Gecko (*Hemidactylus mabouia*) at Boca da Barra, Pacatuba, Sergipe, Brazil. Photograph by Leonardo Cruz da Rosa.

events could be common in areas where human occupation facilitates interactions between these species that would not occur naturally in sympatry. The predation attempt described herein corroborates the statement in Zanchi-Silva and Borges-Nojosa (2017) that such interactions between Venezuelan Snouted Treefrogs and Tropical House Geckos likely are common, especially at perianthropic areas, where *Scinax x-signatus* tends to be most abundant.

## Literature Cited

- Borroto-Páez, R. and D.R. Pérez. 2020. Predation by a Cuban Treefrog (Osteopilus septentrionalis) and a Domestic Cat (Felis catus) on Tropical House Geckos (Hemidactylus mabouia) in central Cuba, with a review of predators and vertebrate prey of Tropical House Geckos. Reptiles & Amphibians 27: 120–128. https://doi.org/10.17161/randa.v27i2.14022.
- Carranza, S. and E.N. Arnold. 2006. Systematics, biogeography, and evolution of Hemidactylus geckos (Reptilia: Gekkonidae) elucidated using mitochondrial DNA sequences. Molecular Phylogenetics and Evolution 38: 531–545. https:// doi.org/10.1016/j.ympev.2005.07.012.
- Frost, D.R. 2024. Amphibian Species of the World: An Online Reference. Version 6.2. American Museum of Natural History, New York, New York, USA. https://doi.

- org/10.5531/db.vz.0001.<a href="https://amphibiansoftheworld.amnh.org/index.php">https://amphibiansoftheworld.amnh.org/index.php</a>.
- Howard, K.G., J.S. Parmerlee, Jr., and R. Powell. 2001. Natural history of the edificarian geckos *Hemidactylus mabouia*, *Thecadactylus rapicauda*, and *Sphaerodactylus sputator* on Anguilla. *Caribbean Journal of Science* 37: 285–288.
- Kittel, R.N. and M. Solé. 2015. Diet of the striped snouted treefrog *Scinax squalirostris* (Anura: Hylidae) in southern Brazil. *Herpetology Notes* 8: 157–160.
- Rocha, C.F.D., L.A. Anjos, and H.G. Bergallo. 2011. Conquering Brazil: the invasion by the exotic gekkonid lizard *Hemidactylus mabouia* (Squamata) in Brazilian natural environments. *Zoologia* 28: 747–754. https://doi.org/10.1590/S1984-46702011000600007.
- Rodrigues, M.T., U. Caramaschi, and A. Mijares. 2010. *Scinax x-signatus. The IUCN Red List of Threatened Species* 2010: e.T56005A11404900. https://dx.doi.org/10.2305/IUCN.UK.2010-2.RLTS.T56005A11404900.en.
- Silva, I.C.O., P. Soares, A.C.A. Ribas, D.J. Santana, K.M. Campião, and L.E.R. Tavares. 2021. Scinax fuscovarius (Anura, Hylidae) diet assessment at Serra da Bodoquena, Mato Grosso do Sul, Brazil. North-Western Journal of Zoology 17: 29–33.
- Toft, C.A. 1985. Resource partitioning in amphibians and reptiles. *Copeia* 1985: 1–21. https://doi.org/10.2307/1444785.
- Vitt, L.J. and J.P. Caldwell. 2009: Herpetology: An Introductory Biology of Amphibians and Reptiles. 3rd ed. Academic Press, San Diego, California, USA.
- Zanchi-Silva, D. and D.M. Borges-Nojosa. 2017. Hemidactylus mabouia (Tropical House Gecko). Predation. Herpetological Review 48: 438–439.