



Anurophagy by an Indian Skipper Frog, *Euphlyctis cyanophlyctis* (Schneider 1799) (Anura: Dicroglossidae)

Raju Vyas¹ and Harshil Patel²

¹–Sashwat Apartment, BPC Road, Nr. Splatter Studio, Alkapuri, Vadodara–390007, Gujarat, India (razoovyas@hotmail.com)

²Department of Biosciences, Veer Narmad South Gujarat University, Surat–395007, Gujarat, India (harshilpatel121@gmail.com [corresponding author])

Frogs play an important ecological role by feeding on a wide range of typically small invertebrate prey; however, they also have been recorded preying on small vertebrates (Wells 2007), including on other frogs (Toledo et al. 2007; Measey et al. 2015). Herein we describe an Indian Skipper Frog (*Euphlyctis cyanophlyctis*) feeding on a cricket frog (*Minervarya* sp.). The Indian Skipper Frog, which inhabits various habitats across Iran, Afghanistan, Pakistan, Nepal, Bhutan, Bangladesh, Sri Lanka, Vietnam, and India (Frost 2021; Dinesh et al. 2021), is known to be an opportunistic

feeder, consuming a wide range of invertebrates and vertebrates (Hossain 2015).

During the late evening hours of 24 October 2019, we were returning to our guest house after a routine field survey. While passing through a stretch of grass thickets in Blackbuck National Park, Bhavnagar District, Gujarat, India (22.0456°N, 72.0193°E), we encountered a number of frogs of various species (Marbled Toads, *Duttaphrynus stomaticus*; Indian Bullfrogs, *Hoplobatrachus tigerinus*; Indian Skipper Frogs, *E. cyanophlyctis*; and cricket frogs, *Minervarya* sp.) on the ground. One large frog (SVL ~5.0 cm) had grasped a smaller frog (SVL <2.0 cm) by its hindlimbs (Fig. 1) and, within a few minutes, had engulfed it entirely. We identified the predator as an Indian Skipper Frog and the prey as a cricket frog. Because we did not capture the frogs, we were unable to determine the species of the prey. Four species of *Minervarya* (*M. agricola*, *M. cepfi*, *M. keralensis*, and *M. syhadrensis*) are known to occur in Gujarat (Patel et al. 2018; Patel and Vyas 2020; Garg and Biju 2021). To the best of our knowledge, this is the second report of anurophagy by *E. cyanophlyctis* in Gujarat; Patel et al. (2017) reported an individual feeding on a terrestrial frog (*Fejervarya* sp.).



Fig. 1. An adult Indian Skipper Frog (*Euphlyctis cyanophlyctis*) feeding on a cricket frog (*Minervarya* sp.) in Blackbuck National Park, Gujarat, India. Photograph by Raju Vyas.

Acknowledgements

We are very thankful to Mr. M.H. Trivedi, Assistant Conservator of Forest, Forest Department, Gujarat, for his extensive help with accommodations and permits.

Literature Cited

- Dinesh, K.P., B.H. Channakeshavamurthy, C. Murthy, P. Deepak, A.V. Ghosh, and K. Deuti. 2021. Morphological groupings within *Euphlyctis* (Anura: Dicroglossidae) and description of a new species from the surroundings of Thattekad Bird Sanctuary, Kerala, India. *Zootaxa* 4990: 329–353. <https://doi.org/10.11646/zootaxa.4990.2.7>
- Frost, D.R. 2021. *Amphibian Species of the World: An Online Reference*. Version 6.1. American Museum of Natural History, New York, New York, USA. <<https://amphibiansoftheworld.amnh.org/index.php>>. <https://doi.org/10.5531/db.vz.0001>.

- Garg, S. and S.D. Biju. 2021. DNA barcoding and systematic review of minervaryan frogs (Dicroglossidae: *Minervarya*) of peninsular India: Resolution of a taxonomic conundrum with description of a new species. *Asian Herpetological Research* 12: in press. <https://doi.org/10.16373/j.cnki.ahr.210023>.
- Hossain, L. 2015. Ecology and food habits of Common skittering frog, *Euphlyctis cyanophlyctis* (Schneider, 1799) in Bangladesh. *Journal of the Asiatic Society Bangladesh Science* 41: 7–17. <https://doi.org/10.3329/jasbs.v41i1.46067>.
- Measey, G.J., G. Vimercati, F.A. Villiers, M.M. Mokhatla, S.J. Davies, S. Edwards, and R. Altwegg. 2015. Frog eat frog: exploring variables influencing Anurophagy. *PeerJ* 3: e1204. <https://doi.org/10.7717/peerj.1204>.
- Patel, H. and R. Vyas. 2020. Corrections on recent herpetofaunal species records from Gujarat State, western India. *Journal of Animal Diversity* 2(3): 11–15. <http://dx.doi.org/10.29252/JAD.2020.2.3.3>.
- Patel, H., S.K. Tank, and P. Vaghashiya. 2017. *Euphlyctis cyanophlyctis* (Indian Skipper Frog). Diet. *Herpetological Review* 48: 161.
- Patel, H., R. Vyas, V. Naik, B. Dudhatra, and S.K. Tank. 2018. Herpetofauna of the northern Western Ghats of Gujarat, India. *Zoology & Ecology* 28(3): 1–12. <https://doi.org/10.1080/21658005.2018.1499237>.
- Toledo, L.F., R. Ribeiro, and C.F. Haddad. 2007. Anurans as prey: an exploratory analysis and size relationships between predators and their prey. *Journal of Zoology* 271: 170–177. <https://doi.org/10.1111/j.1469-7998.2006.00195.x>.
- Wells, K.D. 2007. *The Ecology and Behavior of Amphibians*. University of Chicago Press, Chicago, Illinois, USA.