INTERSPECIFIC AMPLEXUS BETWEEN UPERODON MORMORATA (RAO, 1937) (ANURA: MICROHYLIDAE) AND MINERVARYA SP. (ANURA: DICROGLOSSIDAE)¹

SAISH SOLANKAR², ANUJ SHINDE^{3,5} AND SHUBHANKAR DESHPANDE^{3,4,*}

¹Accepted March 02, 2021

First published: September 30, 2021 | doi: 10.17087/jbnhs/2021/v118/154310

²Department of Anthropology, Purdue University, West Lafayette, IN - 47906, USA. Email: solankarsaish@gmail.com

³Department of Zoology, Fergusson College, Shivaji Nagar, Pune 411 004, Maharashtra, India.

⁴Institute of Natural History Education and Research (INHER), C26/9, Ketan Heights, Kothrud, Pune 411 038,

Maharashtra, India. Email: shubhankarsdeshpande11@gmail.com

⁵Email: anujherp@gmail.com

*Corresponding author

The majority of Anurans employ external fertilization, which is facilitated by amplexus wherein the male clasps the female. This is followed by the laying of gametes by the male and female for external fertilization. Anurans are known to rely on vocal, visual, and chemical cues for species and sex recognition (Wells 2007). However, such cues are found to be less efficient in large breeding congregations involving multiple explosive breeding species (Mollov *et al.* 2010). Some anuran species fail to recognize the release call of heterospecific individuals, which may lead to interspecific amplexus (Marco and Lizana 2002).

In India, Harpalani *et al.* (2015) reported interspecific amplexus between members of families Microhylidae: *Ramanella anamalaiensis* (now *Uperodon anamalaiensis*), Dicroglossidae: *Fejervarya* sp. (now *Minervarya*), and Ranixalidae: *Indirana brachyura*. Sayyed and Padhye (2020) reported interspecific amplexus between *Raorchestes ghatei* and *Uperodon mormorata*. Here we report multiple amplecting pairs of *Uperodon mormorata* and *Minervarya* sp.

On June 03, 2020, at 06:15 hrs, the first author (SS) observed three interspecific amplecting pairs inside a garden pond in Belgaum, Karnataka ($15^{\circ} 52' 36.0''$ N; $74^{\circ} 29' 32.7''$ E). As soon as he approached, two of the pairs separated and hopped away. The third pair remained in amplexus for approximately 10 minutes (Fig. 1). There was no observed egg laying at the site. Both sexes of *Minervarya* sp. were seen, though the female individual involved in amplexus could not be identified beyond generic level. Only male individuals of *Uperodon mormorata* were seen.



Fig. 1: Interspecific amplexus between Uperodon mormorata and Minervarya sp.

The male microhylid was identified as *Uperodon mormorata* based on the following observed characters: Globular body, mouth significantly narrow, tympanum indistinct, fingertips with truncate discs. Dorsum dark olive-grey with scattered brown spots on the posterior part, a faint dark brown inverted 'V' at shoulder level; ventral side of body, including the throat and limbs, densely mottled. These taxonomic features confirm the identification according to Garg *et al.* (2018).

ACKNOWLEDGEMENTS

We thank Priyanka Potdar, Ankit Emmi, and Yash Parvatrao for assisting us in the field.

REFERENCES

- GARG, S., G. SENEVIRATHNE, N. WJAYATHILAKA, S. PHUGE, K. DEUTI, K. MANAMENDRA-ARACHCHI, M. MEEGASKUMBURA & S.D. BIJU (2018): An integrative taxonomic review of the South Asian microhylid genus Uperodon. Zootaxa 4384(1): 1–88. Doi: https:// doi.org/10.11646/zootaxa.4384.1.1
- HARPALANI, M., A. KANAGAVEL & B. TAPLEY (2015): Notes on breeding and behaviour in the Anamalai Dot Frog *Ramanella anamalaiensis* Rao, 1937. *Herpetology Notes* 8: 221–225.
- MARCO, A. & M. LIZANA (2002): The absence of species and sex recognition during mate search by male common toads *Bufo bufo*.

Ethology Ecology & Evolution 14: 1–8.

- MOLLOV, I., G. POPGEORGIEV, B. NAUMOV, N. TZANKOV & A. STOYANOV (2010): Cases of abnormal amplexus in anurans (Amphibia: Anura) from Bulgaria and Greece. *Biharean Biologist* 4: 121–125.
- SAYYED, A. & A. PADHYE (2020): Natural history of Ghate's Shrub Frog *Raorchestes ghatei* (Rhacophoridae) from the Northern Western Ghats, India. 189. *IRCF Reptiles & Amphibians 26(3)*: 205–210.
- WELLS, K.D. (2007): The Ecology and Behavior of Amphibians. University of Chicago Press, Chicago. Pp. 338–402.

MISCELLANEOUS NOTES

Recommended Citation

Solankar, Saish, Anuj Shinde & Shubhankar Deshpande (2021): Interspecific amplexus between *Uperodon mormorata* (Rao, 1937) (Anura: Microhylidae) and *Minervarya* sp. (Anura: Dicroglossidae). *J. Bombay Nat. Hist. Soc. 118*. doi: 10.17087/jbnhs/2021/v118/154310

