

MORPHOMETRIC CHARACTERISTICS
OF *BOMBINA BOMBINA* (DISCOGLOSSIDAE, ANURA)
IN THE MEDVEDITSA RIVER VALLEY (SARATOV REGION)
AND NONINVASIVE SEX DIAGNOSTICS
BY SIZE AND WEIGHT TRAITS

Mikhail V. Yermokhin ¹ and Vasily G. Tabachishin ²

¹ *Saratov State University*
83 Astrakhanskaya Str., Saratov 410012, Russia
E-mail: ecoton@rambler.ru

² *Saratov branch of A. N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences*
24 Rabochaya Str., Saratov 410028, Russia
E-mail: tabachishinvg@sevin.ru

Received 17 October 2017, accepted 11 December 2017

Morphometric characteristics of *Bombina bombina* males and females were done. 10 traits were measured and 10 indices were calculated for a sample of *B. bombina* from the population of the lake Cherepashie (the Medveditsa river valley, Lysogorsky district, Saratov region). Only some traits show significant sexual differences in *B. bombina*. It is shown that in the conditions of degradation of the spawning reservoir network in river valleys, a significant increase in the role of individuals with relatively large dimensions of their hind limbs (mainly femur) occurred in the *B. bombina* populations. A reliable sex determination of *B. bombina* in field conditions presents significant difficulties. A method of noninvasive sex determination of *B. bombina* is proposed, based on analysis of metric and weight traits. The parameters of the discriminating function equation have been determined, which makes it possible to correctly diagnose sex in 95% of individuals. It is recommended to use this method to analyze the sexual structure of *B. bombina* populations in field conditions.

Key words: *Bombina bombina*, size and weight characteristics, sex diagnostics, discriminant analysis.

DOI: 10.18500/1814-6090-2018-18-1-2-27-34

Acknowledgments: This work was partially supported by the Russian Foundation for Basic Research (project no. 16-04-01248).

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Cite this article as:

Yermokhin M. V., Tabachishin V. G. Morphometric Characteristics of *Bombina bombina* (Discoglossidae, Anura) in the Medveditsa River Valley (Saratov Region) and Noninvasive Sex Diagnostics by Size and Weight Traits. *Current Studies in Herpetology*, 2018, vol. 18, iss. 1–2, pp. 27–34 (in Russian). DOI: 10.18500/1814-6090-2018-18-1-2-27-34.
