

ACTA ZOOLOGICA BULGARICA

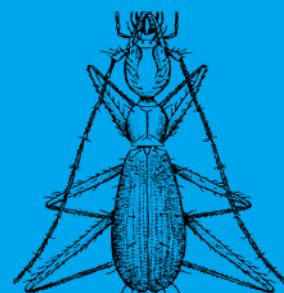
Supplementum 16

Zoological Proceedings
of the 9th International Conference
“Modern Trends in Science”

Blagoevgrad, Bulgaria
15–19 September 2021



2023
November



Institute of Biodiversity and Ecosystem
Research

Bulgarian Academy of Sciences

ISSN 0324-0770 (print)
ISSN 2603-3798 (online)

Honorary Editor-in-Chief: *Vassil Golemansky*

Editor-in-Chief: *Boyko B. Georgiev*

Managing Editor: *Rositsa Kaneva*

Language Editor: *Vesela Evtimova*

Co-editors:

Apostolos Apostolou

Dragan Chobanov

Vesela Evtimova

Simeon Lukanov

Rumyana Metcheva

Paraskeva Mihailova

Vasil Popov

Diana Zlatanova

Simeon Lukanov

Advisory Board:

Gábor Csorba (Budapest)

Hristo Delchev (Sofia)

Victor Fet (Huntington)

Denis Geraads (Paris)

Georgi Georgiev (Sofia)

Peter Glöer (Hetlingen)

Victor V. Glupov (Novosibirsk)

Andy J. Green (Seville)

Borislav Guéorguiev (Sofia)

Boris Kryštufek (Ljubljana)

Jean Mariaux (Geneva)

Josef Matena (Česke Budejovice)

Georgi Markov (Sofia)

Yuri M. Marusik (Magadan)

Boris Nikolov (Sofia)

Anastasios Legakis (Athens)

Toshko Ljubomirov (Sofia)

Vlada Peneva (Sofia)

Aleksi Popov (Sofia)

Guy Smagghe (Ghent)

Milcho Todorov (Sofia)

Margarita Topashka (Sofia)

Yordan Uzunov (Sofia)

Eliza Uzunova (Sofia)

Instructions to Authors

General Information

Acta Zoologica Bulgarica publishes contributions in systematics and phylogenetics, zoogeography and faunistics, terrestrial ecology and behaviour, aquatic ecology, parasitology, palaeozoology, zoomorphology and developmental biology, conservation biology, applied zoology and other branches of zoology dealing with diversity, ecology and evolution of animals. The geographical scope of the journal is worldwide but a priority is given to the Bulgarian and Balkan fauna as well as the fauna of associated regions (e.g. Black Sea, Danubian Basin and Southeast Europe). Descriptions of new zoological methods, short reviews of zoological books and information about scientific events are also accepted. Manuscripts are considered on the assumption that they have not been published elsewhere and have not been simultaneously submitted to another journal. Manuscripts must conform strictly with the instructions to authors before being sent to the editor. Papers should follow the *International Code of Zoological Nomenclature* (Fourth Edition, 1999). Incoming manuscripts are initially judged by the editor. If the manuscript is acceptable as corresponding to the scope of the journal and representing a major contribution deserving publication in an international journal, it will be forwarded to reviewers for evaluation. After the approval of the final version by the editorial board, the manuscript will be accepted for publication. The editor reserves the right to make editorial changes. Authors agree, with the acceptance of the manuscript, that the copyright is transferred to the publisher. Manuscripts, proofs, reviews and other correspondence concerning editorial matters should be addressed to the Editorial Office, e-mail actazoologicabulgarica@gmail.com.

Manuscripts

Manuscripts must be submitted in correct English by e-mail. The following formats are accepted: Winword, Word Perfect, InDesign. The text should be left-justified, font size 12, no column or page breaks, double-spaced (c. 30 lines per page), without word hyphenations, A4 format. The pages must be numbered in Arabic numerals. Places of figures and tables within the text should be indicated. Generic and species names must be spelled out at least once in the text and should be in italic. Family names of authors of taxa should be in regular font.

Four categories of contributions are published, with the following size of standard manuscript: 1. Research articles: max. 20 pages, including the list of references, figures, captions to figures and tables (on separate sheets); 2. Review articles (invited or consulted with the editor before the submission): 10-25 pages; 3. Short communications: up to 8 pages; 4. Book reviews: up to 3 pages. Information about scientific events, past or forthcoming, will also be accepted (up to 3 pages). The manuscripts should conform to the following format:

Title: It should be concise and enough informative. Superior taxa should be noted in the title in parentheses, e.g. (Order: Family).

Author(s): Full first name(s), middle initials and surname(s) in bold and italic.

Address(es): As complete as possible, including e-mail address(es).

Abstract: It should consist of only one paragraph of maximum 15 lines, briefly describing main results and conclusions with no description of methods, discussions, references or abbreviations.

Key words: Normally 3-6 items suitable for information-retrieval system, not repeating already those contained in the title.

The standard order of sections should be: Introduction, Material and Methods (including Study Area, if relevant), Results, Discussion, Conclusions (optional), Acknowledgements and References.

Tables: They must not repeat information already presented in the figures or in the text. Each table must be self-explanatory and as simple as possible, it should be double-spaced within an A4 page size. Tables must be numbered consecutively. They should be typed on separate sheets and enclosed after the references. An explanatory caption, located on the top of the table, should be provided.

Illustrations: Lines and letters in figures must be able to be enlarged or reduced without reduction in quality. They should conform to the size of the type area (16.5 x 24 cm), which is the limit for all illustrations. Magnification should be shown by scale bars. Illustrations must be submitted in electronic version in TIF format in minimum 300 DPI. Black and white photographs must be sharp, of high quality, presented on plates (maximum 14x17 cm in size). Figures must be numbered consecutively and should be provided with an explanatory legend on a separate sheet (titled 'Text under figures'). All tables and figures must be referred to in the text. The printed version of the journal may contain only greyscale illustration. The electronic version can contain colour versions of the same illustrations.

Citations and References

Each citation in the text must be accompanied by a full reference in the list of references. Each reference included in the list of references should be cited in the text. The in-text citations are as follows (please, note small caps of author's names): (BURESH 1941), (BURESH 1941: 35) [if a certain page should be cited]; BURESH & ZONKOV (1941); (BURESH 1941, PETROV 1956, IVANOV 1996) [in chronological order] or BURESH et al. (1949), if three or more authors are cited. The references should be arranged primarily alphabetically by the first author's family name and by year of publication in case of multiple publications by the same author(s). In case of papers written in letters other than Latin, if there is an English title in the summary, it may be used instead. If there is not such a summary, the author's name must be transliterated and the title of the paper must be translated into English; in this case, the original language of the cited reference should be noted in parentheses at the end of the paragraph, e.g.: (In Bulgarian). Examples of bibliographic descriptions of references:

AUTHOR A. V. 1990a. Title of the article. Full Title of the Journal 56 (3): 35-105.

AUTHOR A. V. & AUTHOR C. P. 1990a. Title of the article. Full Title of the Journal 56 (2): 35-105.

AUTHOR A. V., AUTHOR B. B. & AUTHOR C. P. 1990a. Title of the article. Full Title of the Journal 56 (1): 35-105.

AUTHOR A. V. 2000b. Title of the book. Place of publication: Publishing House. 220 p.

AUTHOR A. V. & AUTHOR C. P. 1990. Title of the contribution. In: EDITOR V. A. (Ed.): Title of the book or volume. Place of publication: Publishing House, pp. 235-265.

Corrections

The (senior) author will receive only one proof for checking (PDF file). Only printer errors may be corrected. The corrected version should be sent back to the journal editor within two weeks.

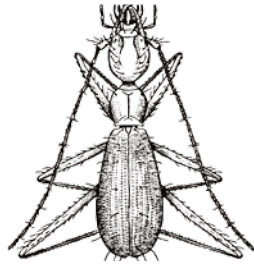
For more detailed instructions to authors, see the journal homepage: www.acta-zoologica-bulgarica.eu.

CONTENTS

ILKOVA J. & DIMITROVA D. – Effect of Cadmium on Salivary Gland Polytene Chromosomes of <i>Chironomus riparius</i> Meigen, 1804 (Diptera: Chironomidae).....	3
UCHMAŃSKI J., CHAJCZUK K. & OPALIŃSKI K. W. – Resource Partitioning among Competing Individuals: an Experiment with Bean Weevil <i>Acanthoscelides obtectus</i> (Say, 1831) (Coleoptera: Chrysomelidae).....	11
MITREVICHIN E., PESHEV H., STOYNOV E., GROZDANOV A., SAKELARIEVA L. & PULEV A. – Biological and Ecological Characteristics of <i>Testudo hermanni</i> Gmelin, 1789 and <i>T. graeca</i> Linnaeus, 1758 (Testudines: Testudinidae) in the Northwestern Foothills of the Pirin Mountains, Bulgaria.....	25
TYUFEKCHIEVA V., VIDINOVA Y., EVTIMOVA V., VARADINOVA E. & BOTEV I. – Ephemeroptera, Plecoptera and Trichoptera (Insecta) of Mountain Tributaries of the Struma River: Diversity in Relation to Environmental Parameters and Zoogeographic Features.....	35
VARADINOVA E., GEORGIEVA G., IHTIMANSKA M., VIDINOVA Y., EVTIMOVA V., TYUFEKCHIEVA V. & TODOROV M. – Macrozoobenthos in Mountain Standing Water Bodies in Bulgaria	49
PARK J., SAKELARIEVA L., VARADINOVA E., EVTIMOVA V., VIDINOVA Y., TYUFEKCHIEVA V., GEORGIEVA G., IHTIMANSKA M. & TODOROV M. – Taxonomic Composition and Dominant Structure of the Macrozoobenthos in the Maritsa River and Some Tributaries, South Bulgaria.....	61
VIDINOVA Y., TYUFEKCHIEVA V., IHTIMANSKA M., EVTIMOVA V., VARADINOVA E., TODOROV M. & GEORGIEVA G. – Benthic Macroinvertebrate Assemblages in Karst Springs Ecosystems in Bulgaria	75

Acta zoologica bulgarica

ISSN 0324-0770 (print)
ISSN 2603-3798 (online)



Supplementum 16 • Sofia • November 2023

**Zoological Proceedings
of the 9th International Conference
“Modern Trends in Science”**

**Blagoevgrad, Bulgaria
15–19 September 2021**

Organized by:

**Faculty of Mathematics and Natural Sciences,
South-West University „Neofit Rilski”,
Blagoevgrad, Bulgaria**

Zoological Proceedings

**of the 9th International Conference “Modern Trends in Science”
Blagoevgrad, Bulgaria, 15–19 September 2021**

Recommended citation:

AUTHOR(s) 2020. Title of the paper. In: Zoological Proceedings of the 9th International Conference “Modern Trends in Science” Blagoevgrad, Bulgaria, 15–19 September 2021. Acta Zoologica Bulgarica, Suppl. 16: yy–zz.