# Contents

- Benthic species assemblages change through a freshwater cavern-type cenote in the Yucatán Peninsula, Mexico Dorottya Angyal, Sergio Cohuo, José Manuel Castro-Pérez, Maite Mascaró, Carlos Rosas
- Two new species add to the diversity of *Eoniphargus* in subterranean waters of Japan, with molecular phylogeny of the family Mesogammaridae (Crustacea, Amphipoda) *Aki Shintani, Chi-Woo Lee, Ko Tomikawa*
- Postembryonic development of the troglobitic planthopper species Valenciolenda fadaforesta Hoch & Sendra, 2021 (Hemiptera, Fulgoromorpha, Kinnaridae), with a key to nymphal instars Alejandro Ortega-Gómez, Jesús Selfa, Alberto Sendra, Hannelore Hoch
- **69** Behavioral observations of the olm (*Proteus anguinus*) in a karst spring via direct observations and camera trapping *Ester Premate, Žiga Fišer, Žan Kuralt, Anja Pekolj, Tjaša Trajbarič, Eva Milavc, Živa Hanc, Rok Kostanjšek*
- A new species of Allobathynella (Crustacea, Bathynellacea, Parabathynellidae)
   from the hyporheic zone of the Hangang River, South Korea
   Su-Jung Ji, Gi-Sik Min

**03** First biological data, associated fauna, and microclimate preferences of the enigmatic cave-dwelling beetle *Dalyat mirabilis* Mateu, 2002 (Coleoptera, Carabidae) *Jaime Mayoral, Pablo Barranco, Angel Fernandez-Cortes* 

- **23** Laterality in cavefish: Left or right foraging behavior in Astyanax mexicanus Luis Espinasa, Ruth Diamant, Marylena Mesquita, Julianna M. Lindquist, Adrianna M. Powers, James Helmreich
- A new species of the genus *Siambatbynella* Camacho, Watiroyram & Brancelj, 2011
   (Crustacea, Bathynellacea, Parabathynellidae) from a Thai cave
   Ana I. Camacho, Philippe Leclerc
- Two new cavernicolous species of Anillinus Casey (Carabidae, Trechinae, Anillini)
   from Texas with a revised key to Texas species
   Igor M. Sokolov
- 7 Free living ciliated protists from the chemoautotrophic cave ecosystem of Frasassi (Italy) Daizy Bharti, Santosh Kumar, Federico Buonanno, Claudio Ortenzi, Alessandro Montanari, Pablo Quintela-Alonso, Antonietta La Terza

# http://subtbiol.pensoft.net/

A peer-reviewed open-access journal

Subterranean Biology Published by The International Society for Subterranean Biology



# 44 🔷 2022

<u> PENSOFT</u>

Subterranean

1 Biology

4

2022

http://subtbiol.pensoft.net



## Subterranean Biology - Published by The International Society for Subterranean Biology

## Editor-in-Chief

Oana Teodora MOLDOVAN "Emil Racovitza" Institute of Speleology Romanian Academy Clinicilor 5, 400006 Cluj Napoca, Romania E-mail: oanamol@hasdeu.ubbcluj.ro

#### Editors

Marina COBOLLI Università di Roma "La Sapienza", Roma, Italy David C. CULVER The American University, Washington DC, USA Christian GRIEBLER Helmholtz Zentrum München, GmbH, Neuherberg, Germany Hans-Jürgen HAHN Universität Koblenz-Landau, Landau in der Pfalz, Germany Horton HOBBS III Wittenberg University, Springfield, USA John R. HOLSINGER Old Dominion University, Norfolk, USA Williams Frank HUMPHREYS Western Australian Museum, Perth, Australia Lubomír KOVÁČ Pavol Jozef Safarik University in Kosice, Slovakia Leonardo LATELLA Museo Civico di Storia Naturale di Verona, Verona, Italy Giuseppe MESSANA Istituto per lo Studio degli Ecosistemi, Firenze, Italy

Managing Editor Lyubomir PENEV Institute of Biodiversity and Ecosystem Research Bulgarian Academy of Sciences Yurii Gagarin Street 2 1113 Sofia, Bulgaria E-mail: info@pensoft.net

#### **Jos NOTENBOOM**

European Environment Agency, Copenhagen, Denmark Boris SKET Univerza V Ljubljana, Ljubljana, Slovenia Eleonora TRAJANO Instituto Biociências da USP, Sao Paulo, Brazil Peter TRONTELJ University of Ljubljana, Slovenia Christian JUBERTHIE, Honorary Editor Saint-Lizier, France

### **Editorial Advisory Board**

Belles X. (Spain), Blas M. (Spain), Casale A. (Italy), Coineau N. (France), Danielopol D. (Austria), Deharveng L. (France), Di Russo C. (Italy), Giani N. (France), Iliffe T.C. (United States), Magniez G. (France), Marmonier P. (France), Oromi P. (Spain), Parzefall J. (Germany), Ribera C. (Spain), Ruffo S. (Italy), Sbordoni V. (Italy), Thibaud J.M. (France), Turquin M.J. (France), Vigna-Taglianti A. (Italy), Weber F. (Germany), Wilkens H. (Germany).

Editorial Board: http://subtbiol.pensoft.net/board

#### Focus and Scope

**Subterranean Biology** is an international journal published by Pensoft on behalf of the International Society for **Subterranean Biology** [SIBIOS-ISSB] for the publication of original and significant contributions on all aspects of subterranean life.

All content is Open Access distributed under the terms of the *Creative Commons Attribution License*, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. Authors are thus encouraged to post the pdf files of published papers on their homepages or elsewhere to expedite distribution.

#### **Editorial Office**

#### **Pensoft Publishers**

Prof. Georgi Zlatarski 12, 1700 Sofia, Bulgaria. Tel. +359-2-8704281, Fax +359-2-8704282 E-mail: journals@pensoft.net

#### AUTHOR GUIDELINES

Authors are kindly requested to submit their manuscript *only* through the online submission module at http://subtbiol.pensoft. net. In case of difficulties with the submission procedure, please contact subtbiol@pensoft.net. Full text of author guidelines is available at: http://subtbiol.pensoft.net/ about#AuthorGuidelines

#### EXCERPTS FROM THE GUIDELINES

**BODY TEXT.** All papers must be in English, checked by a native English-speaking colleague (if author(*s*) is/are not native English speaker(*s*)). Write with precision, clarity, and economy: use the active voice and first person whenever appropriate.

WEB (HTML) LINKS. Authors may include links to other Internet resources in their article. This is especially encouraged in the reference section. When inserting a reference to a web-page, please include the http:// portion of the address.

**CITATIONS WITHIN THE TEXT.** Before submitting the manuscript, check each citation in the text against the **References** to ensure that they match exactly. Delete citations from the list if they are not actually cited in the text of the article. Citations in the text should be formatted as follows: (Smith 1990) or (Smith et al. 1998; Brock and Gunderson 2001; Felt 2006).

**REFERENCES.** It is crucial to properly format the references, because all references will be linked electronically as much as possible to the papers they cite. For all references, list all authors. You can include a **DOI** number for the full-text article as an alternative to or in addition to traditional volume and page numbers. Please use the following style for the reference list:

Published Papers: Polaszek A, Alonso-Zarazaga M, Bouchet P, Brothers DJ, Evenhuis NL, Krell FT, Lyal CHC, Minelli A, Pyle RL, Robinson N, Thompson FC, van Tol J (2005) ZooBank: the open-access register for zoological taxonomy: Technical Discussion Paper. Bulletin of Zoological Nomenclature 62: 210-220. Accepted Papers: Same as above, but 'In press' appears instead the page numbers.

**Electronic Journal Articles:** Mallet J, Willmott K (2002) Taxonomy: renaissance or Tower of Babel? Trends in Ecology and Evolution 18 (2): 57-59. doi: 10.1016/ S0169-5347(02)00061-7.

Paper within conference proceedings: Orr AG (2006) Odonata in Bornean tropical rain forest formations: Diversity, endemicity and applications for conservation management. In Cordero Rivera A (Ed) Forest and Dragonflies. Fourth WDA International Symposium of Odonatology, Pontevedra (Spain), July 2005. Pensoft Publishers, Sofia-Moscow, 51-78.
Book chapters: Mayr E (2000) The biological species concept. In:

Wheeler QD, Meier R (Eds) Species Concepts and Phylogenetic Theory: A Debate. Columbia University Press, New York, 17-29. **Books:** Goix N, Klimaszewski I (2007)

Catalogue of Aleocharine Rove Beetles of Canada and Alaska. Pensoft Publishers, Sofia-Moscow, 166 pp. Book with institutional author:

International Commission on Zoological Nomenclature (1999) International code of zoological nomenclature. Fourth Edition. London: The International Trust for Zoological Nomenclature.

**PhD thesis:** Dalebout ML (2002) Species identity, genetic diversity and molecular systematic relationships among the Ziphiidae (beaked whales). PhD thesis, Auckland, New Zealand: University of Auckland.

Link/URL: BBC News: Island leopard deemed new species. <u>http://news.bbc.co.uk/</u> [accessed 3.VI.2008]

CITATIONS OF PUBLIC RESOURCE DATABASES: It is highly recommended all appropriate datasets, images, and information to be deposited in public resources. Please provide the relevant accession numbers (and version numbers, if appropriate). Accession numbers should be provided in parentheses after the entity on first use. Examples of such databases include, but are not limited to:

- Zoobank (www.zoobank.org),
- Morphbank (www.morphbank.net),

• Genbank (www.ncbi.nlm.nih. gov/Genbank),

• BarCode (www.barcodinglife.org)

Providing accession numbers allows linking to and from established databases and integrates your article with a broader collection of scientific information. Please list all accession numbers directly **after the References**.

INTERNATIONAL CODE FOR ZOO-LOGICAL NOMENCLATURE. ZooKeys will publish papers only strictly following the rules of the 4th edition of the *International Code of Zoological Nomenclature*. Each first mentioning of an animal species name within the text must be provided with author(s)' name(s). Year of publication of animal species is recommended to be given in taxonomic revisions with providing full referencing of original description in the list of references.

**OPEN ACCESS FEES.** Publication fees in open access journals ensure a barrier-free distribution of your paper at no charge for the readers and include costs involved in processing, formatting, publishing, indexing and archiving your paper.

The journal charges Open Access Publication Fee of EURO 15 per page for papers of less than 100 printed pages. Publication fees for larger papers will be discounted and can be negotiated with the Managing Editor.

Open Access Publication Fees are usually covered by institutional funds and grants. Discounts/waivers can be requested by private and retired zoologists, scientists from low- and middle-level income countries, postgraduate students, especially in case of exceptionally good manuscripts.

Discounts will be offered also to scientists who actively participate in the reviewing and editing process.

**PRINTED VERSION.** Offprints and printed issues of the journal can be purchased additionally (see journal's website). For standing orders/subscriptions please contact the Managing Editor.