

# International Association of Astacology Symposium 24



## BOOK OF ABSTRACTS

September 16 – 20, 2024, Zagreb, Croatia

BOOK OF ABSTRACTS  
International Association of Astacology Symposium 24

Editor

Ivana Maguire

Croatian Ecological Society

Zagreb, 2024

**ISBN 978-953-6202-16-4**

**Title:** BOOK OF ABSTRACTS of International Association of Astacology Symposium 24

**Short title:** IAA24 - Book of abstracts

Logo on cover – Adam Peter Maguire

## **Organiser of the Congress and Publisher of the Book of Abstracts**

Hrvatsko ekološko društvo / Croatian Ecological Society  
Rooseveltov trg 6, HR-10000 Zagreb, Hrvatska  
e-mail: [hed@ekolosko-drustvo.hr](mailto:hed@ekolosko-drustvo.hr)  
URL: <http://www.ekolosko-drustvo.hr/>

## **Co-organisers of the Congress**

Department of Biology, Faculty of Science, University of Zagreb  
The International Association of Astacology

## **Organizing and Programme Committee** (in alphabetic order)

Ana Bielen, University of Zagreb, Faculty of Food Technology and Biotechnology  
Sanja Gottstein, University of Zagreb, Faculty of Science  
Sandra Hudina, University of Zagreb, Faculty of Science  
Goran Klobučar, University of Zagreb, Faculty of Science  
Ivana Maguire, University of Zagreb, Faculty of Science  
Dora Pavić, University of Zagreb, Faculty of Food Technology and Biotechnology  
Matej Vucić, University of Zagreb, Faculty of Science  
Karolina Pipinić, University of Zagreb, Faculty of Science

## **Scientific Committee** (in alphabetic order)

Susan B. Adams, USDA Forest Service, Southern Research Station, USA  
Ana Bielen, University of Zagreb, Faculty of Food Technology and Biotechnology, Croatia  
Quinton Burnham, Edith Cowan University, Australia  
Javier Dieguez Uribeondo, Real Jardín Botánico, CSIC, Spain  
James M. Furse, Griffith University, Coastal and Marine Research Centre, Australia  
Frederic Grandjean, Université de Poitiers, UFR Sciences Fondamentales et Appliquées, France  
Sandra Hudina, University of Zagreb, Faculty of Science, Croatia  
Japo Jussila, Department of Environmental and Biological Sciences, University of Eastern Finland  
Goran Klobučar, University of Zagreb, Faculty of Science, Croatia  
Pavel Kozák, University of South Bohemia in České Budějovice, Czech Republic  
Ivana Maguire, University of Zagreb, Faculty of Science, Croatia  
Lucian Pârvulescu, West University of Timisoara, Timisoara, Romania  
Adam Petrusek, Charles University, Department of Ecology, Czech Republic  
Chris A. Taylor, Prairie Research Institute, Illinois Natural History Survey, USA  
Kathrin Theissing, LOEWE Centre for Translational Biodiversity Genomics, Germany

**Technical support:** Tihomir Husnjak, AlpeAdria d.o.o.; Renata Horvat, Eva Janeković, University of Zagreb, Faculty of Science; Tin Škugor, Ela Šarić, University of Zagreb, Faculty of Food Technology and Biotechnology

## Freshwater crayfish in Serbia: Update on the distribution

Đuretanović S<sup>1</sup>, Stojanović K<sup>2</sup>, Marković V<sup>2</sup>, Zorić K<sup>3</sup>, Simović P<sup>1</sup>, Živić I<sup>2</sup>, Simić V<sup>1</sup>

<sup>1</sup>Faculty of Science, University of Kragujevac, Kragujevac, Serbia,

simona.djuretanovic@pmf.kg.ac.rs; predrag.simovic@pmf.kg.ac.rs; vladica.simic@pmf.kg.ac.rs

<sup>2</sup>Faculty of Biology, University of Belgrade, Belgrade, Serbia, vanja.markovic@bio.bg.ac.rs;

ivanas@bio.bg.ac.rs

<sup>3</sup>Institute for Biological Research „Siniša Stanković” – National Institute of the Republic of Serbia, Belgrade, Serbia, katarinas@ibiss.bg.ac.rs

Our study aims to build upon a prior studies of crayfish distribution by consolidating findings from our fifteen years field research and summarizing existing published data. In Serbian freshwater ecosystems, we have identified the stone crayfish *Austropotamobius torrentium*, the noble crayfish *Astacus astacus*, and the narrow-clawed crayfish *Pontastacus leptodactylus* as native species. Unfortunately, our ecosystems have been penetrated by two invasive species: the spiny-cheek crayfish *Faxonius limosus*, first discovered in 2004, and the signal crayfish *Pacifastacus leniusculus*, more recently found in 2020. Fifteen years since the last research, we have observed that the most commonly found native crayfish is the stone crayfish, documented at 206 sites in 131 freshwater ecosystems, followed by the noble crayfish (46 sites in 31 freshwater ecosystems) and the narrow-clawed crayfish (22 sites in 11 freshwater ecosystems). Field observations have shown that changes in habitat and the increasing impact of climate change (significant droughts and floods over the past decade), primarily affect native crayfish populations. Understanding species distribution is fundamental to a wide range of biological research. Gathering additional data on species distribution is essential for enhancing our understanding of biodiversity, the functioning of aquatic ecosystems, conservation planning, climate change adaptation, and the management of invasive species. Moreover, distribution data is crucial for monitoring endangered species, such as the stone and noble crayfish, which are strictly protected under the Rulebook on the Proclamation and Protection of Strictly Protected and Protected Wild Species of Plants, Animals, and Mushrooms ("Official Gazette of RS" no. 5/2010, 47/2011, 32/2016 and 98/2016).

**Keywords:** crayfish diversity, Serbia, indigenous species, non- indigenous species