

XXI conference of the Iberian Association of Limnology (AIL)
and the 21st National Congress of Ecology (Portuguese Ecological Society – SPECO)

SIBECOL/AIL meeting Aveiro 2022

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Guest Editor
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PREFACE

The 2nd meeting of the Iberian Ecological Society (SIBECOL) together with the XXI conference of the Iberian Association of Limnology (AIL), and the 21st National Congress of Ecology (Portuguese Ecological Society – SPECO), was held at the University of Aveiro, Aveiro, Portugal, from 3rd to 8th July 2022.

Under the theme “Ecology: Bettering our sustainable future through scientific knowledge,” this classical *in-person* conference brought together around 400 researchers and students from over 15 countries, primarily from Europe and Latin America, to share their expertise and discuss some of the most pressing environmental and societal issues.

The meeting gave participants the opportunity to learn from 260 oral communications and 138 poster presentations, organized into 11 regular and 14 special scientific sessions. These presentations spanned a wide range of topics in ecological research, covering areas such as ecosystem processes, functioning, and services, evolutionary ecology and biogeography, ecotoxicology, microbial ecology, ecological connectivity, ecological restoration, urban ecology, biological invasions, and the ecology of species interactions. They also delved into ecological research in extreme environments and on environmental global changes.

Special sessions focused on various topics, including diversity and inclusion in ecology, social science approaches to address the current ecological crisis, ecology and conservation of temporary aquatic ecosystems, and disturbance and resilience. These sessions also examined how populations, communities, and ecosystem processes, including those involving “non-charismatic” biodiversity, respond to and are affected by different stressors. Additional topics in the special sessions included meta-systems ecology, pollination ecology, and the impacts of urbanization, microplastics, salinization, and wildfires on aquatic ecosystems.

In addition to the regular scientific sessions, the conference offered five technical workshops aiming to provide hands-on training in various aspects of ecological research. Topics covered in these workshops included meta-analysis in ecology, DNA barcoding, microplastics detection, best approaches to attract funding for ecological research but also comprised a discussion on how ecology researchers perceive and feel about the actual ecological crisis.

Over the course of the 6 days of the meeting invited keynote speakers presented their research and insights on various subjects: José Alves from the CESAM/University of Aveiro, Portugal, presented challenges faced by migratory shorebirds due to environmental changes and Josie South from the University of Leeds, UK, addressed the status, opportunities, and implications of African crayfish invasions. Maurine Neiman from University of Iowa, USA, presented results of her research concerning nutrient limitation and its role in maintaining ploidy and sex variation in a New Zealand snail species while Andrea C. Encalada from BIOSFERA Institute, Universidad San Francisco de Quito, Ecuador, examined biodiversity and ecosystem function along elevation gradients in Andean-Amazon rivers and streams. Ana Hilário from CESAM/University of Aveiro, Portugal, shared with participants the biodiversity and ecosystem processes in the hydrothermal vents in the Arctic Ocean, as well as challenges in working in these extreme environments. Javier del Campo from the Institute of Evolutionary Biology (UPF-CSIC, Barcelona) / Rosenstiel School of Marine and Atmospheric Science - University of Miami, Florida, USA, gave an overview of the recent advances in the study of coral holobionts and their response to climate change. Bryan Brooks from Baylor University, USA, discussed the multidisciplinary research needs for sustainable environmental quality through the Global Horizon Scanning Project. Luísa G. Carvalheiro from Universidade Federal de Goiás, Brazil, showed how pollinators can help develop socioeconomic tools to promote sustainable development.

The winners of the best PhD theses in limnology prizes awarded by AIL were also invited speak-

ers at the meeting and Elisabeth León-Palmero from the University of Southern Denmark, awardee of 2021, presented her PhD work on “Greenhouse gases in reservoirs, from watersheds to functional genes, while Jorge García-Girón from Freshwater Centre, Finnish Environment Institute, Finland and University of León, Spain presented his PhD work related to the Geographical variation of aquatic macrophyte biodiversity.

The Gender & Science Group of the Iberian Association of Limnology was also invited to present a plenary talk, where they analyzed and discussed the involvement and visibility of women and other historically excluded groups in scientific conferences and on ecological research. This keynote aimed at promoting more inclusive ecology conferences namely those organized by SIBECOL/AIL, where everyone can feel safe and have equal opportunities. The gender & science group keynote talk was considered by participants the most inspiring talk of the meeting.

Finally, the AIL “trajectory prize” of 2022 was awarded to Sergi Sabater in recognition of his outstanding contributions to the field of ecology. His keynote talk, “A Reflection for Science in Ecology: Does River Flow Show a Path?” provided invaluable insights into the many challenges but also opportunities for ecologists studying river ecosystems.

The meeting also included the launch of the book “Reaching everywhere: Ecology in the 21st Century” by Maria Amélia Martins-Loução and Rúben Oliveira (editors), and the SPECO awards special session, which recognized the excellence of a new generation of ecologists. The event featured the presentation of the SPECO PhD Awards and the SPECO Young Post-Doc Prize, both of which honour innovative research conducted in Portuguese universities by young researchers. Joana Bernardino, Miriam Romagosa Verges and Gonçalo Curveira Santos received the awards for first, second and third places for best PhD theses, respectively. José Ricardo Paula with the project “Ocean Deoxygenation and Acute Hypoxia Alter Cuttlefish Development, Physiology And Cognition” Was Awarded The Young Post-Doc Prize.

One of the main goals of the meeting was to foster diversity and inclusion within the ecological community, as well as to support and inspire students and young researchers. Through the different scientific sessions, workshops, and social activities that included the congress dinner and the diversity mixer but also field trips to the Vista Alegre complex, to the nature and biodiversity conservation project BioRia or to the natural reserve of São Jacinto, the organization aimed to create a safe and fun environment that promoted open collaboration, discussion and exchange of ideas.

On behalf of the organizing and scientific committees I would like to thank everyone that made this meeting a success. First of all, I would like to thank Manuel Augusto Graça since he was the one convincing me to organize this meeting in Aveiro. I also want to thank SIBECOL, AIL (and J-AIL) and SPECO for all the support and help given to the organizing committee and to the AIL Gender & Science Group, and the SIBECOL’s Diversity and Inclusion Commission for all their suggestions and proposals that made this a more inclusive meeting. I would also like to thank CESAM – Centre for Environmental and Marine Studies, the University of Aveiro and Aveiro City Council for the support. A special thanks is due to all participants that presented their work, to all that chaired and organized scientific sessions and workshops and especially to all in the organizing committee including also all volunteers that worked tirelessly to make this event possible.

Despite challenges posed by the COVID-19 pandemic and the conflict in Ukraine, it was rewarding to see how eager Iberian ecologists and limnologists were to share their research, to exchange ideas, and come together to reinforce the integrative and transdisciplinary aspects of ecological research and the vitality of our scientific societies.

Thank you all for being part of this meeting and I wish the best of luck to the next organizers!

João L.T. Pestana
on behalf of the organizing committee