

10TH EUROPEAN CONGRESS OF MALACOLOGICAL SOCIETIES



CONFERENCE REPORT

In September 2024, from the 15th to the 20th, the Hellenic Malacological Society convened the 10th European Congress of Malacological Societies (Euromal) in Heraklion, Crete. Co-organised by the Natural History Museum of Crete (Fig. 1), the congress was held at the Cultural Conference Centre of Heraklion, attracting a global assembly of 120 malacologists from 24 countries across four continents (Figs 2, 3) to present and discuss cutting-edge research on molluscs. The central theme, "The slow side of life on a rapidly changing planet," emphasised the critical ecological and evolutionary roles molluscs play in addressing contemporary environmen-

tal challenges driven by anthropogenic pressures. The congress underscored how molluscs contribute to our understanding of large-scale environmental shifts, including climate change, habitat degradation, and pollutant bioaccumulation. The scientific discourse highlighted the relevance of molluscan research in formulating strategies to mitigate these global issues. Euromal 2024 encompassed diverse research areas, including biodiversity, functional biology, ecology, evolutionary history, behavioural adaptations, and conservation biology of extant and fossilised molluscs.



Fig. 1. Registration point at the Natural History Museum of Crete. Photo: MAŁGORZATA PROĆKÓW

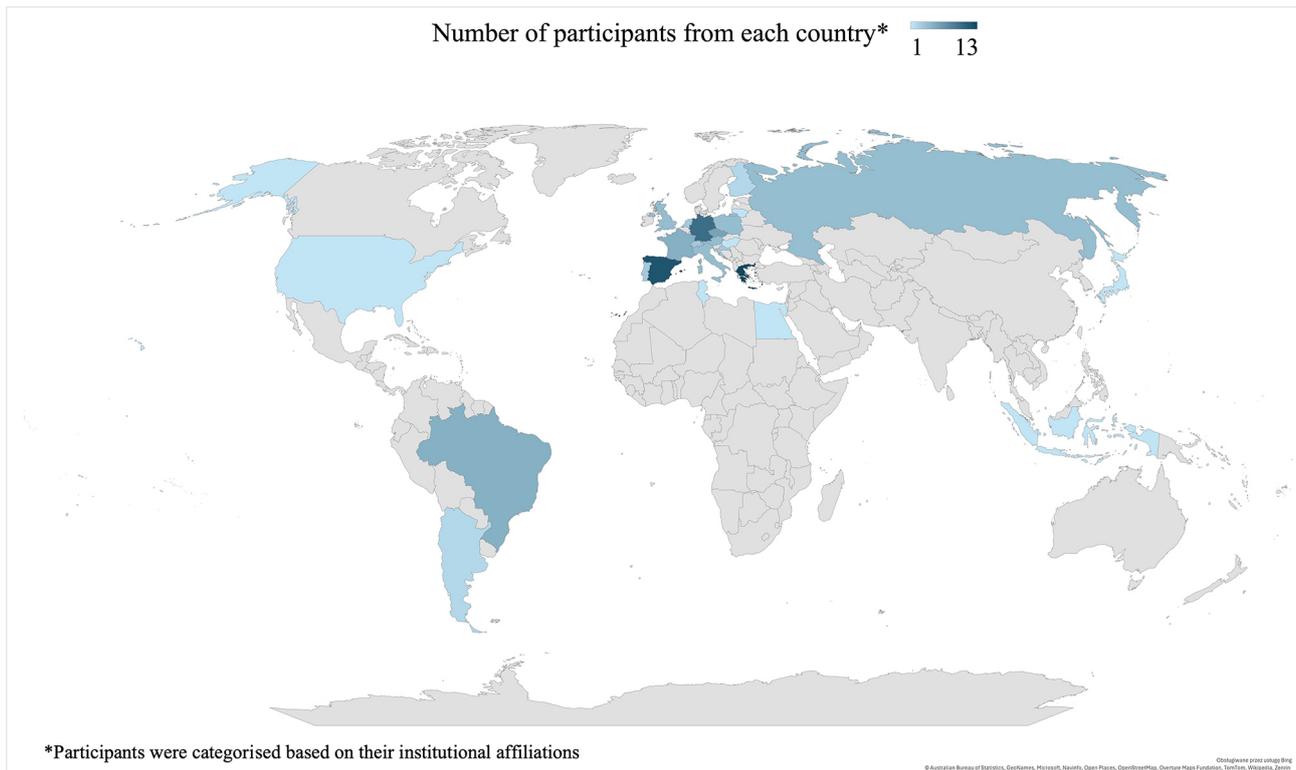


Fig. 2. Geographic representation of participants at the 10th Euromal Congress by country of affiliation



Fig. 3. Group photo of participants at the 10th Euromal Congress, Heraklion, Crete, 2024. Photo: organisers



SHAPING THE FUTURE OF MALACOLOGY: A DECADE OF EUROMAL AND THE IMPACT OF THE 2024 CONGRESS

The European Congress of Malacological Societies has been a vital gathering for malacologists worldwide since its inception in 2000. Over the years, it has become an essential platform for sharing research, discussing emerging challenges, and fostering collaboration in malacology. The congress has a rich history that spans more than two decades. Looking back at the last decade of Euromal, from the 7th edition in 2014 to the 10th edition in 2024 (Table 1, Fig. 4), it becomes clear how much the congress has evolved and continues to shape the future of molluscan research. This period marks a transformative decade in malacology, as it witnessed the rise of new technologies, significant global environmental changes, and a growing emphasis on the conservation of molluscan biodiversity.

By analysing the last four congresses, we can highlight the most impactful developments and trace the field's evolution as malacology adapts to address the environmental challenges of the 21st century.

The 7th Euromal in 2014, held in Cambridge, UK, focused on critical topics such as molluscan physiology, toxicology, invasive species, taxonomy, and biogeography. This edition was instrumental in integrating modern molecular tools, such as next-generation sequencing, into studying molluscan evolution and ecology. The discussions set the stage for a growing emphasis on conservation and managing invasive species, which became increasingly prominent in subsequent congresses. By 2017, the 8th Euromal in Krakow, Poland, continued the trend of engaging early-career researchers, with 32 PhD students participating. One unique feature of that edition was an art exhibition titled “Inspired by Malacology”, which blended science with creativity, enriching the

Table 1. Overview of key statistics from the 7th to 10th Euromal Congress editions

Edition of EuroMal	Year	Location	Participants	Countries	Oral presentations	Posters
7th	2014	Cambridge, UK	120	24	47	50
8th	2017	Krakow, Poland	139	26	73	66
9th	2021	Prague, Czechia	437	29	119	13
10th	2024	Heraklion, Crete	120	24	74	35

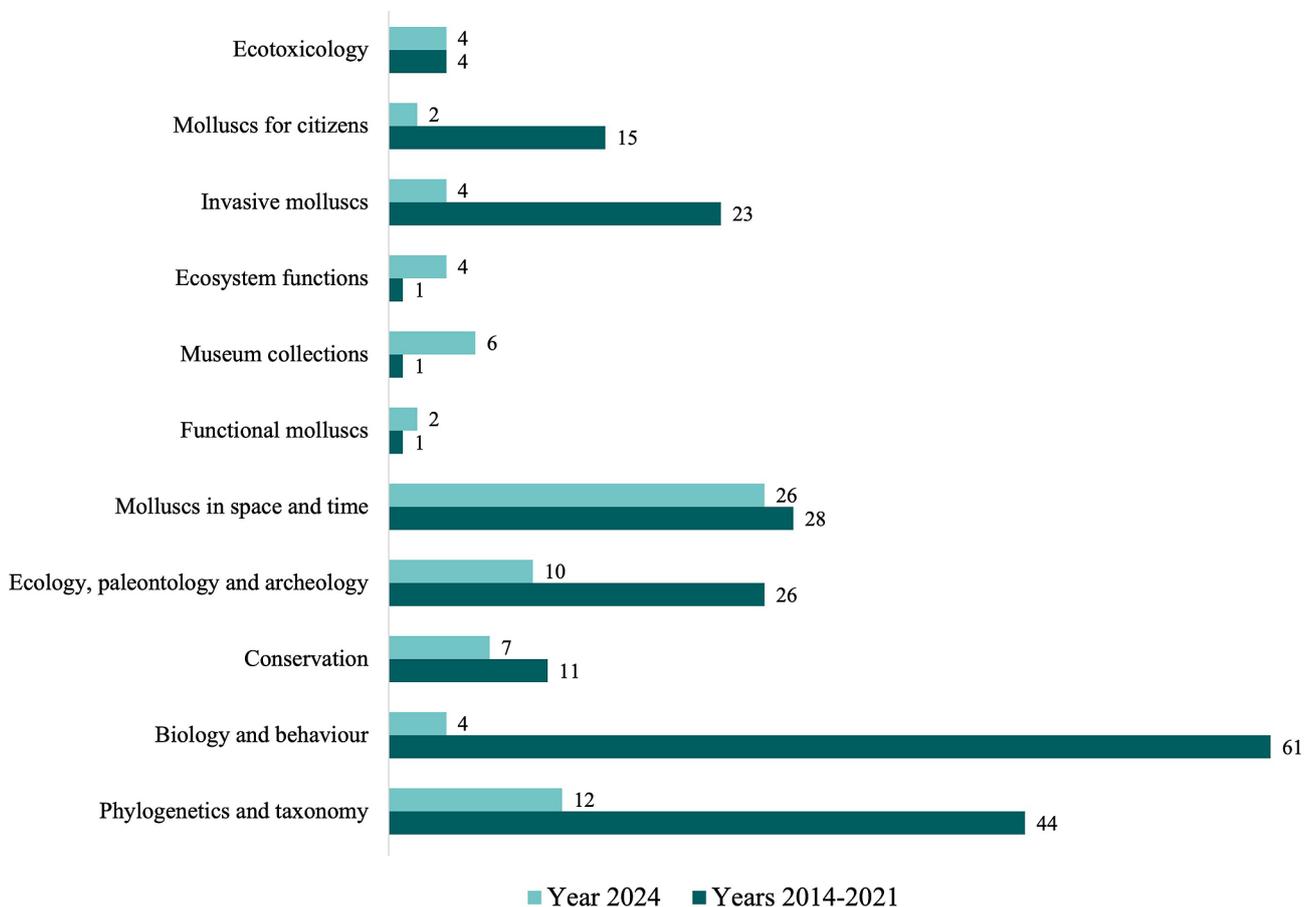


Fig. 4. Comparison of session topics between the 2024 Euromal Congress and the 2014–2021 editions

Congress experience. The congress highlighted the importance of international collaboration and interdisciplinary approaches in addressing the pressing issues facing molluscs and their ecosystems.

Despite the difficulties brought on by the global pandemic, the 9th edition, held in Prague, Czechia, in 2021, showcased the malacological community's resilience and flexibility, using virtual participation to engage an even wider audience. The imbalance in involvement during the 9th edition can be attributed to the pandemic and the switch to an online format, significantly increasing the conference's accessibility. The online nature of the Prague conference allowed for a substantial increase in oral presentations, reflecting how digital formats reduce barriers for presenters. Key themes included ecotoxicology, citizen science, and the growing use of environmental DNA (eDNA) for monitoring molluscan populations and biodiversity. This edition emphasised the role of molluscs as bioindicators of ecological health, highlighting their significance in the context of invasive species and conservation efforts.

The 10th edition of the congress once again garnered significant interest, comparable to the 8th edition. The number of participating countries remained steady, indicating consistent international engagement across editions. Reviewing previous editions reveals a growing trend in the number of both oral presentations and posters. While participation has not yet returned to pre-pandemic levels, the 10th edition gradually recovered in-person attendance. Notably, the number of oral presentations exceeded posters by more than double, with 74 oral presentations compared to 34 posters. Among the oral presentations, 22 were delivered by young researchers, including students and doctoral candidates, highlighting the strong engagement of the younger generation in malacology. Overall, these trends reflect the growing interest and inclusivity of the conference, particularly among early-career researchers, while also emphasising the impact of technological adaptations on participation and presentation formats.

The theme of the 10th Euromal focused on the crucial role molluscs play in understanding and responding to environmental changes caused by human activity. The congress explored topics ranging from palaeontology to conservation, particularly emphasising the use of molluscs as bioindicators for climate change, pollution, and habitat loss. Discussions highlighted the increasing use of molecular techniques in conservation efforts and the need for global collaboration to protect molluscan diversity. This edition reinforced the importance of molluscan research in addressing the environmental challenges of the 21st century while fostering a strong sense of community and shared purpose among malacologists from around the world.

The 7th to 10th editions of Euromal reflect the evolution of malacological research over the past decade, with each congress contributing to a deeper understanding of molluscan biology, ecology, and conservation. The congresses have provided a platform for researchers to exchange ideas, explore new methodologies, and collaborate on solutions to the global challenges affecting molluscs and their ecosystems. As Euromal continues to grow and adapt, it remains a critical forum for advancing the field of malacology and addressing the pressing environmental issues of our time.

DIVERSE SESSIONS AND SPECIAL FOCUSES: EXPLORING THE MULTIFACETED ROLE OF MOLLUSCS IN SCIENCE, CONSERVATION, AND SOCIETY

The 10th Euromal featured an impressive lineup of invited speakers, such as ROBERT CAMERON, DIANA DELICADO, EDMUND GITTENBERGER, JORIS M. KOENE, MARY B. SEDDON and JULIA D. SIGWART, each providing valuable contributions to the field of malacology. With over six decades of expertise in studying land molluscs, ROBERT CAMERON presented his engaging talk, "Why are there so many kinds of snail?" Known for his pioneering research on land snail polymorphism and biogeography, ROBERT CAMERON shared insights from his extensive work across Europe, Australia, and beyond, cementing his legacy as a leader in the field. DIANA DELICADO followed with a fascinating exploration of integrative phylogenetic approaches, focusing on the Hydrobiidae family of freshwater gastropods. Her innovative combination of molecular and morphological methods paves the way for better conservation strategies and a deeper understanding of biodiversity. EDMUND GITTENBERGER, a senior researcher, provided a historical perspective in his presentation, focusing on evolutionary studies of the genus *Albinaria*. With nearly 400 publications, GITTENBERGER's lifelong dedication has greatly influenced evolutionary biology. JORIS KOENE captivated the audience with his talk on socially transferred materials in molluscs, delving into the unique reproductive strategies of hermaphroditic molluscs, including the famous dart-shooting behaviour of land snails. MARY SEDDON brought her extensive conservation expertise to the session with her talk on mainstreaming mollusc conservation into biodiversity planning. Drawing on her decades-long work with IUCN Red List assessments and global conservation efforts, MARY SEDDON highlighted the urgent need to integrate mollusc conservation into broader biodiversity strategies. JULIA SIGWART started the keynote talks with her presentation "What do whole genomes tell us about molluscan evolution?" In addition to her cutting-edge research on genomic

insights and biodiversity, JULIA SIGWART is also the host of the podcast *Weird Species*, where she shares fascinating stories about unique organisms, bringing biodiversity science to a broader audience.

The sessions highlighted the diverse importance of molluscs in scientific research, conservation, and public health, emphasising the need for interdisciplinary approaches to understanding their roles in ecosystems and society. From their ecological functions and contributions to biodiversity to their cultural significance and the emerging threats of climate change and invasive species, molluscs were explored from many perspectives.

Interestingly, during this congress, some topics were more often undertaken than in previous meetings (Fig. 4). For example, the “Mollusca in Museum Collections” session emphasised the importance of mollusc specimens in scientific research, discussing best practices for preserving and managing these collections, with a focus on type specimens crucial for taxonomy. “The Ecosystem Services to One Health promotion” session highlighted molluscs’ ecological roles, from nutrient cycling to bioindicators. It stressed the need for interdisciplinary approaches to managing their contributions to ecosystems and human society. In the “Functional Molluscs” session, the talks focused on molluscs’ biochemical and physiological roles, drawing parallels with previous discussions on molecular and functional aspects. Finally, the “Molluscs in Space and Time” session, the longest of the events, explored molluscs’ evolutionary,

ecological, and biogeographical roles across history, continuing discussions from past events on these crucial topics.

SUMMARY OF EUROMAL 2024: COLLABORATION, INNOVATION, AND CULTURAL ENGAGEMENT

The conference highlighted the growing need for international collaboration in mollusc conservation research, particularly in climate change and the invasion of non-native species. Several presentations at the meeting emphasised that these challenges are too complex and widespread for any one country or field of study to handle independently. Unlike previous conferences, where multiple sessions ran simultaneously, forcing participants to choose between them, this edition offered a more streamlined schedule. This allowed attendees to participate in a broader range of presentations without prioritising one session over another, ensuring they did not miss out on valuable insights from different areas of malacological research. The conference maintained a high standard, as evidenced by the fact that two early career malacologists were jointly awarded first prize for the best presentation (Fig. 5). Surprisingly or not, an additional award went to STEPHANIE MORAN, a PhD Student at the School of Art, Design and Architecture at the University of Plymouth, UK. She showed how transdisciplinary, artistic projects can contribute to broader public awareness of and engagement with



Fig. 5. One of the awarded presentations. Photo: MAŁGORZATA PROĆKÓW



Fig. 6. Ice Breaker event at the Natural History Museum of Crete. Photo: MAŁGORZATA PROĆKÓW

mollusc conservation. Furthermore, the winning poster was recognised twice by the Euromal committee and an additional committee from Spain.

The Euromal 2024 conference not only offered top-tier scientific presentations but was also filled with social events that gave participants plenty of opportunities to connect and experience Crete's rich cultural and natural heritage. These events were a great way to foster collaboration and encourage informal conversations in a relaxed atmosphere. The conference started with a memorable Ice Breaker event at the Natural History Museum of Crete (Fig. 6), where attendees could mingle and explore fascinating exhibits about Crete's natural environment and the Eastern Mediterranean. As part of the conference, participants had the opportunity to explore the stunning landscapes of Crete through organised excursions. One of the highlights was the visit to the magnificent Lassithi Plateau, a peaceful and fertile area nestled among the wild peaks of Dikti Mountain. This plateau is renowned for its iconic windmills and the mythological Dikteon Andron cave, believed to be the birthplace of Zeus. This excursion allowed attendees to appreciate Crete's natural beauty and cultural richness, perfectly complementing the scientific focus of the event.

In addition to these activities, the organisers provided complimentary entry for conference participants to the Natural History Museum and the local

oceanarium. Moreover, after the conference concluded, participants were allowed to enjoy a guided tour of the museum, offering a deeper insight into the region's natural history. The organisers' committee made every effort to ensure the congress was climate-friendly. Printed materials were kept to a minimum, with only a few detailed programmes produced. The gifts received by participants reflected an environmentally conscious lifestyle, including reusable bottles. The Book of Abstracts was available exclusively in electronic format and remains accessible for download on the Euromal website. Snacks and beverages were sourced from local suppliers, further supporting sustainable practices.

This year's congress was a significant scientific gathering and a delightful social event. According to current plans, the next Euromal congress will take place in Portugal in 2027.

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