



3rd EUROPEAN FMCS SYMPOSIUM
BRAGANÇA, PORTUGAL 7-10 SEPTEMBER 2026

Freshwater Mollusk Conservation in a Changing World

**Learning from the Past,
Protecting the Future**

**Symposium
Program**



3rd European Freshwater Mollusk Conservation Society Symposium

Detailed Program

Day 1 / Monday, 7 September 2026

Time	Type	Presenter / Event	Country	Presentation title
14:00-15:00	Registration and Opening Session			
15:00-15:30	Invited Lecture	Manuel Lopes-Lima, Ronaldo Sousa	Portugal	The dramatic decline of freshwater mussels in Europe
Session 1 Biological Invasions and Their Impacts				
15:30-16:00	Invited lecture	David Aldridge	UK	Invasive bivalves in freshwater ecosystems: recent advances and future perspectives
16:00-16:15	Oral presentation	Lyubov Burlakova	USA	Non-native mollusks in the Great Lakes: Invasion dynamics, density, and impact
16:15-16:30	Oral presentation	Alexander Karatayev	USA	Multiple invasions decimate the most imperiled freshwater invertebrates
16:30-17:00	BREAK	Coffee Break		
Session 2 Ecosystem Functions, Services and Nature-Based Restoration				
17:00-17:30	Invited lecture	Dave Strayer	USA	Progress and challenges for understanding relationships between freshwater mussels (Unionida) and nutrients
17:30-17:45	Oral presentation	Jonathan Lopez	USA	Mussel-generated ecosystem function varies with long-term changes in secondary production
17:45-18:00	Oral presentation	Jake Daviot	Australia	Quantifying ecosystem services to promote freshwater mussel conservation in southwestern Australia
18:00-18:15	Oral presentation	Ville Julkunen	Finland	Freshwater mussel <i>Anodonta cygnea</i> reduces concentration, germination rate, and infectivity of pathogenic oomycete <i>Saprolegnia</i> spp. spores
18:15-18:30	Oral presentation	Jouni Taskinen	Finland	Relationship between number and size of glochidia of the freshwater pearl mussel <i>Margaritifera margaritifera</i>
18:30-18:45	Oral presentation	Matti Mako	Finland	Agricultural and urban drainage water filtration by using MuFil (Mussel Filtration) - concept
18:45-19:00	Oral presentation	Nicoletta Riccardi	Italy	From Endangered to Essential: Freshwater Mussels as the Missing Link in Aquatic Restoration?
19:30	Social Event	Welcome "Ice Breaker" Cocktail (Bragança Castle)		

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Day 2 | Tuesday, 8 September 2026

Time	Type	Presenter / Event	Country	Presentation title
Session 3 Taxonomy, Systematics and Evolutionary Biogeography				
09:00-09:30	Invited lecture	Arthur Bogan	USA	Unionida: an evolving concept
09:30-09:45	Oral presentation	Yulia Beshpalaya	Russia	Phylogeny, taxonomy, and biogeography of the subfamily Sphaeriinae (Bivalves: Sphaeriidae)
09:45-10:00	Oral presentation	Camila F. Chacón	Argentina	Revealing hidden diversity of neotropical freshwater bivalves
10:00-10:15	Oral presentation	Ilya Vikhrev	Russia	Taxonomic revision of endemic cementing river oysters from Madagascar and evolutionary biogeography of the genus in Africa
10:15-10:30	Oral presentation	Vincent Prié	France	Beyond eDNA surveys: taxonomic insights from a bushy batch of ASVs
10:30-11:00	BREAK	Coffee Break		
Session 4 Gastropod Diversity, Bivalve Distribution and Molecular Monitoring				
11:00-11:15	Oral presentation	Diana Delicado	Spain	Global drivers and patterns of extinction risk in the hyperdiverse family Hydrobiidae
11:15-11:30	Oral presentation	Fatima Ezzahra Aroumy	Morocco	Groundwater Hydrobiidae (Mollusca: Gastropoda) in the Bouhlou region (Morocco): distribution, groundwater quality and conservation importance
11:30-11:45	Oral presentation	Laurynas Orla	Lithuania	Freshwater Gastropod Diversity in Lithuania: A Review of Historical and Recent Records
11:45-12:00	Oral presentation	María García Álvarez	Spain	Beyond Climate: Modelling Freshwater Mussel Distributions in River Networks
12:00-12:15	Oral presentation	Gorazd Urbanič	Slovenia	eDNA Uncovers Bivalve Diversity in Non-Wadable and Impounded Rivers in Slovenia
12:15-12:30	Oral presentation	Michelle Melchior	New Zealand	Tracking an invasion in real time: habitat drivers and co-occurrence patterns between invasive <i>Corbicula fluminea</i> and native freshwater mussels in New Zealand
12:30-14:00	BREAK	Lunch Break		

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Time	Type	Presenter / Event	Country	Presentation title
Session 5 Monitoring, Assessment and Conservation Planning				
14:00-14:30	Invited lecture	Jürgen Geist	Germany	Progress and challenges in freshwater mussel research and conservation
14:30-14:45	Oral presentation	Joana Nogueira	Portugal	Can eDNA change the game in conservation?
14:45-15:00	Oral presentation	Erin McCombs	USA	Application of the Mussel Assemblage Health Index (MAHI) to address the decline of freshwater mussels
15:00-15:15	Oral presentation	Rebecca Höß	Germany	Status assessment and recovery potential of Denmark's only freshwater pearl mussel (<i>Margaritifera margaritifera</i>) population in the Varde River system
15:15-15:30	Oral presentation	Joaquim Reis	Portugal	Conservation Status of Freshwater Mussels in the South-Western Iberian Peninsula
15:30-15:45	Oral presentation	Hugh Jones	Australia	On the hunt for the rare and endangered Smooth Almond-shell mussel (<i>Hyridella narracanensis</i>) in Tasmania, Australia
15:45-16:00	Oral presentation	Michael Klunzinger	Australia	Conservation of freshwater bivalves in Australia: Challenges and solutions
16:00-16:30	BREAK	Coffee Break		
Session 6 Recovery, Captive Rearing and Restoration Practice				
16:30-16:45	Oral presentation	Stefan Abreu Fernandes	Luxembourg	Effects of pathologies on the rearing success and reintroduction outcomes in two endangered freshwater mussels: <i>Margaritifera margaritifera</i> and <i>Unio crassus</i> .
16:45-17:00	Oral presentation	Paulina Jakubiak	Poland	The impact of chemical lake restoration on freshwater mussels
17:00-17:15	Oral presentation	Keiko Nakamura	Spain	Juvenile growth in <i>Pseudunio auricularius</i> : A multi-site semicaptivity study across the Ebro River basin
17:15-17:30	Oral presentation	Michaela Tille	Germany	When survival is not enough: a multi-endpoint approach to evaluate mussel translocation success
17:30-17:45	Oral presentation	Fatima M'Hamdi	Morocco	First attempt to develop a long-term individual marking protocol for <i>Pseudunio maroccanus</i> (Pallary, 1918) (Mollusca: Margaritiferidae) in KBA Bouhlou, Morocco
17:45-18:00	Oral presentation	Jon Magerøy	Norway	Recovery of <i>Margaritifera margaritifera</i> in limed rivers in Norway
18:00-18:15	Oral presentation	Emilia Nordfeldt	Sweden	Improving aquatic ecosystems from source to sea: integrated conservation actions for threatened freshwater mussels in southern Sweden
18:15-19:30	Poster Session			
20:00	Gala Dinner			

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Poster presentations

Presenter	Country	Nº	Presentation title
Nuno Alves	Portugal	1.	Beyond Species Detection: Using eDNA for Genetic Diversity Monitoring in Threatened Mediterranean Freshwater Taxa
Andreas Dobler	Germany	2.	From disturbance to opportunity: Beaver slides can promote <i>U. crassus</i> reproduction in modified streams
Dan Cossey	New Zealand	3.	A tool for the rapid assessment of mussel condition in the field
Dulmini Perera	Australia	4.	Thermal tolerance of Carter's freshwater mussel - <i>Westralunio carteri</i> Iredale 1934
Joana Nogueira	Portugal	5.	Prioritising Space and Actions for Freshwater Mussel Conservation in Southern Portugal
Joaquim Reis	Portugal	6.	About the presence of <i>Unio tumidiformis</i> in the Guadalquivir basin
Jon Magerøy	Norway	7.	Unintentional establishment of <i>Margaritifera margaritifera</i> populations through stocking of <i>Salmo trutta</i>
Liu Manchón	Portugal	8.	Save the Southern Naiads: An Integrated Conservation Strategy for Endangered Freshwater Mussels in Southern Portugal
Keiko Nakamura	Spain	9.	Evaluation of oxidative stress and neurotoxicity in the Asian Clam as a bioindicator
Marie von Wesendonk	Germany	10.	Effects of degrading freshwater mussel shells on the water chemistry
Michael Klunzinger	Australia	11.	New descriptions of glochidia from the wet-dry tropics of Australia
Sebastian Rock	Sweden	12.	Artificial light at night impacts the behaviour and gene expression of an endangered unionid mussel
Sebastian Rock	Sweden	13.	Parasitism under the spotlight: artificial light at night disrupts circadian and redox balance in fish, enhancing fitness of parasitic glochidia
Silvana Costa	Portugal	14.	Behavioural monitoring of Native versus Non-native bivalves exposed to olive mill wastewaters: A Valvometric Comparative Study
Silvia Signorini	Italy	15.	The bivalve <i>Unio elongatulus</i> as sentinel of environmental quality: a case study in Lake Orta
Catarina Varela	Spain	16.	Practical guidance for improving captive rearing success in <i>Margaritifera margaritifera</i> conservation programmes

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Day 3 / Wednesday, 9 September 2026

Time	Type	Presenter / Event	Country	Presentation title
Session 7 Conservation Challenges and Case Studies				
09:00-09:30	Invited lecture	Mary Seddon	UK	EU PULSE 2025: Revising the Red List of European Freshwater Molluscs
09:30-09:45	Oral presentation	Khadija Elbouhali	Morocco	First ecological assessment of invasive <i>Corbicula fluminea</i> populations in Moroccan freshwater ecosystems
09:45-10:00	Oral presentation	John Hyde	USA	Resource Equivalency Analysis of Freshwater Mussel Populations Injured by the Certus, Inc. and Lone Mountain Processing, Inc. Toxic Spills in the Upper Tennessee River Basin, USA
10:00-10:15	Oral presentation	Astrid N. Schwalb	USA	Facing an uncertain future - What can we learn from 10 years of research in a drought-prone river system?
10:15-10:30	Oral presentation	Grita Skujienė	Lithuania	Freshwater Unionidae population dynamics in relation to the 2015 pollution incident in the Šešupė River
10:30-11:00	BREAK	Coffee Break		
Session 8 Population Ecology, Reproduction and Species Interactions				
11:00-11:15	Oral presentation	Mafalda Gama	Portugal	Spatial and temporal dynamics of native freshwater mussels in an intermittent Mediterranean stream
11:15-11:30	Oral presentation	Sabrina Nykänen	Finland	Using simulation models as tools for studying the food web and population ecology of freshwater pearl mussel
11:30-11:45	Oral presentation	Juha Syväranta	Finland	Do size and depth matter – some world records among freshwater pearl mussels?
11:45-12:00	Oral presentation	Marie von Wesendonk	Germany	Ecological functions of freshwater mussel shells for the macroinvertebrate community
12:00-12:15	Oral presentation	Anna Łabęcka	Poland	Do unionid freshwater mussels incur reproductive costs during the incubation of the bitterling fish?
12:15-12:30	Oral presentation	Sandra Kaźmierczak	Poland	Hidden Manipulators: The Influence of Parasites on the Behavior of Freshwater Mussels
12:30-14:00	BREAK	Lunch Break		

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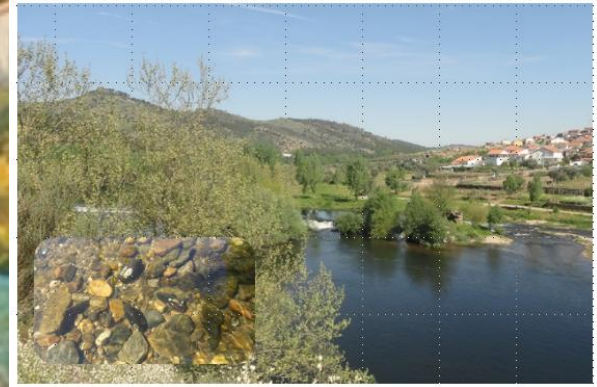
Day 3 / Wednesday, 9 September 2026

Time	Type	Presenter / Event	Country	Presentation title
Session 9 Conservation Priorities, Genomics and Restoration				
14:00-14:30	Invited lecture	Agustin Bassó	Argentina	South American Freshwater Bivalves: Foundations for a Coordinated Conservation Agenda
14:30-14:45	Oral presentation	Alexandra Weber	Switzerland	Reproductive mode and hybridisation shape conservation genomic patterns in <i>Anodonta</i> freshwater mussels
14:45-15:00	Oral presentation	David Berg	USA	Evaluating the three Rs of conservation utilizing population genomics
15:00-15:15	Oral presentation	Arianna Lord	Switzerland	A population genomics approach to understanding the <i>Unio crassus</i> species complex in Poland and Croatia
15:15-15:30	Oral presentation	Paul Russell Stanley	USA	Range-wide analysis of the phylogeography and genetic variation of <i>Lampsilis cariosa</i> , a widespread but potentially at-risk freshwater mussel of North American Atlantic Slope drainages
15:30-15:45	Oral presentation	André Gomes-dos-Santos	Portugal	Population-specific phenotypic plasticity of endangered bivalves in response to extreme events
15:45-16:00	Oral presentation	Sarah Raubenheimer	UK	From Habitat Restoration to Optimised Reinforcement: Progressing Freshwater Pearl Mussel Recovery in the River Irt
16:00-16:30	BREAK	Coffee Break		
Session 10 Environmental Stressors, Mass Mortality and Physiological Responses				
16:30-16:45	Oral presentation	Dan Cossey	New Zealand	Freshwater mussel mass mortality events: current knowledge and future priorities
16:45-17:00	Oral presentation	Silvana Costa	Portugal	Multi-Species Biomarker Assessment of Olive Mill Wastewater Toxicity on Freshwater Bivalves
17:00-17:15	Oral presentation	Kristi Dobra	USA	Using high-resolution chemical analysis to explore patterns of trace element distribution in <i>Actinonaias ligamentina</i> shells from the Allegheny River, USA
17:15-17:30	Oral presentation	Dulmini Perera	Australia	Sublethal responses of Carter's freshwater mussel- <i>Westralunio carteri</i> Iredale 1943- to multiple stressors
17:30-17:45	Oral presentation	Sebastian Rock	Sweden	Divergent behavioral, metabolic and physiological responses of two salmonids to glochidiosis
17:45-18:00	Oral presentation	Maria Urbanska	Poland	From Ecological Disaster to Scientific Opportunity: Structural Studies of Mussel Shells from Lake Orta
18:00-18:15	Oral presentation	Tadeusz Zajac	Poland	Massive die-off in freshwater mussels: indicators and underlying processes in <i>Unio nanus</i> from the Northern Carpathians
18:30	Closing Session			

SOCIAL PROGRAM: Douro International Natural Park

MORNING: The border section of the Douro River will be visited, an embedded valley with cliff margins that separate Portugal from Spain. **Douro Internacional Natural Park**, with 86,834.82 ha, covers an extensive surface adjacent to the river; its **vegetation** is dominated by oaks (*Quercus rotundifolia*, *Q. suber*, *Q. pyrenaica*) and prickly juniper (*Juniperus oxycedrus*). **Douro Internacional Natural Park** is a fundamental area for large rupicolous **birds**, namely Egyptian vulture (*Neophron percnopterus*) and griffon vulture (*Gyps fulvus*) that have found refuge here. This area has a low population density and agriculture and livestock production are the main economic activities. Strange **dovecotes**, once a source of food and fertilizer, complete a rough landscape that gains a dramatic expression in the Douro cliffs. "**Mirandês**", since 1999 the 2nd official language in Portugal, is another surprise this northeast Portuguese area has to offer.

AFTERNOON: Unionidae populations (*Unio delphinus*, *Anodonta anatina*, *Potomida littoralis*) will be visited in the Rabaçal River (Tua Basin), threatened by several pressures (e.g. pollution, invasive alien species, dam construction, fluvial beach).



Bus will leave from the main gate of the UPB Campus at 8:00 on Thursday, September 10, and will return at 18:00.

Organization



Collaborators



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<https://esa.ipb.pt/mollusk/>