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mollusk research and conservation
in the Old and New World**

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Book of Abstracts

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| Abst. ID | Author(s) | Title |
|----------|---|--|
| P12 | Barak V, Simon O, Nemcikova S, Bily M, Dort B, Svanyga J, Douda K (CZE) | Interpretation of mussel bioindication test results in Buddensiek cages and Hruska sandy boxes |
| P13 | Simon O, Kladivová V, Bily M, Hruška J, Rebec J, Franče P, Staponites L, Jahelková V, Mrázek V (CZE) | Is it possible to significantly improve water quality in a freshwater pearl mussel protected area? 30-year experience from Blanice River catchment restoration |
| P14 | Frisch M, Heumann S, Michels K, Thielen F (LUX) | Water purification performances of freshwater mussels |
| P15 | Varandas S, Parra S, Félix LM, Santos D, Gago J, Monteiro SM (PRT) | Oxidative stress response in gonads of Asian clam, <i>Corbicula fluminea</i> , simultaneously exposed to microplastics and cadmium |
| P16 | Teixeira A, Lopes-Lima M, Varandas S, Froufe E, Sousa R (PRT) | FRESHCO project - preliminary results assessing the multiple implications of invasive species on freshwater mussel decline and coextinction processes |
| P17 | Lopes-Lima M, Froufe E, Fonseca MM, Teixeira A, Varandas S, Gonçalves D, Hinzmann M, Arenas F, Gan HM, Breton S, Prié V, Zieritz A, Bogan AE, Razgour O, Vikhrev IV, Bolotov IN, Pfeiffer J (PRT) | ConBiomics: the missing approach for the conservation of freshwater bivalves |
| P18 | Dobler A, Stoeckl K, Geist J, Inoue K (DEU) | Prioritizing conservation areas for endangered freshwater molluscs in Bavarian riverine systems, Germany |
| P19 | Douda K, Vodáková B (CZE) | The analysis of glycogen in tissues of duck mussel (<i>Anodonta anatina</i>) and possibilities of its application in conservation of bivalve populations |
| P20 | Travina OV, Bepalaya YV, Aksenova OV (RUS) | Ecology and distribution of <i>Dreissena polymorpha</i> (Pallas, 1771) in the Northern Dvina River basin |
| P21 | Urbańska M, Ożgo M, Geist J, Taskinen J (POL) | A preliminary study on the parasites of the depressed river mussel <i>Pseudoanodonta complanata</i> (Rossmässler, 1835) |
| P22 | Urbańska M, Chmist J (POL) | Sensitivity of freshwater mussels (native <i>Unio tumidus</i> and invasive <i>Sinanodonta woodiana</i>) to pollutants: nitrate, sulfate, chloride and phosphate |
| P23 | Horáčková J, Horsák M, Beran L, Čejka T, Juříčková L, Maňas M, Simon O (CZE) | Malacologica Bohemoslovaca and other freshwater mollusc data sources from the Czech and Slovak Republics |
| P24 | Horáčková J (CZE) | Freshwater molluscs in the Czech Republic – current status and red list |



CONBIOMICS: THE MISSING APPROACH FOR THE CONSERVATION OF FRESHWATER BIVALVES

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The decline of freshwater biodiversity has reached alarming proportions. The extinction rate of freshwater biodiversity is predicted to be five times faster than all other groups of species. The Unionidae, being the largest of the freshwater bivalve families, is among the most endangered group in the world. They are important providers of aquatic ecosystem services and are characterized by an unusual pattern of mtDNA inheritance. However, phylogeny, population genetic structure and species-level diversity remains unclear for much of the group. With an experienced and well-qualified team, the present proposal aims to define the most important freshwater mussel taxa and most critical areas for conservation, at European and Global levels, to inform the most relevant policy makers. This will be

achieved by integrating a genomics approach with available distribution data, in order to determine and map global species richness, phylogenetic diversity, and weighted endemism. This complementary approach will not only help conserve this vulnerable group but will offer wider benefits to freshwater ecosystems whose billions of people depend globally. Additionally, as these animals have an extraordinary unusual pattern of mtDNA inheritance, they will be used as model-taxa to study the evolution of mtDNA and life in general.