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**Bridging the gap between freshwater
mollusk research and conservation
in the Old and New World**

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Book of Abstracts

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FRESHCO PROJECT - PRELIMINARY RESULTS ASSESSING THE
MULTIPLE IMPLICATIONS OF INVASIVE SPECIES ON FRESHWATER
MUSSEL DECLINE AND COEXTINCTION PROCESSES

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The Iberian freshwater ecosystems are highly invaded by a myriad of organisms that threaten their native biodiversity, including fish and mussels. FRESHCO project is evaluating the direct and indirect impacts of selected invasive alien species (IAS) belonging to distinct functional groups (from plants to vertebrates) on the native Iberian freshwater mussels (FM) and its fish host fauna. Preliminary results for the designed tasks (T) were obtained: T1 - based on field and lab experiments, FM exhibited lower growth, lower physiological condition, and higher locomotor activity at higher *Corbicula fluminea* density, suggesting that FM are negatively affected by *C. fluminea* and may be displaced to less favourable habitats; T2 - only native Iberian fishes are effective hosts for *Unio delphinus* and *Potomida littoralis*, while *Anodonta anatina* has a more wide range of host fishes that may include non-native species; T3- molecular and classical detection tools has been used to analyze the diets of selected IAS (*Lepomis gibbosus*, *Pacifastacus leniusculus*, *Procambarus clarkii*, *Neovison vison*) and preliminary results showed that all these IAS predate FM; T4 - 150 sampling sites in Douro basin (Portugal and Spain) were surveyed and mussel and fish assemblages and their habitats characterized. In opposition to salmonid streams, which maintain a good ecological status, large number of median-sized and lowland rivers display marked changes in abiotic conditions and biotic composition, including a higher proportion of non-native species presence. From an ecological point of view, overall results would help to clarify the real impacts of the most prominent IAS on the threatened native FM and fish species in Iberia. From a management point of view, this project will contribute with information that can be used in a more effective conservation of native species and management of IAS.