TEMPRIV
Ecohydrology and Ecological Quality in Temporary Rivers

Workshop

Conservation of Fish Fauna and Climate Change in Mediterranean-type Streams

20-21 November 2013 | University of Évora

Sala do Senado (242), Colégio Esprito Santo
Largo dos Colegiais, Évora

Introductory Talks

20 Nov: 9:30h-13:00h

Climate Scenarios: From Global to Catchment Scale

| João Corte Real UÉ - ICAAM

Impacts of Climate and Land Use Changes on Mediterranean River Catchments

| Sandra Mourato – Instituto Politécnico de Leiria - ICAAM

Vulnerability of Stream Biota to Climate Change in Mediterranean Climate Regions

| Ana Filipa Filipe - CIBIO Porto

Seminar

20 Nov: 14:30h-18:00h
21Nov: 9:30h-18:00h

Conservation of California´s Freshwater Fishes: Methods, Problems and Uncertainties

| Rebecca M. Quinones - University of California Davis, Center for Watershed Sciences

The integrity of fish communities of Mediterranean streams, particularly the intermittent ones, is expected to be particularly vulnerable to climate change, mainly due to the increase of hydrological variability. Hydro-climatic models predict that climate change would increase frequency and severity of floods and droughts, which result in the enlargement of the low flow period and aggravate environmental conditions in Mediterranean-type streams. Both climate variability and human-induced local pressures would likely have stronger implications for the local conservation of biodiversity. Thus, long-term strategies for fish bio-integrity conservation, namely through the assessment of the fish-based ecological status, should be supported by a predictive model of fish fauna response to flow, anticipating the loss of integrity and changes of the fish assemblages in the scenarios of climate changes.
In this seminar, we will explore how species status and distributions are being evaluated for native and alien fish species in California. One important aspect of this analysis is identification of data gaps and uncertainties associated with the evaluations. We will discuss and apply methods used in Moyle et al. 2011, and then refined in Moyle et al. 2013, to estimate the current and future status of species in Portugal. As precursory steps, we will develop conceptual models to identify the threats, including climate change, faced by taxa and use permutations (as in Quiñones et al. 2013) to conduct analysis of population trends. We will also discuss how general linear models can help identify factors (e.g., harvest rate, changes in stream flow) driving trends in abundance. Moreover, discussion will touch on the development of the PISCES database by UC Davis.

Free access event (but registration is required – Please send mail to milheu@uevora.pt)

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COMPETE · QREN Quadro de Referência Estratégico Nacional · União Europeia Fundo Europeu de Desenvolvimento Regional · Governo da República Portuguesa FCT Fundação para a Ciência e a Tecnologia · icaam Instituto de Ciências Agrárias e Ambientais Mediterrânicas — Knowledge connecting land, food and people