

# Patterns of habitat use of the endangered fish species Saramugo, *Anaecypris hispanica*, and the invasive Bleak, *Alburnus alburnus*: implications for native fish fauna conservation.

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Matono P, Bernardo JM, Costa AM, Silva J, Sousa D, Rodrigues P, Cardoso AC, Carrapato C, Pinheiro P, Almeida J, Lousa H, Silva N, Silva R, Alcazar R. The Bleak (*Alburnus alburnus*) is an invasive fish occurring in high density in many streams and rivers of the Iberian Peninsula, namely in the Guadiana basin. Considering its invasive success, the coexistence with native species can lead to negative impacts. Although this species has been considered a biological threat, there is still a lack of knowledge on many aspects of its bio-ecology in Mediterranean climate streams. This study was developed under the Life Project for the Conservation of Saramugo (*Anaecypris hispanica*) in the Guadiana River Basin and aimed to evaluate the potential impact of the Bleak on the Saramugo populations, considering the patterns of habitat use and distribution. Data were collected in the Guadiana river basin during the spring of 2015 and 2016. The patterns of habitat use, habitat preferences and overlap were quantified. The spatio-temporal variability of the Bleak captures was also evaluated. Saramugo exhibited habitat preferences for deep pools, medium/deep runs and fast riffles and the Bleak showed preference for medium /deep pools and medium/deep runs, resulting in a high habitat overlap between both species. Substrate type and vegetation elements were important for both species, though with distinct preferences. The Bleak performed seasonal movements in the river network that seems related to a dispersal strategy to assure the occupation of new stream areas. The obtained results contribute to support decision-making on the implementation of effective measures that selectively benefit the native fish fauna conservation.