

## Are different biodiversity metrics related to the same factors? A case study from Mediterranean wetlands



Conservation biology is mainly interested in prioritizing sites on the basis of their high biodiversity. Although species richness is a commonly used criterion, it does not take other crucial aspects of identifying conservation priority sites into account, such as rarity or taxonomic distinctness. Additionally, management efforts are usually focused on the conservation of a small number of species, mainly vertebrates.

However, the biodiversity patterns of these faunal groups and the main factors which determine them cannot be generalized to other faunal groups (e.g. aquatic invertebrates). Therefore, the objectives of the present study are: - to compare the response of 11 biodiversity metrics in order to know which ones are redundant,

- to identify key environmental factors for biodiversity,
- to find out whether sites with high biodiversity values also have a good habitat condition and high protection status.

The study was done at assemblage level (crustaceans and insects) in 91 wetlands in the NE Iberian Peninsula.

Regression tree models were used to identify the key factors influencing biodiversity, including water, wetland and landscape characteristics as explanatory variables. Generalized Linear models were used to establish the relationship between biodiversity metrics and protection status and habitat condition.

The results obtained by the two sampled seasons were compared. Conductivity was the main factor influencing biodiversity metrics. Positive significant relationships were found between some biodiversity metrics and wetland habitat condition, whereas there were none for protection status, indicating the inadequacy of conservation policies to protect wetland aquatic invertebrate biodiversity.

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