

Cryptic species in the zooplankton hindering our understanding of ecological processes

Species identification for most ecological and applied purposes (e.g. biological monitoring, environmental assessment, etc.) is performed through the analysis of morphological features of the organisms collected in the wild and sorted individually. There are growing evidences that several complexes of cryptic species (i.e. species that cannot be identified from morphology) exist in the zooplankton, and that different cryptic species within a single morphological species may respond differently to environmental drivers, because they represent different evolutionary entities with different ecological adaptations. Such differences can represent serious hindrances to our understanding of biological drivers and correlates of biodiversity if the species complexes are not solved. I will report few examples from on-going analyses on aquatic and limno-terrestrial rotifers to support such scenario and provide suggestions on how molecular tools could provide useful avenues to get pass such impasse.

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