



Conference Abstract

# Preliminary conservation status assessment of cave-dwelling planarians (Platyhelminthes, Tricladida) of Italian Alps and Apennines.

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## Abstract

Despite being a fundamental source of biodiversity, several highly diverse taxa of aquatic invertebrates, including Platyhelminthes, remain still poorly known and poorly considered in protection programs. This is the case especially of several invertebrate species that inhabit groundwater. In this environment, invertebrates play significant roles that are strictly connected to the usefulness of these systems for human survival. The groundwater biodiversity of continental Italy is largely unknown and its importance neglected in national and regional legislation. One of the most poorly studied group of the Italian groundwater fauna are planarians. Most of the known species are endemic of small single karst areas or a single cave, with their distribution being never investigated after the original description. The aims of this study are to provide an update conservation status assessment of cave-dwelling planarians known from Italian Alps and Apennines. In particular, we want to analyze the major threats for their survival and the factors determining the possibility to contact and observe these important invertebrates for the subterranean systems. From October 2016 to September 2017, we explored the known localities of nine taxa and a

relevant number of surrounding caves. Our results suggest that most of the cave-dwelling planarians species of continental Italy are threatened by water pollution and habitat destruction; moreover, our research underlines that there is a large conservation issue dealing with stenoendemic planarians that may involve other cave-dwelling invertebrates with narrow ranges. Generally, the underground habitat of most species appears to be deeply compromised and changed since species description.

## **Keywords**

Stenoendemic; cave conservation; invertebrate; flatworm; planarian; Triclad; underground biodiversity; pollution

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