

## Angitola lake sediments: preliminary data and biotic indices

**Borgonuovo, C<sup>1</sup>, Mutalipassi, M<sup>2</sup>, Faugno, S<sup>3</sup>, Panzuto, R<sup>1</sup>, Motta, CM<sup>1</sup>,  
Agnisola, C<sup>1</sup>, Pititto, FM<sup>4</sup>, De Martinis, C<sup>2</sup>, Carella, F<sup>1</sup>, Esposito, L<sup>2</sup>**

<sup>1</sup>Dept. of Biology, via Mezzocannone 8, UNINA, Napoli, Italy

<sup>2</sup>Dept. of Veterinary Medicine and Animal Productions, via F. Delpino 1, UNINA, Napoli, Italy

<sup>3</sup>Dept. Agrarian, Via Università 100, UNINA, Portici, Italy

<sup>4</sup>Natural Regional Park of “Serre”, Via Santa Rosellina 2, Serra San Bruno, Vibo Valentia, Italy

[camilla.borgonuovo@gmail.com](mailto:camilla.borgonuovo@gmail.com)

The Angitola lake is an artificial basin located in Calabria Region, in South Italy, part of the “Natural Regional Park of Serre”. Its surface area is 1.96 km<sup>2</sup> and it is approximately 3 km away from Sant’Eufemia gulf. The basin was created in 1966 by damming the homonymous river. Four major rivers enter the lake: three in the far southeast, the fourth, smaller and active only during the winter period, in the southwest area. The international *Ramsar* Convention includes the basin and surroundings; in light of the *Rio Convention*, its directives have been transposed in the “Birds Directive” (BD) and “Habitats Directive” (HD).

The Angitola lake, entrusted to the WWF Calabria, is one of the 2299 Italian SIC (code IT9340086): this area significantly contributes in maintaining and restoring the endangered freshwater habitat listed in HD, in protecting biodiversity of the region and it is part of the *Natura 2000 network*. The present study is part of the *Angitola FISH<sub>2</sub>O* project (European Fisheries Fund/FEP code 02/BA/12) and it aimed to examine the benthic macro-invertebrates community of the southeast part of Angitola lake. The first 15 cm in depths of sediments have a very variable composition, from fine sand to mud (rich in organic matter). This variability can be explained by the different characteristic of the chosen sampling transects. Fauna sampling, carried out by core drills and plankton nets, shows presence of *Diptera* and *Tricoptera* larvae and some *Nematoda*, *Polichaeta* and *Mollusca*. Preliminary conclusion is that the Angitola lake is a diversified environment in which areas with different anthropic interference are present. The benthic macro-invertebrates community might be involved by possible disturbances induced by chemicals (e.g. water pollution) and/or physical variations (e.g. high sedimentation). Medium and long-term investigations are imperative to protect and promote the lake biodiversity, to verify the effects of seasonal fluctuations and how these are related to human activities such as tourism, demographic increase and industrial activities.

Key words: Angitola lake, benthic community, biodiversity

References: -<sup>1</sup>Donohue I and Garcia Molinos J, 2009 Biological reviews 84: 517-531