DEPLOYMENT OF ENEX ENCLOSURES IN HIGH-MOUNTAIN LAKE REDON (SPAIN)

Pau Giménez-Grau, Marisol Felip, Aitziber Zufiaurre, Sergi Pla-Rabès, Lluís Camarero, and Jordi Catalan

Study Description

The ENEX experiment in Lake Redon (Pyrenees) investigated the relationship between the changes in plankton stoichiometry, productivity, and community structure occurring during nutrient fluctuations in P-limited conditions. Columnar enclosures were used for treatments varying P availability, N:P imbalance, and N source. C:N:P seston ratios were stable in P-limited conditions, with loose coupling with productivity, nutrient supply ratios, and species dominance. The stoichiometric ratios shifted to Redfield proportions in P-repleted conditions. The results suggest a complex regulation of P scarcity in planktonic communities that goes beyond immediate acclimation growth responses and might include alternative physiological and biogeochemical states.

Giménez-Grau, P., M. Felip, A. Zufiaurre, S. Pla-Rabès, L. Camarero, and J. Catalan. 2021. Deployment of ENEX Enclosures in High-Mountain Lake Redon (Spain). Bull Ecol Soc Am. 102(1):e01799. https://doi.org/10.1002/bes2.1799

Photo 1: Ultraoligotrophic Lake Redon (Central Pyrenees Mountains, Spain) with the ENEX experimental enclosures deployed in the central part. Limnological research in this high-mountain lake (2232 m above sea level) has been ongoing for more than 30 years. Photo credit: Pau Giménez-Grau.

This photograph illustrates the article "Homeostasis and non-linear shift in the stoichiometry of P-limited planktonic communities" by Pau Giménez-Grau, Marisol Felip Aitziber Zufiaurre, Sergi Pla-Rabès, Lluís Camarero, and Jordi Catalan published in *Ecosphere*. https://doi.org/10.1002/ecs2.3249.