



Rocco Tiberti (2011). Ecology of alpine lakes in Gran Paradiso National Park. Università degli Studi di Pavia, tesi di dottorato in Ecologia Sperimentale e Geobotanica.

This thesis aims at understanding the functioning of high altitude lakes ecosystems in Gran Paradiso National Park. The entire work is based on field data from 20 alpine lakes, collected with a non-manipulative approach. The organisms inhabiting alpine lakes are subjected to strong environmental pressures, resulting in low diversity and simple food web structure. Although alpine lakes are remote ecosystems, naturally-occurring extreme conditions are superimposed on by several anthropogenic threats interacting with the ecological processes. A main intent of this study is to include these interacting anthropogenic threats in the understanding of ecosystems. The general hypothesis is that the internal ecological dynamic of each lake depends on the interplay of several variables that are unique to each catchment area, such as the pressures exerted by the physical environment, the initial chemical composition of precipitation, the amount and distribution of rain and snowfall, the nature of the surrounding catchment and of the lake basin, and the impact of human activity and land use in the catchment. All these variables determine the sensitivity of each lake toward external influences.