

ABSTRACT BOOK



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OCCURRENCE AND MASS DEVELOPMENT OF *MOUGEOTIA* SPP. (ZYGNEMATACEAE) IN LARGE, DEEP LAKES

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Over the last decades, mass developments by the filamentous conjugating green alga *Mougeotia* have been followed in three large peri-alpine lakes (Lake Geneva, Lake Garda, Lake Maggiore) and in the sub-tropical Lake Kinneret. The aim of this study is to highlight annual and interannual patterns of *Mougeotia* biomass in the studied lakes and select key environmental parameters that may favour and maintain its mass development. Our results confirm former studies that planktic *Mougeotia* favours meso-oligotrophic conditions and becomes dominant when annual mean total phosphorus concentrations in the epilimnion fall below 20 $\mu\text{g l}^{-1}$. This triggering factor has effect with interactions of other environmental circumstances such as the water column stability. Physiological and morphological features of the taxon make it a successful competitor under stratified conditions. Results also showed that in three out of the four studied lakes, the annual peak was higher when the annual population development started earlier. Focusing on Lake Geneva, depth and strength of the thermocline, as well as wind speed in the beginning of summer that can cause nutrient replenishment and mix the epilimnion are key factors in the blooming of the taxon.