

ABSTRACTS

6: Stenger-Kovács, C., E. Lengyel, L. O. Crossetti, V. Üveges, J. Padisák (2012): Diatom ecological guilds as indicators of temporally changing stressors and disturbances in the small Torna-stream, Hungary. *Ecological Indicators* 24 (2013) 138–147

In this research, indicator properties of the three recently described diatom ecological guilds (low profile, high profile and motile) and their responses to different stressors and disturbances were tested along a temporal gradient. Experiments were run at a standard sampling site in the Torna-stream (Hungary) between 2008 and 2010 using standardized substrata. The low profile guild was dominant during periods with low nutrient (SRP and TN) availability. In contrast, the high profile guild was dominant in resource rich (SRP and SRSi) periods. The motile ecological guild was the most sensitive to the nutrients (TN and SRSi) and some other factors (e.g. temperature, Cl⁻). Increasing irradiance in spring and summer favored the growth of the high and the low profile guild. Higher resistance to floods favored the adhesion type of the low profile guild enabling their summer peak in terms of relative abundance. During high flood periods, incident light availability apparently sufficed the needs of this guild. Seasonal changes of the diatom ecological guilds and guild diversity were robust and predictable. This study supported that the ecological responses of diatom ecological guilds, despite the apparent simplicity of the grouping method, is strong enough to indicate the temporally changing environmental conditions.