

ABSTRACTS

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environmental match and we had a record of deliberate stocking and, thus, sufficient propagule pressure to establish. This allows us to directly test the role of biotic interactions and this analysis will elucidate the role of functional traits in the success of an invader.

Keywords: Great Lakes Basin, Functional diversity, Failed invasions.

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Dolichospermum lemmermannii is distributed in northern temperate and boreal regions. In the last 20 years, this Nostocales species appeared in all the large (62-368 km²) lakes south of the Alps (Garda, Iseo, Como and Maggiore), often in the form of summer water blooms. The study of the sub-fossil akinetes in sediment cores allowed to antedate the introduction of *Dolichospermum* in Lake Garda between the 1960s and the 1970s. The successive establishment was hypothesized to be linked to the increase of nutrients following the economic development of the region, and to the high warming documented in this lake district. The new recent spread of this species in Southern Europe emphasizes the ecological heterogeneity and the possible existence of ecotypes, confirmed by the recent discovery of strains showing high temperature optima for growth. In this work, the biogeography and characteristics of strains isolated in different European climatic regions were carried out by adopting a multidisciplinary approach. A phylogenetic study of the 16S rRNA and *rpoB* genes was integrated with the assessment of the toxic potential by PCR and LC-MS. The study will contribute to identify better management options aimed to mitigate the effects of this new cyanobacterium on the large subalpine lakes. *Keywords: Cyanophyta, Cyanotoxins, Harmful algal blooms.*

CARRICK, H.J.¹, CAFFERTY, E.¹, STIMETZ, A.¹, POTHOVEN, S.A.², and FAHNENSTIEL, G.L.³, ¹Central Michigan University, Dept. of Biology and Institute for Great Lakes Research, Mount Pleasant, MI, 48859, USA; ²National Oceanic and Atmospheric Administration, Lake Michigan Field Station, Muskegon, MI, USA; ³Michigan Technological University, Great lakes Research Center, Houghton, MI, 49931, USA. **Dynamics of Picoplankton in Lake Superior: Close Coupling Between Growth and Grazing Losses.**

Pico-sized plankton play an important role in regulating the key biogeochemical cycles in most pelagic environments. Here, we presented some of few seasonal estimates for both heterotrophic (Hpico) and phototrophic (Ppico) picoplankton abundance (direct