

*MASTOGLOIA SMITHII* VAR. *LACUSTRIS* GRUNOW: TAXONOMIC ORIGINS AND MORPHOLOGICAL VARIABILITY IN NORTH AMERICA

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*Mastogloia smithii* var. *lacustris* is a widespread diatom taxon that often dominates the flora of karstic environments, especially in habitats that experience periodic desiccation. Despite the large populations, this taxon is often misreported as the nominate variety or the name *lacustris* is given to specimens that do not closely match its description. The occurrence of elongated and deformed initial valves also contributes to taxonomic uncertainty. Furthermore, the original description of this taxon (by Grunow in Schneider 1878) did not designate a holotype or even provide a type locality. These uncertainties spurred an investigation into the taxonomic origins and what characteristics make up the North American concept of *M. smithii* var. *lacustris*. Specimens from Iowa, Ontario, Florida, and several sites in the Caribbean region were compared to a “type” slide of Grunow material from Belgium. The northern specimens appear more similar to the type specimens than the tropical specimens; the latter exhibit consistently finer striae density, more linear-lanceolate rather than elliptical-lanceolate valve margins, and more narrow central areas. We suggest designating a lectotype and elevation of *M. smithii* var. *lacustris* to the species level, and formally describing a new taxon to accommodate the tropical populations.

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