

Diatom 7: 13-19 (英文)

渡辺仁治・浅井一視：高優占度珪藻による有機汚濁度の判定(1). *Achnanthes*, *Anomoeoneis*, *Aulacoseira*, *Melosira* を第一位種とする群集

Toshiharu Watanabe and Kazumi Asai : Simulation of organic water pollution using highly prevailing Diatom taxa (1). Diatom assemblage in which the leading taxon belongs to *Achnanthes*, *Anomoeoneis*, *Aulacoseira* or *Melosira*

Abstract

When we decide only the first and second taxa in their relative abundance in an attached diatom assemblage, we can obtain the DAIpo (diatom assemblage index to organic water pollution) approximate value and the saprobic level in a saprobic system of the investigated site from proposed tables. We think the method will receive wide application as a simple biological simulating method for organic water pollution, and also for paleolimnology.

The diatom assemblages in which the predominating taxon belongs to *Achnanthes* are usually representative ones in clean water such as xenosaprobic and oligosaprobic area with over 50 in DAIpo value. However, *Achnanthes exigua* and *A. minutissima* var. *saprophila* occurred respectively in polluted waters from α -mesosaprobic to polysaprobic as the most dominant taxon. The assemblage in which the predominating taxon belongs to *Anomoeoneis* appeared in α -oligosaprobic standing waters, to *Aulacoseira* in both β -mesosaprobic flowing and standing waters, and to *Melosira* in oligosaprobic flowing waters.

Key index words

Achnanthes, biotic index, diatom assemblage index (DAIpo), dominance, saprobic level, water pollution.