Diatom 7: 37-42 (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 (4). Nitzschia, Pinnularia, Surirella, Synedra が第1位種となる群集

Toshiharu Watanabe and Kazumi Asai: Simulation of organic water pollution using highly prevailing diatom taxa (4). Diatom assemblage in which the leading taxon belongs to Nitzschia, Pinnularia, Surirella or Synedra

Abstract

Ecological characteristics of the diatom assemblage in which the predominating taxon belongs to Nitzschia, Pinnularia, Surirella and Synedra are the following.

*Nitzschia*: Thirteen taxa belong to Nitzschia occurred as the predominating taxon in 391 sites (30%) among 1287 sampling sites. Almost all the taxa occur in oligosaprobic and β-mesosaprobic waters with 30-84 in DAIpo marks, however, *Nitzschia palea* is one of the few saprophilous taxa among them and occur frequently in polluted waters with less than 29 in DAIpo marks.

*Pinnularia*: *Pinnularia braunii* var. *amphicephala* is generally known as an acidobiontic taxon, moreover, this is a typical saprophilous taxon.

*Surirella*: Two taxa belong to *Surirella* occurred as the predominating taxon in slightly polluted flowing sites with 30-51 in DAIpo marks.

*Synedra*: The diatom assemblage in which the predominating taxon belongs to *Synedra* has a tendency of occurring in clean waters. Among the seven taxa appeared as the predominating taxon, *Synedra inaequalis* and *S. ulna* var. *ulna* occurred in xenosaprobic and β-mesosaprobic flowing waters respectively, *S. acus*, *S. delicatissima* var. *deticatissima*, *S. rumpens* var. *familiaris*, *S. rumpens* var. *fragilarioides* and *S. amphicephala* in oligosaprobic standing waters.

Key index words
biotic index, diatom assemblage Index (DAIpo), Nitzschia, Pinnularia, Surirella, Synedra.