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 chracteristics 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.*