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Toshiharu Watanabe and Kazumi Asai : *Nitzschia paleaeformis* and *Nitzschia amplexans* occurring in strongly acid waters of pH range from 1.0 to 3.9 in Japan

Abstract

We have performed a statistical analysis on the pH tolerance of 485 diatom taxa in epilithic algal assemblages, collected from 215 freshwater sites, representing a pH gradient ranging from 1.0 to 12.5. In this study, 45 *Nitzschia* taxa occurred. Among them 22 belong to alkaliphilous (16 taxa) or alkalibiontic (6 taxa) taxa, while 21 are circum-neutral taxa. Only two taxa were recognized as acidobiontic taxa. In this paper, we report on the ecological and morphological features of these two strange *Nitzschia* taxa occurring in the strong acid waters from pH 1.0 to 3.9 in Japan.

Key index words : acidobiontic species, environmental frontier species, epilithic diatom, *Nitzschia amplexans*, *Nitzschia paleaeformis*, pH