

Diatom 3: 21-31 (英文)

小杉正人：海岸付近の付着性珪藻の分布の限定要因－塩分濃度と付着基物－

Masato Kosugi : Limiting factors on the distribution of benthic diatoms in coastal regions－salinity and substratum－

Abstract

Ecological studies of benthic diatoms in coastal regions were performed by collecting the samples from 110 localities divided in 16 regions throughout Japan. In order to discriminate the characters between species whose distribution is limited by salinity and substratum, environmental gradient analyses were executed.

By examination of 94 diatoms, it was found that the distribution of 7 species were evidently confined by salinity, 6 by the nature of substrata and 26 by the both factors. All species were divided into 11 groups on the basis of similarities in adaptation to salinity and substratum. The determination of limiting factors and the grouping of species will offer some preliminary knowledge on each diatom as biological indicators in studies of paleoecology and water pollution.

Key index words: limiting factors, benthic diatom, salinity, substratum