

Diatom 8: 1-5 (英文)

加藤和弘：相対出現頻度の低い種を解析から除外した場合の効果と影響

Kazuhiro Katoh : Deletion of less-abundant species from ecological data

Abstract

It is known that the deletion of rare species from a data matrix makes ecological analysis easier. The aim of the present study is to discuss the profitability of relative abundance (ratio of individuals of a species in a sample) as a criterion of determination of rare species, although the use of relative frequency (probability of occurrence of a species in the analyzed samples) as the criterion is popular. The results indicated that deletion of less-abundant species caused as little distortion to the data analysis as deletion of less-frequent species. When the analyzed samples were varied, deletion of less-abundant species showed smaller distortion than deletion of less-frequent species. It should be noted that deletion of less-frequent species sometimes makes the data analysis impossible because most species can be deleted from small and isolated subgroups of the samples. It was also indicated that the species-compositional data analysis on the basis of similarity could be carried out with little distortion, when the most quarter, or one-third, of the observed species were analyzed by Bray-Curtis similarity index, or Pianka's alpha index, respectively.

Key index words

data deletion, ecological analysis, individual differences scaling, similarity.