

第136回 汽水域懇談会

Dispersal potential of neritic benthic foraminifera in Maizuru Bay and Aso-kai lagoon: implications for the study of the East Asian winter monsoon 若狭湾沿岸域(舞鶴湾・阿蘇海)における底生有孔虫の分散と 過去の東アジア冬季モンスーン変動に対する考察



日時:2018年 7月6日(金) 17:00-18:00 場所:エスチュアリー研究センター2階セミナー室 高田 裕行(博士:地球環境科学) 釜山大学海洋学科・博士研究員

【講演概要】

The East Asian monsoon, the climate system that encompasses the Japanese islands, has two phases: the summer and winter monsoon. We have studied the influence of the East Asian winter monsoon on coastal environments in Aso-kai lagoon, central Japan, based on both stable oxygen isotope ratios of bivalves and the faunal composition of benthic foraminifera. We focus on occurrences of modern bivalves and benthic foraminifera in Maizuru Bay, a nearby analogue to ancient Aso-kai lagoon.

We have studied benthic foraminifera in Maizuru Bay since 2016, in order to understand how variation in the East Asian winter monsoon could affect species dispersal. Some of the common species of benthic foraminifera show complicated distributions with high temporal variation. Previous studies have described these species as opportunistic species. Benthic foraminifera in bay environments commonly show lateral variation toward the inner portion of the bay, with decreasing species richness due to more frequent fluctuations in salinity and/or dissolved oxygen content in hypolimnetic waters. In contrast, the lateral variation of species diversity does not have a marked trend in Maizuru Bay. These features imply that the benthic foraminiferal fauna in Maizuru Bay may be largely maintained by the dispersal of juveniles during intense mixing of the coastal waters in the winter. We will discuss the relationship between benthic foraminifera species distribution and the intensity of the East Asian winter monsoon.

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