

Planktonic foraminiferal faunal changes around the Matuyama–Brunhes boundary and its paleoceanographic implications in the Kuroshio domain off Honshu, Japan

*Kizuku Shikoku¹, Hiroki Hayashi¹, Minoru Ikehara²

1. Interdisciplinary Graduate School of Science and Engineering, Shimane University, 2. Center for Advanced Marine Core Research, Kochi University

This study conducts a paleoceanographic reconstruction of the Kuroshio domain around the Matuyama–Brunhes boundary by means of planktonic foraminiferal assemblages. In our previous paper (Shikoku et al., 2016JpGU), we carried out a faunal analysis of planktonic foraminifera from the sediment core TB2 obtained near the Chiba section, which has been focused as a candidate site of GSSP for the early–middle Pleistocene. As a result, warm species such as *Globoconella inflata* sharply increased at approximately 0.77 Ma in MIS19. It suggests that the faunal change might be caused by a latitudinal migration of the Kuroshio front at this horizon. However, such faunal change might also be caused by some of local factors including tectonic barriers of water mass. We need additional datasets of other sections in and around Japan to reconstruct the time-space distribution of the faunal change.

In this study, we used core samples of IODP Site C0001 drilled off the Kii Peninsula. The present oceanographic setting at the study site is nearby the northern edge of the Kuroshio domain associated constantly with a cold eddy. A total of 47 samples were collected for this study from cores 6H-2 to 5H-6 at an interval of 10 cm (about 1.7 ka in time resolution). Age of each sample was determined by the oxygen isotope stratigraphy. According to the results, we have significantly observed two peaks of *G. inflata* in MIS19. The temporal distribution pattern in relative abundance of *G. inflata* at Site C0001 is similar to that at TB2. With respect to the current age model of Site C0001, the faunal change of this site might be slightly delayed from that of TB2.

Keywords: planktonic foraminifera, paleoceanography, Pleistocene, MIS19