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Genetic diversity of planktic foraminifera and the bipolarity of genotypes in the Pacific

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Molecular phylogenetic analyses have revealed high genetic diversity within planktic foraminifer morphospecies. Molecular studies of planktic foraminifera suggest these genotypes exhibit distinct ecological preferences. Moreover, their potential differences of their ecology and habitats could affect their chemical and isotopic composition of the test. However, the phylogeography of planktic foraminifera in the South Pacific is yet to be revealed. This study shows the phylogeography of *Globigerina bulloides* in the South Pacific. Living planktic foraminifera specimens were collected during R/V Mirai cruise (MR08-06). Molecular phylogeny and Identification of genotypes were based on partial small subunit ribosomal RNA gene (rDNA). We confirmed that one bipolar genotype in the Atlantic (type IIa) also exhibits bipolar distribution in the Pacific. Our results also suggest that trans-equatorial dispersal occurred in the East Pacific genotype.

Keywords: Planktic foraminifera, Genetic diversity