

Paleoceanography of the Oyashio area during the last 20,000 years based on benthic foraminifera

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Benthic foraminifera in two cores collected from the Oyashio area exhibits large changes during the last glacial-Holocene transition. The glacial fauna of core ST-5 is comparable to a recent fauna in the same depth under the confluence zone between the Kuroshio and Oyashio currents, indicating that the deep water paleoenvironment during the last glacial was similar to the recent condition under the confluence zone. However, the foraminiferal abundance change exhibits that the carbonate dissolution intensified in depths near 2,000m during the Holocene. While, the glacial fauna of core ST-21 indicates that intermediate waters originated from north intensified during the last glacial. The Holocene faunas reflect low oxygen condition similar to intermediate waters in the recent Oyashio area.