FORAMINIFERAL EVIDENCE FOR SURFACE CIRCULATION CHANGES IN THE OKHOTSK SEA AND NORTHWESTERN PACIFIC 12OOO YEARS AGO

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Changes in composition of planktonic foraminifera in uppermost Quaternary sequences obtained from different areas of the Okhotsk Sea (9 sites) were analyzed in order to reconstruct the history of circulation of the sea and the influence of adjacent basins on the sea hydrology. Globorotalia scitula, Globigerinita glutinata and Globigerinita uvula were observed only in upper part of all sequences younger 12180 years.The relative warm-water species Globorotalia scitula is not encountered in the waters of the recent Pacific Ocean at the Okhotsk Sea latitudes. This species is driving to the Okhotsk Sea by the Soya Current from the Japan Sea. Peculiarities in distribution of Globorotalia scitula in sequences appear to be related to changes in the regime of the Soya and Tsushima Currents. Lower parts of the cores (60000-12180 years ago) barren of this species suggest the lack of the warm water inflow from the Japan Sea.The appearance of Globorotalia scitula in cores at the level of 12000 years indicates the renewal of the activity of the Soya and Tsushima Currents. Changes in the regime of these currents are related to sea-level fluctuations.The appearance of Globigerinita glutinata and Globigerinita uvula on this level is reflected the expansion of areals of these species in Northwestern Pacific connected with northward advance of the subarctic boundary (Polar Front) and the Oyashio current.The increasing of surface temperature and productivity of planktonic foraminifera took place 12 000 years ago.This work was supported by the RFFI, Project 97-05-64924.