KARGINIAN PALEOBASIN IN THE NORTH OF SIBERIA

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The development of the North Quaternary transgressions and migration of fauna to the Arctic depend on a degree of penetration of the Atlantic watermass to the Arctic Ocean.

There are two patterns of oceanic circulation: circular pattern for interglacials and circular pattern for glacials and interstadials (Kellogg and others, 1978; Kellogg, 1980). The first pattern is characterized by wide penetration of a warm Atlantic surface-water to the Arctic region. At this time the North Atlantic bottom watermass is formed in the Norvegian-Greenland basin. In glacials and interstadials the location of the North Atlantic bottom watermass formation is moved into northeastern Atlantic. At this time the Atlantic surface-water does not penetrate to the Arctic region.

The presence of Atlantic foraminiferal species in the Karginian (=Middle Wurm) deposits in the North of Siberia suggests, that interglacial type of watermass circulation between the Arctic and the Atlantic Oceans existed during both interglacials and at certain stages of the Karginian time, wich is reputed to be interstadial in the world scientific literature.

The strong influx of a warm Atlantic surface-water to the Arctic region was twice: 30.7-24.1 ka B.P. and 42-35 ka B.P.

For the time of maximum of Karginian transgression the paleooceanic map is compiled. The hydrological conditions (bathymetry, salinity and temperature of a near-bottom water layer) and a deposition of the Karginian paleobasin shore line are reconstructed on the basis of distribution of benthic foraminifera communities (Levtchuk,1984; Gusskov, Levtchuk, 1988).

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