

Distribution of the Anadyr Water near the Gulf of Anadyr and the Bering Strait

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Primary production in the Bering Strait (BS) especially in the Russian side is extremely high and it is found not only in spring but also in summer and autumn seasons. It has been suggested that the continuous high phytoplankton activity is attributed to rich amount of nutrients in the Anadyr Water (AW). Although some literatures reported higher nutrients concentration in the Gulf of Anadyr (GA), similar level of primary production as the BS is difficult to be observed in the GA. In this study, we obtained a historical CTD dataset (1930–2005) compiled at the Far Eastern Regional Hydrometeorological Research Institute (FERHRI) in Russia and investigated water mass structure from the GA to the BS. We analyzed the dataset climatologically because stations of each cruise distribute sparsely. In August, while the AW with high salinity (>35 PSU) distributed near the bottom of the GA, the Bering Shelf Water was covered the surface of the Gulf. The AW was spread along coast of Russia and a part of it was found in the surface of BS. The water mass structure in this study suggests that the AW from the AG continuously supports high primary production in summer of the BS.

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