

Warm Water Allochthont's as Indicators of a Thermal Mode of a North-Western Part of the Japan Sea During Winter and Spring 2003-2004

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According to the satellite information the intensive transfer of subtropical waters to north-western part of the Japan Sea has been taken place since the middle of the summer 2003 and it caused the insignificant extension of the summer hydrological season. The field investigations have shown that in general the thermal conditions of the north-western part of the Japan Sea were above the standard greatly during 2003. The high level of temperature (1-3 degrees above) was observed along the coast of Primorye (except for zone between 44-45°N). The going on autumn's intensive penetration of warm waters to the north-western part led to the later intensification of subarctic front. This process took place in winter 2003-2004 also. So, patches and streams of water with temperature above zero were recorded near the Middle Primorye's offshore in November 2003, and in the Peter the Great Bay – in February 2004. These processes affected the structure of plankton community: the warm water allochthont's presence (the ocean subtropical zooplankton species) was recorded in winter-spring period, and it's not usual time for them. In the beginning of December 2003 in the Kievka Bay (Middle Primorye) calanoid copepods *Mesocalanus tenuicornis*, *Calanus pacificus*, *Paracalanus parvus* и *Clausocalanus* sp. and syphonophores *Halitemma rubra* were registered in plankton samples. In March 2004 in Vostok Bay (the Peter the Great Bay, Southern Primorye) copepods *Mesocalanus tenuicornis*, *Microsetella rosea*, *Oncaea conifera*, *Sapphirina* sp. и *Stephos* sp. were registered in the water with the temperature below zero. So, the bioindication method of research let ascertain the facts of coming warm water to the north-western part of the Japan Sea during winter-spring period 2003-2004, and it is confirmed by the instrumental methods (satellite and hydrological observations).