

## **Information on the nature, extent and impact of aquatic invasive species within Arctic marine waters subject to the jurisdiction of the Russian Federation**

P.P. Shirshov Institute of Oceanology of the Russian Academy of Sciences (IO RAS) conducts comprehensive oceanographic research, including in the Arctic seas under the jurisdiction of the Russian Federation (mainly in the White, Barents, Kara Seas and the Laptev Sea). Terms of reference of this work are included the investigation of the current state and dynamics of ecosystems of the Arctic seas.

As a result of long-term observations the species composition and structure of communities are demonstrated the stability over time. According to observations in the White and Kara Seas in the time series length of 50 - 60 years it is noted the stability of the species and relatively small changes in community structure.

The results of the above research have been summarized in the Arctic Biodiversity Assessment which was presented to the Arctic Council in 2013 by CAFF, namely Chapter "Marine Invertebrates» to be prepared by A. Josefson, V. Mokievsky.

Currently, the fauna of the western sector of the Arctic has one species, the distribution of which is directly linked to the human activities. Its possible impact on the ecosystem is required the special attention and investigation. This is a red king crab, also called Kamchatka crab, *Paralithodes camtschaticus*, which is acclimatized in the Barents Sea and is actively distributed its range in the Arctic. The investigation of distribution of red king crab is conducted in the Barents, Kara and White Seas by the IO RAS.

Currently, the IO RAS has investigated and conducted the description of the first finding of red king crab in the inner part of the White Sea. The scientists consider that most likely explanation of this finding is human activities in the Kandalaksha Bay. As in the case of the introduction, as well as the natural settling of the White Sea, the prospects for the survival of *P. camtschaticus* in the inner parts of the White Sea are uncertain. Obviously, the following factors will hinder such survival: reduced salinity in coastal areas, where the breeding of king crabs, and subzero temperature throughout the water column during the winter, which does not allow find suitable sites for wintering adult males and females.

As a result of field work in the Kara Sea it has been revealed the penetration of the red king crab in this marine basin. Currently the results of the field expeditions, which were conducted in 2013-2014 period, are considered and processed by scientists.