

ESTIMATION OF AN ECOLOGICAL SITUATION IN THE GORKY WATER BASIN USING THE HYDROBIOLOGICAL AND HYDROCHEMICAL PARAMETERS

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On the basis of the results of own hydrochemical and hydrobiological researches and also the character of the real ecological situation of Gorky and Cheboksarsky water basins in summer period of the 2002 year, the evaluation of the quality of water and review of the specific structure of the main kind of cancers is given.

MORTALITY IN CALANUS GLACIALIS: SEASONAL VARIABILITY IN THE WHITE SEA BETWEEN 1963 AND 1998

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We have quantified seasonal variability in the mortality of *C. glacialis* in the White Sea from a data time consisting of 813 samples obtained between 1963 and 1998. Based on a vertical life table method (VLT) we developed a modified model that reduce estimate biases by relaxing assumptions of near constant recruitment and development schedules in the population under study. The approach allows for near unbiased estimates of mortality in pairs of consecutive developmental stages. We use point estimates for the combination of developmental stages CV and adult females to study seasonal variability in mortality to test for seasonal differences and trends in *C. glacialis* mortality rate.

CALANUS GLACIALIS, A KEY ORGANISM IN ARCTIC SHELF SEAS

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The Arctic shelf seas and the marginal Ice Zone are regions of major importance for biogenic production in high latitudes. Blooms of algae occur through the Arctic oceans during spring, summer and autumn, associated with sea ice during the ice algal bloom as early as March -April, and in open waters as a phytoplankton blooms as soon as the leads forms in the icepack and along the receding ice edge between June and September. The Arctic *Calanus glacialis* plays a key role in the pelagic lipid-based energy flux in Arctic shelf seas. It converts low energy carbohydrates and proteins into high energy lipids, which makes it extremely lipid-rich (>70% lipids), and a high-energy food item for higher trophic levels. *C. glacialis* optimally time its reproduction, growth and seasonal migration to the two algae blooms, the ice algae peak production in March -April and the phytoplankton peak during mid-summer.