

## **Zooplankton spatial distribution in thermokarst lake of The Lena River Delta (Republic of Sakha (Yakutia)).**

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### **Abstract**

This paper presents the study results of zooplankton spatial distribution at the thermokarst lake of the Lena river delta (Republic of Sakha (Yakutia)). The species composition of zooplankton revealed 40 species: 25 species of Rotifera type, 8 species of Cladocera suborder and 7 species of Copepoda subclass. The basic complex of the following species is revealed: rotifers *Conochilus unicornis* (Rousselet, 1892), *Kellicotia longispina* (Kellicot, 1879), *Keratella cochlearis* (Gosse, 1851), crustaceous cladocerans: r. *Bosmina*, copepods: *Maranaebiotus brucei* (Richard, 1898), *Leptodiptomus angustilobus* (Sars, 1898), *Eudiaptomus graciloides* (Lilljeborg, 1888). The zooplankton number of reservoir was determined by rotifers (69.1% of the total), the average value was  $178,2 \pm 21,6$  thousand individuals/m<sup>3</sup>. The biomass of zooplankton was represented by major species of copepods (74.4% of the total biomass), the average value is equal to 1184.1 mg/m<sup>3</sup>. 2 peaks of zooplankton quantitative indicators are revealed. The differences of the spatial distribution of species are represented within the water area of the reservoir: in the polygonal part of the lake, in the littoral and the pelagic thermokarst part of the reservoir. According to the ecological state of the reservoir evaluation this lake is characterized is a clean and oligosaprobic one. In accordance to zoogeographical, ecological and faunal characteristics the zooplankton is presented mainly by cosmopolitan, eurytopic and littoral species.

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### **Keywords**

Arctic, Spatial distribution, Thermokarst lake, Zooplankton