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CHIRONOMIDS (DIPTERA, CHIRONOMIDAE) OF HIGHLY MINERALIZED RIVERS OF THE ELTON LAKE REGION, RUSSIA: TAXONOMIC COMPOSITION, ECOLOGICAL FEATURES

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In this article we discuss the analysis results of the data from our long-term studies (2006-2019) of chironomids (Diptera, Chironomidae) that were part of bottom communities of 7 small but highly mineralized rivers, the tributaries of hyperhaline Lake Elton in Volgograd Region (N49° 13′, E46° 40′).

We collected data on species composition and quantitative development of macrozoobenthos communities were and registered 25 species and larval forms of chironomids from 4 subfamilies: Chironominae – 14 species (10 from Chironomini, 4 from Tanytarsini), Orthocladiinae – 9 species, Tanypodinae – 2 species. The structure of chironomids' communities depends on the physical and chemical characteristics of biotopes, as well as water salinity, and is determined by the trophic indicators of the rivers (Zinchenko, Shitikov et al., 2014). The quantitative development and biodiversity of chironomids' larvae significantly correlate with environmental conditions and physicochemical characteristics of bottom substrates and water masses.

We determined certain environmental factors, such as total salinity, ionic composition, pH, oxygen concentration, temperature and biotope diversity, that can cause changes in chironomids' cenosis. Additionally, we provide values of abundance and biomass, and frequencies of species occurrence in rivers of different salinity under the influence of abiotic factors. We also present ecological and faunistic characteristics of chironomids as part of bottom communities of highly mineralized rivers of the Lake Elton region.

Keywords: highly mineralized rivers, chironomids, taxonomic composition, ecological features, mineralization, abiotic factors, tributaries of the Lake Elton.

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