

The monitoring of zooplankton biodiversity changes in the Black Sea in front of Georgia [Мінливість біорізноманіття зоопланктону чорноморського узбережжя Грузії; Изменчивость биоразнообразия зоопланктона черноморского побережья Грузии]. The present study is based on investigations which were carried out seasonally during 2002 – 2006. Samples were collected at five stations (Batumi, Kobuleti, Natanebi, Supsa, Poti), at two depths. The depths were 5 m and 50 – 60 m (thermocline). Samples were collected by a big Jedy net (with filtering cone N.38 and cell 110mk), then fixed by 4% formalin solution and taken to the laboratory. During the treatment samples were reduced to 150 cm³. We used Stamplelpipette 1 cm³ and Bogorov's chamber. Then the direct counting method was used. Visual inspection, counts and taxon determination were made with the help of Binocular LEICA 100 and microscope KRUSS. The biomass was defined by the standard weights of zooplankton [7], and for the caloricity – the standard caloricity table of the Black sea invertebrates (zooplankton and meyoenthos) (Alexandrov, 2001). The abundance of zooplankton was higher on the surface layer comparing to the thermocline at the following stations: Natanebi, Supsa. Most probably this difference is related to river input of Natanebi and Supsa streams being saturated of organic materials. The vanished form *Pontella mediteranea* (Pontellidae), a species belonging to izoneiston Copepoda, being reported as a good indicator of anthropogenic pollution (Polishuk et al., 1984), was discovered during the observed period. The number of Copepoda species such as *Acartia clausi*, *A. tonsa* and opportunistic dinoflagellate *Noctiluca scintillans* contribute significantly to the abundance of zooplankton (Khalvashi, 2006). In our region, as well as in the whole Black Sea ecosystem, zooplankton variability has been observed after the arrival of *Mnemiopsis leidyi*. This event has caused a decrease in the abundance of mezozooplankton and changes in the community structure too. *M. leidyi* has also a negative effect on the species *Pleurobrachia pileus* (Black Sea Biological diversity of Georgia). However, another exotic species *Beroe ovate* has led to the significant reduction of the population of *M. leidy* (Khalvashi, Makharadze, 2006). Dominant species are *Acartia clausi*, *A. tonsa*, *Penilia avirostris*. However, recently an exotic species *Acartia tonsa* has replaced the small form of *Acartia clausi* [5]. In comparison to previous years the concentration of *Noctiluca scintillans* has changed only slightly. Euthropic and polluted bases are characterized by the reduction of the number of Cladocera. It is important to remark, that from 1990 to 2002 the above mentioned forms together with *Acartia clausi* and *Noctiluca scintillans*, are used as indicators of polluted waters. In order to have an effective monitoring of zooplankton biodiversity changes in the Black Sea coast of Georgia a daily migration index has been applied for different forms being rejected upon intensification of light and fluctuation of the temperature (Nikitin, 1939). **M. S. Khalvashi, G. M. Makharadze, I. D. Takidze** (Water Ecology and Fisheries Research Institute, Batumi, Georgia).