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DIVERSITY OF TISSUES ESTERASES *NEOGOBIOUS FLUVIATILIS* INHABITING THE DANUBE LAKES

The work was performed to examine the variety and level of expression of *Neogobius fluviatilis* (Pallas, 1814) esterases, inhabiting the Danube Lakes: Kitay, Yalpug and Kugurluy. Analysis of the enzymes expression of *Neogobius fluviatilis*, dwelling of the three isolated water showed a high degree of similarity among the molecular forms of esterase in fish living in lakes Yalpug and Kugurluy. Gobies of these lakes have four main molecular forms of esterases with similar parameters of the electrophoretic mobility. *Neogobius fluviatilis*, inhabiting in the lake Kitay, has in the course of a leading form of electrophoresis esterase 1a, which is absent in the spectrum of esterase from individuals from other lakes. Moreover, compared with esterase 2 and 3, it does not have as pronounced expression. It is interesting to note that, judging by the presence of all individuals low mobile allozymes of esterase 1, the studied samples are high homogeneous. Esterase 2 shows two allozymes.

Their presence in the samples determines the corresponding homozygotes and heterozygotes genotypes. At the same time, gobies originating from lakes Yalpug and Kugurluy, revealed only one form of esterase 1. *Neogobius fluviatilis* from Lake Yalpug were found similar spectrum of esterases with the gobies from lakes Kugurluy and Kitay, but with lower levels of their expression. Comparing the data of spectral analysis esterase of fish with different origin, is possible to assume that for gobies from lakes Yalpug and Kugurluy, characterize a high degree of kinship. In this case, the structure of natural populations of *Neogobius fluviatilis* from these ecological systems, obviously, is formed under the action of the same form of natural selection, which direct at preserving polymorphism in some molecular forms of esterases and eliminates this polymorphism in others. Concerning of esterases polymorphism of *Neogobius fluviatilis*

from Lake Kitay, it is largely determined by the same form of the enzyme, except for esterase 1. However, fish from this lake differ an unusually high level in expression of major esterase caused, probably, the stronger influence of environmental factors on the system of esterolis.

Рекомендована к печати на заседании кафедры гидробиологии и общей экологии, протокол № 4 от 8.11.2010 г.