

Microevolution of Baikal omul *Coregonus autumnalis migratorius* (Georgi)

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Lake Baikal, called by locals as "Pearl of Siberia" is the deepest and most voluminous of the world's great lakes, containing 20% of the Earth's unfrozen fresh water. Situated in southern Siberia and surrounded on all sides by mountains, isolated from civilization until the early 20th century, worshiped by foreigner travelers, Lake Baikal still hides in its depths species of which little is known or undescribed so far. The diversity of flora and fauna found in Lake Baikal is higher than in any other freshwater lakes in the world. Among over 2,000 described animal species, more than 80% are endemics. What makes Baikal unique is its impressive diversity at great depths, explained by the presence of the oxygen even at a depth of 1600m.

The book presents the endemic *Coregonus* species, belonging to Baikal's native fish fauna and one the main market fish of Baikal Lake. Coregonids, which have evolved into a myriad of forms, subspecies and species during and after the Pleistocene glaciations, are rich subjects for the study of evolutionary problems. In this regard, studies of the Baikal omul origin, taxonomy and evolution, summarized in the book, provide students and scientists with new results and theories in freshwater science.

Although the book is written in Russian, it is very helpful and interesting for people who speak Russian and are fascinated by this ancient lake. The text outlines crucial issues concerning the basis of speciation and the mechanisms of it, as a result of long-



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lasting research (1965-2007), conducted by the authors' scientific team. The text is organized into 8 chapters: the first provides general information about history of the formation of Lake Baikal as a deepwater body, and the effects of climate changes in Pleistocene that have had influenced the origin of deep water species; the second reveals the structure and functioning of the pelagic zone in Lake Baikal, whereas the next four chapters are focused on the species of Baikal omul, its population structure, the seasonal distribution, eco-morphotypes and intrapopulation variation. The last two chapters outline the authors' view on the main directions of microevolution transformations of Baikal omul and summarize available molecular phylogenetic studies on the origin of Baikal omul. The student will find in the book numerous schematic drawings that will help to understand the ideas presented in the text, and suggested

reading, as well. The book of Smirnov et al. provides a comprehensive look at Baikal omul (*Coregonus autumnalis migratorius*) origin and opens new questions for further ecological and evolutionary studies, thus making an important contribution to the field.

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