THE CONTRIBUTIONS OF IZATULLAYEV AND BOYMURODOV IN THE STUDY OF THE DISTRUTION OF BIVELVE MOLLUSKS IN CENTRAL ASIA

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Annotation: *The study of the distribution of bivalve mollusks in Central Asia plays a crucial role in understanding the biodiversity and ecological dynamics of the region's aquatic ecosystems. Among the significant contributors to this field, Izzatullayev and Boymurodov have made noteworthy contributions. Izzatullayev's research focused on the identification and distribution patterns of mollusk species across Central Asia, utilizing collections from the Russian Academy of Sciences Zoology Institute. Boymurodov, on the other hand, conducted detailed studies on the hydrobiont populations of the Sangzor River, contributing to a deeper understanding of mollusk distribution in the region. Their works have provided valuable insights into the ecological roles of these organisms and have become a foundation for further studies in the area, particularly concerning the conservation and management of aquatic biodiversity in Central Asia.*

Keywords: *Central Asia, bivalve mollusks, distribution, Izzatullayev, Boymurodov, ecological research.*

Аннотация: *Изучение распространения двустворчатых моллюсков в Центральной Азии играет важную роль в понимании биоразнообразия и экологической динамики водных экосистем региона. Среди значимых вкладчиков в эту область можно отметить работы Изатуллаева и Боймуродова. Исследования Изатуллаева были направлены на идентификацию и закономерности распространения видов моллюсков по Центральной Азии с использованием коллекций из Зоологического института Российской академии наук. Боймуродов, в свою очередь, провел подробные исследования популяций гидробионтов на реке Сангзор, что позволило глубже понять распределение моллюсков в регионе. Их работы предоставили ценную информацию о экологической роли этих организмов и стали основой для дальнейших исследований в данной области, особенно в контексте охраны и управления водным биоразнообразием Центральной Азии.*

Ключевые слова: *Центральная Азия, двустворчатые моллюски, распределение, Изатуллаев, Боймуродов, экологические исследования.*

The bivalve mollusks of the genus *Anadonta* have been studied by malacologists Ya.I. Starobogatov and Z.I. Izzatullayev in the water basins of Central Asia. They examined the morphology of the shells of species belonging to this genus from Central Asia and

partly from Europe, identifying their differences from the typical representatives of the genus. Z.I. Izzatullayev (1987) also used collections from the Zoological Institute of the Russian Academy of Sciences to study the occurrence of mollusks in the water ecosystems of Central Asia. A total of 14 species of mollusks from the Zarafshan Basin were studied [1; B.63-66; 2; B.14-65; 3; B.86-87; 4; B.21-23].

In recent years, Z.I. Izzatullayev (2015, 2016, 2019, 2020, 2021), Z.I. Izzatullayev and X.T. Boymurodov (2010, 2014, 2016, 2017, 2019, 2021), and B.N. Otaqulov (2021) have conducted studies on bivalve mollusks in Uzbekistan's aquatic ecosystems [5; B.65-67; 6; B.26-40].

In Z.I. Izzatullayev's work "Aquatic Mollusks of Central Asia and Adjacent Regions," the species composition of aquatic mollusks in Central Asia and their significance in economic activities were studied. In his 2001-2002 works, he provided information on pearl farming with mollusks in Uzbekistan and detailed the fauna of Uzbekistan's rare endemic invertebrates [7; B.93-95].

Z.I. Izzatullayev's works also include data on the biodiversity of Western Tien Shan mollusks, the status of the study of aquatic mollusks in Central Asia, and the mollusks found in protected areas and their economic significance [8; B.130-131; 9; B.105-110].

In the 2009 publication by Z.I. Izzatullayev and X.T. Boymurodov, "Bivalve Mollusks of the Zarafshan River Basin," information about the malacofauna of fishery farms in the Zarafshan Basin was provided. The study analyzed the distribution of 10 species of bivalve mollusks in the Chelak fishery and 6 species in the Darg'om fishery. The research also explored how the acclimatization of fish in fish farms has contributed to the spread of bivalve mollusks, particularly the introduction of Sinanodonta species with Chinese fish. The presence of *Sinanodonta gibba*, *S. orbicularis*, and *S. puerorum* species in the middle reaches of the Zarafshan River for the first time was also reported. The analysis of the limited species diversity of bivalve mollusks in the Qoratepa and Tusinsoy reservoirs was conducted, which were formed by damming mountain streams and separated from other water bodies of the Zarafshan River [10; B.43-78].

In their 2010 work "Biodiversity, Ecological Characteristics, and Distribution of Mollusks in the Pre-Aral Water Systems," Z.I. Izzatullayev and X.T. Boymurodov analyzed the biodiversity, density, and distribution of mollusks in the Aral region. Based on their research from 2000-2010, the malacofauna of irrigation systems, such as Bulung'ur, Eski Anhor, Tuyatortar, Narpay, Shohrud, and the Darg'om canals, was studied [11; P.39-41].

Z. Bobomurodov (2022) conducted research on the hydrobiont populations of the Sangzor River. B. Otaqulov (2021) investigated the influence of abiotic factors on the distribution of bivalve mollusks in the Qashqadaryo riverine systems (Bivalvia: Unionidae, Pisididae, Euglesidae, Corbiculidae) [12; B.39-41].

The study of the bivalve mollusk fauna in the water systems of the Qashqadaryo basin plays an essential role in assessing the ecological condition of the region and preserving

biological diversity. Furthermore, these studies provide a scientific foundation for effective water resource management, ensuring the stability of aquatic ecosystems, and preserving the natural environment. The results of these studies, particularly in the conservation of bivalve mollusks in the Qashqadaryo basin and recognition of their ecological importance, are significant for the sustainable management of water resources in the region.

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