STUDY OF THE FAUNA OF BIVALVE MOLLUSKS OF THE KASHADARYA BASIN

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Abstract: *Currently, the hydrological regime of rivers in arid regions around the world, as well as their annual and seasonal characteristics, are continuously changing, which has a negative impact on the biological diversity of hydrobionts in water basins. In particular, the irrational use of water resources and the establishment of numerous reservoirs and fishery enterprises have led to the transformation of hydrobiont fauna. Therefore, studying the current state of hydrobionts characteristic of water basins in arid regions and developing measures to protect rare species is of great scientific and practical significance.*

Keywords: *Kashkadaryo Basin, water types, bivalve mollusks, mollusk fauna.*

Аннотация: *В настоящее время гидрологический режим рек в засушливых регионах мира, а также их годовые и сезонные характеристики постоянно изменяются, что негативно сказывается на биологическом разнообразии гидробионтов в водных бассейнах. Особенно это связано с нерациональным использованием водных ресурсов и созданием многочисленных водохранилищ и рыбных хозяйств, что приводит к трансформации фауны гидробионтов. Поэтому изучение современного состояния гидробионтов, характерных для водных бассейнов засушливых регионов, и разработка мер по охране редких видов имеют важное научное и практическое значение.*

Ключевые слова: *бассейн Кашкадарьи, типы вод, двустворчатые моллюски, фауна моллюсков.*

Annotatsiya: *Bugungi kunda dunyoda qurg‘oqchil mintaqalardagi daryolarning gidrologik rejimi, yillik va mavsumiy xarakterining doimiy o‘zgarib borayotganligi suv havzalaridagi gidrobiontlarning biologik xilma-xilligiga salbiy ta’sir ortib bormoqda. Ayniqsa suv resurslaridan oqilona foydalanmaslik, suv omborlari va baliqchilik xo‘jaliklarining ko‘plab tashkil etilishi natijasida gidrobiontlar faunasining transformatsiyalashuviga sabab bo‘lmoqda. Shunga ko`ra, arid hududlari suv havzalari uchun xos bo‘lgan gidrobiontlarning zamonaviy holatini o‘rganish va kamyob turlarini muhofazalash choralarini ishlab chiqish muhim va ilmiy-amaliy ahamiyat kasb etadi.*

Kalit so‘zlar: *Qashqadaryo havzasi, suv tiplari, ikkipallali mollyuskalar, mollyuskalar faunasi*

The Qashqadaryo Basin, located in the southern part of Uzbekistan, is an important ecological area that is home to a diverse range of biological species. The water ecosystems of this region, particularly the fauna of bivalve mollusks, hold significant importance. Bivalve mollusks are one of the major groups of aquatic organisms, playing a crucial role as filter feeders in the ecological system and helping to maintain water purity.

Studying the fauna of bivalve mollusks in the Qashqadaryo Basin is essential for analyzing the ecological situation and preserving biological diversity. The composition, numbers, habitat conditions, feeding, and reproduction processes of bivalve mollusk species living in the rivers, lakes, and other water bodies of the Qashqadaryo Basin are being studied. Through this research, the role of bivalve mollusks in the ecosystem and their influence on ecological factors can be determined.

Taking these factors into account, the study of the fauna of bivalve mollusks in the Qashqadaryo Basin contributes to the development of ecological research, sustainable management of biological resources, and the conservation of the natural environment.

Global studies on the biology, morphology, zoogeography, and distribution of bivalve mollusks have been analyzed by foreign scientists such as B.K. Harvey (1989), I. Anderson (1991), and P. Bouchet (2007). The density and distribution patterns of mollusks have been studied by G.P. Alyokhina, I.A. Misetov, M.V. Puzakova (2007), H. Markus (2010), A.E. Bogan (2010), and Annabelle Cuttelod (2011) [1; P.181-185; 2; P.35-43; 3; P.59-97; 4; P.154-215].

In Uzbekistan, research on the fauna and flora of the republic has been carried out by Russian scientists such as P.P. Semyonov-Tyanshansky (1856-1872), N.A. Seversov (1864-1878), A.P. Fedchenko (1868-1878), L.S. Berg (1940-1949), and others, who gathered materials from both terrestrial and aquatic species [5; B.125-2108].

In the study of the mollusk fauna of Surxondaryo and Qashqadaryo regions, the materials collected by A.P. Fedchenko in 1868-1871 were of great significance. These materials were sent to German specialists for analysis, and bivalve mollusks were identified by E. Martens (1873, 1884) and Z. Clessin (1886, 1887). E. Martens' research on mollusks found in Central Asian aquatic ecosystems provided valuable information on four species. Data on the systematic composition of mollusks, shell sizes, and distribution were also reflected in the works of Z. Clessin (1886, 1889) [7; B.29-32; 8; B.39-41].

Z.I. Izzatullayev (1987) used collections from the Russian Academy of Sciences Zoology Institute to study mollusks in the water ecosystems of Central Asia. Fourteen species of mollusks from the Zarafshan Basin were studied.

Z. Bobomurodov (2022) conducted research on the populations of hydrobionts in the Sangzor River. B. Otaqulov (2021) studied the influence of abiotic factors on the distribution of bivalve mollusks in the water types of the Qashqadaryo coast (Bivalvia: Unionidae, Pisididae, Euglesidae, Corbiculidae) [9; B.39-41].

In conclusion, the study of the fauna of bivalve mollusks in the water types of the

Qashqadaryo Basin is crucial for evaluating the ecological condition of the region and preserving biological diversity. Bivalve mollusks play an important role in maintaining the stability of the ecosystem through their filtering function in the water bodies they inhabit. These organisms can serve as bioindicators for improving water quality and detecting changes in the ecosystem.

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