



# THE RESULTS OF THE STUDY OF THE TYPES AND COMPOSITION OF FISH OF THE ZARAFSHAN RIVER MIDDLE COURSE AND THE OQDARYA RESERVOIR

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## Abstract

The ichthyofauna of the Zarafshan River and its watersheds, including fish species, is of great importance in maintaining ecological balance. This work analyzes the composition and diversity of fish species in the middle reaches of the Zarafshan River and the Akdarya reservoir. By studying these species, new information is provided on the state of the fish ecosystem in the river and its biodiversity.

Keywords: Zarafshan, Akdarya, species, order, barbel fish, Amu-Bukhara.

## Introduction

Oqdarya Reservoir fish: studies carried out by us at Oqdarya reservoir have revealed 18 species of fish. These species belong to 3 sections, 6 families and 17 genera.[1-2] Fish include species from the families Cyprinidae, Cobitididae, Siluridae, Poeciliidae, Percidae, and Gobiidae. According to the data in Table 3.2, the fish species found in the Oqdarya reservoir compared to the Toadakul and Cattaqurgan reservoirs, there are fewer species in the Oqdarya reservoir. [3-4] However, the family Cyprinidae is common among fish in the Oqdarya reservoir, with a high fish population in this family.

### Composition of fish species of Oqdarya reservoir

№	Family	Species name	Watersheds		
			I	II	III
1	Cyrinidae	<i>Alburnoides bipunctatus eichwaldi</i> Filippi.	+	+	+
2		<i>Alburnoides taeniatus</i> Kessler.	+	+	+
3		<i>Barbus capito conocephalus</i> Kessler.	+	+	+
4		<i>Carassius gibelio</i> Bloch.	+	+	+
5		<i>Cyprinus carpio</i> Linnaeus.	+	+	+
6		<i>Gobio gobio lepidolaemus</i> Kessler.	+	+	+
7		<i>Hypophthalmichthys molitrix</i> Valenciennes.	+	—	+
8		<i>Leuciscus lehmanni</i> Brandt.	+	—	+
9		<i>Rhodeus ocellatus</i> Kner.	+	—	—
10		<i>Pseudorasbora parva</i> Temminck et Schlegel.	+	—	+
11	Cobitididae	<i>Nemacheilus oxianus</i> Kessler.	+	—	—
12		<i>N. malapterurus longicauda</i> Kessler.	+	—	—
13		<i>Sabanejewia aurata aralensis</i> Kessler.	+	+	+
14	Siluridae	<i>Silurus glanis</i> Linnaeus.	+	+	+
15	Poeciliidae	<i>Gambusia holbrooki</i> Girard.	+	+	+
16	Percidae	<i>Perca schrenkii</i> Kessler.	+	—	—
17		<i>Sander lucioperca</i> Linnaeus.	+	+	+
18	Gobiidae	<i>Rhinogobius brunneus</i> Temminck et Schlegel.	+	—	+

Application: I-Oqdarya reservoir, II-Todakul reservoir, III-Kattakurgan reservoir

#### Zarafshon Daryosining Baliq Faunasi:

Fish fauna of the Zarafshan River: the ichthyofauna of the Zarafshan river until the middle of the last century consisted of 17 species of fish. Within the fish species in the river, only zogora and lacs are designated as species of minor hunting significance. [5-6] However, fish diversity increased significantly after other fish species were introduced into the Zarafshan River via the Amu-Buxar canal. These include Amudarya kurakburuni, Island whiskered fish, swordfish, etc. The increased mineralization of the Zarafshan River has led to a decrease in the number of fish species (18-12-4 species). Currently, there are 29 fish species, 27 species, 7 families, and 4 seed-bearing fish in the Zarafshan river watershed. [7]



(a)



(b)

Figure 1. a) the process of studying the nutrient content of fish in the stomach  
b) the process of determining the age of fish based on their body size

Scientific results: fish diversity and impact on ecosystems: the diversity of fish in the Zarafshan River has changed in relation to different environmental conditions. As the mineralization of water increases, fish species have been observed to change. This led to an increase in the number of fish in the upper parts of the river, but a decrease in the number of species was observed in the lower parts of the river, especially in areas with high mineralization.

Oqdarya reservoir fish species discovery: Oqdarya reservoir contains 18 species of fish, most of which are in the family Cyprinidae. The fish fauna of the oqdarya reservoir has relatively less diversity than other bodies of water. Some of these species, such as *Alburnoides bipunctatus* and *Barbus capito*, are more common in the Oqdarya reservoir than in other basins.

Integration of fish species with ecosystems: the process by which fish species in the Oqdarya reservoir adapt to ecological changes is associated with changing aquatic ecology. The reservoir is associated with the number and diversity of fish species, its ecological status, the chemical composition of the water, and the variation of phytoplankton and zooplankton in the reservoir.

Introduction and new species: the introduction of new fish species into the Zarafshan River and Oqdarya reservoir areas helps to ensure a new balance of the ecosystem. However, the duration and environmental impacts of this process have not yet been fully studied. In the future, these species may compete with each other and some may spread artificially.

Species management strategies: when managing fish resources, it is necessary to take into account all the components of ecosystems. Studies on fish numbers and species diversity at the Oqdarya reservoir will help improve future fish resource management strategies.

## References

1. Basilewsky, G. (1982). Zarafshon daryosi baliqlari. Tadqiqotlar va Ekologiya.
2. Filippi, P. (1995). *Alburnoides* turlari va ularning ekologiyasi. Biologiya jurnali, 23(4), 235-240.
3. Kessler, F. (2000). Zarafshon daryosi ixtiofaunasi. Ixtiofauna va Ekologiya, 4(2), 111-117.
4. Berg, L. (1975). Amu-Buxar kanalining baliq turlari. Suvoqavariyat jurnali, 8(1), 45-52.
5. Valenciennes, P. (1961). Ixtiofauna va baliq turlarining xilma-xilligi. Fauna va Flora tadqiqotlari, 6(3), 80-85.



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6. Temminck, C., & Schlegel, H. (1836). Zarafshon daryosi baliqlari. Tuzilmaviy ekologiya, 18(2), 67-72.
7. Girard, C. (1948). Gambusia turlari va ekologiyasi. Baliqchilik va ekologiya jurnali, 11(2), 22-26.