

**INFORMATION ON THE ICHTHYOFAUNA OF SOME LAKES IN
THE LOWER REACHES OF THE AMU DARYA**

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A total of 51 fish species have been recorded in the Amu Darya, with 20 species found in its upper mountainous region, 32 in its foothills, 35 in its middle reaches, and 38 in its lower reaches [1,2]. During our 2024–2026 study of certain lakes located in the lower reaches of the Amu Darya River and connected to it to the extent possible, 837 individual fish were caught and examined, and 23 species were recorded. The research was carried out for two hours in the morning, from 9:00 to 11:00 AM, by studying the fish caught in the nets of tenant fishermen.

The research was conducted using generally accepted biological, ichthyological, and visual observation methods. Preliminary data collection was carried out directly at the lakes through route-based expeditions and continuous monitoring methods [3].

The research results revealed that the quantitative and qualitative indicators of fish vary across the lakes. 19 fish species (82.6%) were found in Lake Aqtuba, 17 species (73.9%) in Qarateren, and 18 species (78.3%) in Lake Dawitkol. The Qarateren Reservoir accounts for 40.38% of the total fish

caught, while the remaining lakes account for 35.24% (Aqtuba) and 21.98% (Dawitkól), respectively (table 1).

Table 1 Distribution of fish species found in lakes

№	Lakes	Species	%	individual	%
1	Aktuba	19	82.6	295	35,24
2	Karateren	17	73.9	338	40,38
3	Dovutkul	18	78.3	184	21,98
	total	23	100	837	100

Among the discovered fish species, the *Ctenopharyngodon idella*, *Parabramis pekinensis*, *Abramis brama orientalis*, *Carassius auratus gibelio*, *Cyprinus carpio*, *Silurus glanis*, *Sander lucioperca*, and *Channa argus* are more common than other species, *Oryzias latipes sinensis*, *Rhinogobius similis*, *Pelecus cultratus*, *Hemiculter eigenmanni*, and *Abramis sapa Aralensis* are less common.

Below, we will briefly discuss the ichthyofauna of the lakes.

Lake Aqtuba. According to published sources, the hydrobiological environment of this lake is home to simple unicellular organisms, rotifers, mollusk larvae, and the larvae of certain aquatic insects. These organisms form a vital part of the food chain within the lake's ecosystem and play a significant role in establishing the food supply for fish.

In the literature on the lake's ichthyofauna, fish species such as silver carp, sabre carp, northern snakehead, prussian carp, aral roach, aral asp, common carp, wels catfish, eastern bream, common rudd and grass carp are mentioned. This data indicates that fish belonging to different ecological groups can be found in the lake. Some of them feed on aquatic plants and invertebrates, while others are predators.

During the study period, a total of 295 fish specimens belonging to 19 species were caught. The largest proportions of the fish caught in the lake were represented by common carp, silver carp, grass carp, and bighead carp,

accounting for 8.8–10.5%. These were followed by Amur white-eye, eastern bream, common bream, and stone moroko, which accounted for 5.1–7.5%. River abbotina, silver carp, chebachok, striped speed swimmer, catfish, pike-perch, snakehead, and other species constituted smaller proportions, ranging from 3.1% to 4.4%. The lowest proportions (1.0–2.4%) were recorded for rudd, black-eye, ridged-belly fish, and medaka.

Lake Karateren. According to previous and recent studies, the fish fauna of this lake includes rudd, silver carp, white bream, common carp, catfish, and several other fish species.

During our study, 17 fish species were identified, and a total of 338 specimens were caught. The largest proportions of the total catch (7.7–9.2%) were represented by common carp, white bream, striped bream, and Amur white-eye. An intermediate proportion (5.6–7.1%) was accounted for by grass carp, catfish, pike-perch, and snakehead. Smaller proportions (4.7–5.3%) consisted of eastern white-eye, common bream, *Pseudorasbora parva*, black carp, chebachok, and striped speed swimmer. The smallest proportions (2.4–4.1%) were represented by ridged-belly fish, river abbotina, and swordfish.

Lake Dovutkul. During years of abundant water supply, this reservoir supported a diverse fish fauna, including pike, roach, blue-nose bream, rudd, silver carp, grass carp, ridged-belly fish, stone moroko, fast-swimming fish, white bream, Amur white-eye, swordfish, common bream, common carp, white bream, catfish, snakehead, pike-perch, European perch, and Amur bitterling. However, during years of water scarcity, the reservoir dried up, resulting in a decline in the abundance of many fish species, with some disappearing entirely. In recent years, water has gradually been supplied to the reservoir again, and improvements in both the quantitative and qualitative characteristics of its fish populations have been observed.

During our study, 184 fish specimens belonging to 17 species were caught. The largest proportions of the total catch (9.2–10.3%) were represented

by common carp, grass carp, white bream, and pike-perch. Intermediate proportions (5.4–7.1%) consisted of common bream, striped bream, Amur white-eye, chebachok, striped speed swimmer, catfish, and snakehead. Smaller proportions (3.3–3.8%) were represented by ridged-belly fish, eastern white-eye, silver carp, and *Rhodeus ocellatus*, while rudd was the rarest species, accounting for only 2.2% of the catch.

The results of the study demonstrated that the frequency of occurrence of the recorded fish species varied among the Aqtuba, Qarateren', and Dawitkól water bodies. Of the 23 identified species, 13—namely, eastern white-eye, common bream, common carp, ridged-belly fish, white bream, striped bream, grass carp, Amur white-eye, Amur chebachok, striped speed swimmer, common catfish, pike-perch, and snakehead—were recorded in all three lakes. These species can be classified as widely distributed fish species within the studied aquatic ecosystems.

Four fish species—rudd, river abbotina, Aral silver carp, and *Pseudorasbora parva*—were recorded in two of the three lakes, whereas the remaining six species—Aral black-eye, black carp, swordfish, rosy bitterling, Aral roach, and medaka—were found in only one lake. These findings indicate that the ichthyofaunal composition of the studied lakes includes both species that are commonly distributed across the surveyed water bodies and species with a more restricted distribution.

The results of the 2024–2026 study provide information on the ichthyofaunal composition and distribution of fish species in three lakes located in the lower reaches of the Amu Darya River: Aqtuba, Qarateren', and Dawitkól. A total of 837 fish specimens were examined, representing 23 species. The number of recorded species varied among the lakes, with 19 species identified in Aqtuba, 17 in Qarateren', and 18 in Dawitkól, demonstrating differences in ichthyofaunal composition among the studied water bodies.

Overall, the study establishes a baseline for understanding the ichthyofaunal composition and distribution of fish in selected lakes of the lower Amu Darya. Continued monitoring of fish species composition, abundance, and distribution, together with observations of water availability and habitat conditions, is recommended to support the conservation of aquatic biodiversity and the sustainable management of local fishery resources.

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