PRESENT STATUS OF FISH DIVERSITY AND POPULATION ABUNDANCE OF SELECTED FISH SPECIES IN KHUDIYA DAM,MUNGELI CHHATTISGARH, INDIA

Abstract

Fish has a vital role in the socioeconomic structure of South Asian nations and is a valuable source of protein. India is one of the twelve countries in the world with the highest level of biological diversity due to its vast biological heritage. Since the turn of the century, researchers have focused on the 2,546 species of fish that make up the fish population as well as the fish in the Indian subcontinent's inland waterways. The ichthyofauna's lack of knowledge is a major barrier to the popularization of lesser-known fish species in a given environment. Therefore, it is necessary to assess the fish species linked with various freshwater habitats in order to plan production and successful exploitation strategies. The goal of the current study is to better understand the fish diversity in Khudiya Dam between 2023 and 2024.The distance between this dam and Lormi Village in Mungeli District is 20 kilometers. Thirty fish species from five orders and ten families were observed in the current study.

Keywords: Dam, Water, Ichthyofaun, Fish Diversity

Introduction

The maintenance of ecosystem stability and the preservation of the general standard of the environment depend on biodiversity. Fish are anabundant and nutrient-dense food source that have gained popularity among humans. Fish has a vital role in the socioeconomic structure of South Asian nations and is a valuable source of protein. India is one of the twelve countries in the world with the highest level of biological diversity due to its vast biological heritage. Since the turn of the century, researchers have focused on the 2,546 species of fish that make up the fish population as well as the fish in the Indian subcontinent's inland waterways. Dam of knowledge about the ichthyofauna is a major barrier to the popularization of lesser-known fish species in a given environment. Therefore, it is necessary to assess the fish species linked with various freshwater habitats in order to plan production and successful exploitation strategies. (Nayak and Sharma 2001). The potential of fish culture in India has not yet been completely realized. The reservoir's fish biodiversity mainly reflects the variety and quantity of the fish species. A wide range of fish species are preserved by dams, supporting commercial fisheries. There are ver 20,000 fish species in the globe and 2179 species in India that are found in freshwater sources such lakes, tanks, and dams. Numerous researchers, including Day (1978), Khanna (1992), Suresh (2003), Jayaram (1994), and Price (1978), have examined fish in India. S. H. Jambhule and P. M.

Telkhade (2017).The goal of the current study is to examine the diversity of fish in the Khudiya dam in Mungeli. Evaluating the region's fish variety is the study's goal.

Materials and Methods

The Khudiya is located in District Mungeli, 20 kilometers from Lormi Village. The goal of the current study is to better understand the fish diversity in Khudiya Dam between 2023 and 2024. Fish from the Khudiya dam were individually harvested, as well as with assistance from fishermen. By consulting the standard literature of Day (1875), Jayaram (1994), Menon (1999), and Talwar and Jhingran (1991), the fish were recognized up to species. S. H. Jambhule and P. M. Telkhade (2017).

Observation and Result

Thirty fish species from five orders and nine families were observed in the current study. With 20 distinct species, the Cypriniformes order out of five in found to be dominating, followed by the Ophiocephaliformes order with six species. Whereas Clupeiformes and Anguliformes only display one species of fish, Order Perciformes displays two distinct species. The family Cyprinidae dominated the distribution according to family, with 16 species, followed by Ophiocephalidae (04), Bagridae (03), Siluridae (01), Cichlidae (03), and each of the Notopteridae, Gobidae, and Mastacembelidae (01). In the Order Cypriniformes, Labeo and Catla were found to be prominent among the many species, with Ompokpabda appearing least frequently.

Discussion and conclusion

Fish of the Indian subcontinent's freshwater or inland water bodies have been studied since the turn of the century, claims Jhingran (1977). Researchers such as Alikunhi et al. (1955) have spent the last few decades studying the diversity of ichthyofauna from various freshwater basins in India. Thirty fish species from five orders and ten families were observed in the current study. Twenty distinct species were found to make up the main order among the five orders. Whereas Clupeiformes and Anguliformes only display one species of fish, Order Perciformes displays two distinct species. Gayakwad and Kadam (2006) 23 fish species from six orders were found in the Masooli Reservoir in the Maharashtra district of Parabhani. In the Govindsagar reservoir in Himachal Pradesh, Kumar (1990) discovered 51 ichthyofauna belonging to 4 groups, of which 12 species were significant for commerce. In Hyderabad's Ibrahimbagh and Sathamraj reservoirs, ichthyofauna was documented by Devi (1997). He added that Fish of the cypriniformes family predominated in these reservoirs. The state of Rajasthan has seven classifications, according to Jain (1998). According to Sukumaran and Rahman (1998), there are a lot of predatory fish in most of Karnataka's reservoirs. In Pong Reservoir, a total of 27 fish species from 6 families were identified (Singh, 2001). In the

state of Rajasthan, Jain (1998) recorded 53 species of fish fauna and classified them into seven groups. The size, form, and lifespan of the species varied greatly, according to Jhingran (1977). For each species, there are unique maximum sizes and ages. A fish species's growth is influenced by its surroundings. Five important carp species are examined in this study (Catla,The most common and prolific species in the dam are Rohu, Marigal, Common, and Grass carp. Other species are present in smaller quantities and are infrequently found. Every fish is suitable for eating. S. H. Jambhule and P. M. Telkhade (2017).

Table 1: Diversity of Ichtyofauna in Khudiya Dam during year 2023-24

S.N	Name of Fishes	Order	Family
1	Labeogonius	Cypriniformes	Cyprinidae
2	Labeocalbasu	Cypriniformes	Cyprinidae
3	Labeorohita	Cypriniformes	Cyprinidae
4	Catla catla	Cypriniformes	Cyprinidae
5	Cyprinus carpio	Cypriniformes	Cyprinidae
6	Cirrhinusmrigala	Cypriniformes	Cyprinidae
7	Ctenopharyngodonidella	Cypriniformes	Cyprinidae
8	Puntius saranasarana	Cypriniformes	Cyprinidae
9	Rasbora daniconius	Cypriniformes	Cyprinidae
10	Puntius sophore	Cypriniformes	Cyprinidae
11	Amblypharyngodon mola	Cypriniformes	Cyprinidae
12	Puntius ticto	Cypriniformes	Cyprinidae
13	Bariliusbendelisis	Cypriniformes	Cyprinidae
14	Wallago attu	Cypriniformes	Cyprinidae
15	Punctiusconchonius	Cypriniformes	Cyprinidae
16	Lepidocephalichthys	Cypriniformes	Cyprinidae
17	Chela bacaila	Cypriniformes	Siluridae
18	Mystusseenghala	Cypriniformes	Bagridae
19	Mystuscavisius	Cypriniformes	Bagridae
20	Mistus vittatus	Cypriniformes	Bagridae
21	Ophiocephalus punctatus	Ophiocephaliformes	Ophiocephalidae
22	Ophiocephalus striatus	Ophiocephaliformes	Ophiocephalidae
23	Ophiocephalusgachua	Ophiocephaliformes	Ophiocephalidae
24	Ophiocephalusmarulis	Ophiocephaliformes	Ophiocephalidae
25	Chanda nama	Ophiocephaliformes	Cichlidae
26	Chanda ranga	Ophiocephaliformes	Cichlidae
27	Sorotherodonmossambicus	Perciformes	Cichlidae
28	Mastecambalus armatus	Perciformes	Mastacembelidae
29	Glassogobiusgiuris	Anguilliformes	Notopteridae
30	Notopterusnotopterus	Cluipeiformes	Gobidae

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