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Study on Fish Diversity of Nehtara and Rampura Talab at Jobat District Alirajpur (M. P.)

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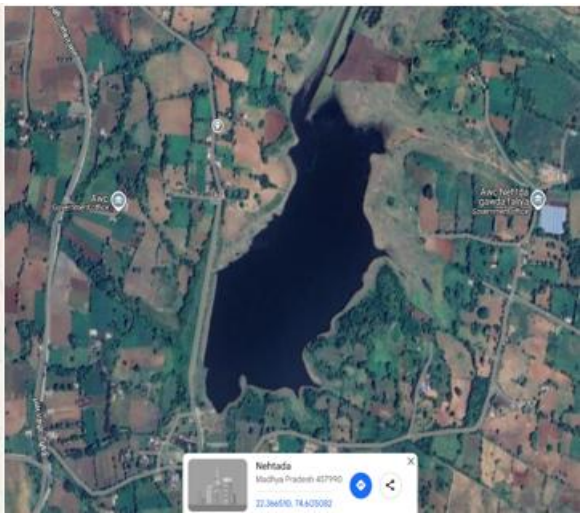
Abstract: ***Water is an essential element found on Earth, without which we cannot survive and no form of any type of life can exist. Water is found in small and large ponds, lakes, rivers, and oceans on Earth, and when it comes to clean or fresh water, it mainly exists as ice at the poles. Water is an essential component of our lives. It is the fundamental basis for energy sources, health, and the balanced development of our bodies. Our daily routine is incomplete without water, and it wouldn't be an exaggeration to say that life is impossible without water because all living beings' biological processes are based on it. We use water for various purposes, such as energy production, irrigation, aquaculture, etc. Aquaculture has emerged as a highly important productive sector, fulfilling not just the dietary needs of people at the local level but also their economic needs. Ponds are super important natural production areas where you can find all sorts of aquatic creatures and plants. Among them, fish are a key species that are raised in various water sources. Fish make up more than half of all vertebrate animals, and Nelson (2006) described about 27, 977 fish species in his book. Fish are a rich source of protein, which is why they play a big role in many people's diets. Fishing is a crucial part of the economy in many countries because the fish farming business helps improve people's nutrition standards. Aquaculture or fishing can be an effective way to produce food in an environmentally friendly manner and conserve water and land resources. The main aim of this research paper is to study the diversity of various fish found in two ponds in the Jobat tehsil of Alirajpur district so that biodiversity can be conserved the quality of the ecosystem can be protected, and the intrinsic value of all species can be understood.***

Keywords: Pond, Carps, Fish Farming, Aquaculture, Biodiversity.

1. Material and Methods

For this study, I select Jobat tehsils 02 major ponds Nehtda Pond and Rampura Pond. Jobat is located on the Doohi River in Alirajpur district. There are two major ponds in Jobat, located in the villages Nehtda and Rampura, which were studied. Jobat's geographical coordinates are 22.42°N 74.57°E and its average elevation above sea level is 292 meters (958 feet). Jobat is about 184 km away from Indore, the commercial city of Madhya Pradesh. Jobat is situated near the Gujarat border in western Madhya Pradesh. According to the 2001 census of India, the population of Jobat was 9991, with 52% men and 48% women. The average literacy rate in Jobat is 72%, which is higher than the national average of 59.5%: male literacy is 79% and female literacy is 64%. In Jobat, 16% of the population is under 6 years old. About 7 kilometres from Jobat is Nehtda Pond and about 5 kilometres from Jobat is Rampura Pond, both of which are medium - sized freshwater ponds where fish farming is done with the help of the local village council. With the help of local fishermen, fish were caught in these two ponds for a year using different types of nets in various seasons. After catching, the vegetation, parasites, and microorganisms on them were removed with clean cloths and washed with warm water, and then the fish were preserved in clean glass containers using 10% formaldehyde. After that, the identification and classification of the fish were done in the laboratory. For the identification and classification of the fish, standard literature by Day (1981) and Jhingran (1882, 1991) was used.

Rampura Pond (Rampura, Jobat)



Nehtda Pond (Nehtda, Jobat)

2. Results and Discussion

After testing both ponds, the results showed that both ponds are rich in biodiversity. There was a good variety of aquatic plants, floating plants, insects, and fish found in the pond. With the help of local fishermen, we caught and studied the fish in these two ponds, discovering 15 species of fish. Most of the fish species present in the pond were minor carp, while under major carp, we found species like Catla, Rohu, Mrigal, and Cirrihinus mrigala. A few catfish, mullets, and one exotic carp were also found, as follows –

Table: The Ichthyofauna collected from the Rampura Pond and Nehtda Pond Jobat Dist. Alirajpur

Sr. N.	Category	Fish Species Found in Pond
1.	Major carps	*Catla catla*
		Cirrhinus mrigala
		Labeo calbasu
		Labeo rohita
2.	Minor carp	*Labeo gonius*
		Labeo fimbriatus
		Labeo bata
		Puntius sarana
		Lepidocephalichthys guntea
3.	Exotic fishes	*Cyprinus carpio*
4.	Cat fishes	*Mystus aor*
		Mystus seenghala
		Rita rita
5.	Murrels	*Channa marulius*
		Channa punctatus

Various published research papers indicate that the fish species found in the ponds of rural areas of Madhya Pradesh mainly belong to the major carp group, contributing over 80% to fish production. Archana Sharma in 2014 studied 3 major carps, 10 minor carps, 9 catfishes, 3 murrels, and 5 other fish species in the Yashwant Sagar reservoir in Indore. Priyanka Sinha, Radhika Gupta, and A. K. Dubey studied 21 species of fish in the limestone mines of Katni and found that the main species here is also major carp. Based on these various research papers, it can be suggested that if fish resources are properly exploited and managed, they can become better productive areas. The appropriate aquaculture techniques should be used according to the fish production capacity and physical and chemical properties of different ponds. Testing of both Nehtda and Rampura ponds shows their rich biodiversity, and if scientific and standard methods of aquaculture are used in these ponds, it can improve the economic and social status of the fish farmers dependent on these ponds, while also conserving local biodiversity.

3. Conclusion

This research paper concludes that there is great potential for fish farming in both of the mentioned ponds. This area can significantly contribute to strengthening the rural economy if we use new and scientific techniques in fish farming. Also, fish farmers should be provided with appropriate education and training related to fish farming, and they should be made aware and motivated. By completely banning uncontrolled and illegal fishing methods, large - scale awareness programs can be organized to prevent the capture of eggs, larvae, and immature fish. In these events, fish farmers can be informed about the importance of fish farming and made aware of various government schemes. In this way, everyone can be inspired to play an active role in achieving sustainable fishery development goals and hand over resources in a healthy state for future generations. This will provide future strategies for development and the conservation of aquatic life.

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