



# Diversity Of Fishes In Bhandara Fish Market, Maharashtra, India

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**Abstract:** A fish market is a location where commercially significant fish and fish products are sold. In the city of Bhandara, there exist two varieties of fish markets: a regular fish market and a weekly fish market. The regular fish market is situated in the Kardha area of Bhandara, while the weekly fish market is found in the main city. The variety of fish is analyzed through the presence of specific species in catches by fishermen and examinations of local fish markets. Collected fish were identified using standard literature, photographed, and preserved in glass jars containing a 10% formalin solution. Fish from the orders Cypriniformes, Perciformes, Ophiocephaliformes, Beloniformes, Clupeiformes, and Mastacembeliformes were documented in Bhandara fish market. A significant group of fish is classified under the order Cypriniformes. Fishes from the order Cypriniformes are commonly favored in aquaculture methods. These fish are raised to meet the needs of consumers. Consumers primarily favor these fish because they grow larger and are highly nutritious and tasty. In the current study, we have indicated the presence of various types of fish at the Bhandara fish market. These investigations will aid in examining the freshwater resources of Bhandara District and will also assist in conducting research on these lines.

**Index Terms:** Bhandara, Fish market, Cypriniformes, Aquaculture.

## 1. INTRODUCTION

Fish market is a place where the fishes and fish products of commercial importance are marketed. It can be dedicated to wholesale trade between fisherman and fish merchants or to the sale of seafood to individual consumers, or to both. Retail fish markets, a type of wet market often sell street food as well as economical source. The fisheries sector provides a powerful tool for income generation and it provides growth to industries as well as a source of nutritious food. Fish production plays an important role in the socio-economic values of community. It gives income and employment to many families. Growth and development of fishery sector is mainly dependent on fish marketing system. Market infrastructure includes wholesale market, retail market and fish retail outlets. In wholesale markets, large quantities of fishes are collected from the surrounding places, sold to other wholesalers and retailers.

'Fishes' comprises a huge and diverse group of animals. There are about 36,001 extant species (FishBase: February 2025 update) occupying diverse environment right from deep sea to swallow freshwater puddles in the Himalayas. In particular, Teleosts represent the most abundant group of bony fishes covering about 32,000 extant species (Nelson, 2016). The morphological variations have arisen as result of the diverse environment that they inhabit. They occupy a variety of freshwater and marine habitats and display a wide range of structural and functional responses to this environment (Patle, 2009, 2013).

Fishes are cold blooded aquatic animals well adapted for life in water. India is having very rich sources of inland water bodies in the form of rivers, canals, reservoirs and lakes. These water bodies are located in different parts of the country especially in rural areas. It mainly used as a source of drinking water, irrigation and fish production. The Indian fish fauna is represented by Chondrichthyes and Osteichthyes. The class

Chondrichthyes is represented by 131 species with 67 genera, 28 families and 10 Orders in the Indian region. The Indian Osteichthyes are represented by 2,415 species belonging to 902 genera, 226 families and 30 orders, of which, five families, are endemic to India. In India, Cyprinidae is one of the largest family of fish (Jagtap, 2013; Chaudhary and Sitre, 2020).

Fisheries occupy a prominent place in the economy of the world as the fish is one of foods of vast majority of people. Fish not only provides long chain Omega-3 fatty acids, fat soluble vitamins, proteins, but also contains fat, inorganic substances and vitamins. Fish protein is easily digestible and it contains considerable proportion of soluble proteins. It is more valuable for human especially for a population whose staple food is rice. Besides, fisheries help in generating employment and revenue and raising nutritional level. Millions of people are suffering from hunger and malnutrition throughout the world while fishes form rich source of food and provide a meal to tide over a nutritional difficulties of man. Fishes have formed an important item of human diet from time immemorial and are primarily caught for this purpose (Sarwade and Khillare, 2010).

In order to maintain sustainable development and stability of ecosystem, surveillance of fish faunal diversity of water bodies should be done. Kamble and Reddi (2012), Kharat et al. (2012), Golib et al. (2013), Nagabhushanam and Hosetti (2013), Chandrashekhar (2014), Biswas and Panigrahi (2014), Gadekar (2015), Narayana and Raju (2016), Chaudhary and Sitre (2020) have contributed in the field of study of fish faunal diversity in freshwater bodies. The main source of fishes in Bhandara is Wainganga river and nearby small lakes. Most of fish sellers sell their fishes on road without maintaining the quality and hygiene. An infrastructure facility in majority of fish markets is not satisfactory. The supplies of fish to the consumers are in the form of fresh and dried fishes. To explore the fish faunal diversity of this particular region present study was undertaken.

## **2. MATERIALS AND METHODS**

### **2.1 Collection and Identification of Fishes**

Fishes were collected from available fish markets in Bhandara. In Bhandara city there are two types of fish markets; regular and weekly fish market. Regular fish market is located at Kardha area of Bhandara and weekly fish market is located in main city. Diversity of fishes is studied by availability of particular species in fishermen caught and survey of local fish markets. Study was undertaken from October 2025 to December 2025.

Collected fishes were identified by using standard literature given by Jayaram (1981), Talwar and Jhingran (1991) and Nelson (2016).

### **2.2 Photography and Preservation of Fishes**

Fishes were photographed, thereafter stored in 10% formalin solution in glass jars.

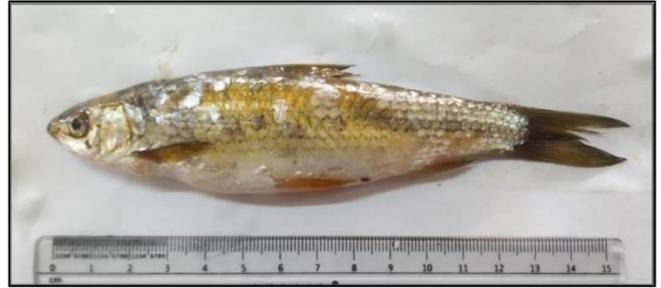
### 3. OBSERVATIONS AND RESULTS

**Table 1: Fishes reported in Bhandara fish market.**

Order	Fish Species Reported
Order: Cypriniformes	
Sub-Order: Cyprinoidei	1. <i>Labeo rohita</i>
	2. <i>Labeo dussumieri</i>
	3. <i>Labeo fimbriatus</i>
	4. <i>Labeo boggut</i>
	5. <i>Cyprinus carpio</i>
	6. <i>Puntius ticto</i>
	7. <i>Puntius stigma</i>
Sub-Order: Siluroidei	8. <i>Mystus seenghala</i>
	9. <i>Mystus bleekeri</i>
	10. <i>Heteropneustes fossilis</i>
	11. <i>Ompok pabda</i>
Order: Perciformes	12. <i>Anabas testudineus</i>
	13. <i>Glossogobius giuris</i>
	14. <i>Ambassis nama</i>
	15. <i>Ambassis ranga</i>
Order: Ophiocephaliformes	16. <i>Ophiocephalus punctatus</i>
Order: Beloniformes	17. <i>Xenentodon cancella</i>
Order: Clupeiformes	18. <i>Notopterus kaporat</i>
Order: Mastacembeliformes	19. <i>Mastacembelus puncalus</i>
	20. <i>Mastacembelus armatus</i>



**1. *Labeo rohita***



**2. *Labeo dussumieri***



**3. *Labeo fimbriatus***



**4. *Labeo boggut***



**5. *Cyprinus carpio***



**6. *Puntius ticto***



**7. *Puntius stigma***



**8. *Mystus seenghala***



**9. *Mystus bleekeri***



**10. *Heteropneustes fossilis***



11. *Ompok pabda*



12. *Anabas testudineus*



13. *Glossogobius giuris*



14. *Ambassis nama*



15. *Ambassis ranga*



16. *Ophiocephalus punctatus*



17. *Xenentodon cancilla*



18. *Notopterus kapirat*



19. *Mastacembelus puncalus*



20. *Mastacembelus armatus*

#### 4. SUMMARY AND CONCLUSION

The fish market of Bhandara lacks basic infrastructure as like most of the other inland fish markets in the country. The major fish market area present in blocks, including; Bhandara fish market and Kardha fish market. The fishermen bring their fishes to the Bhandara and other markets after proper analyzing the demand and price of the fish. The wholesalers are mainly active during morning hours when they dispose their fishes to either retailers or auctioneers.

During present study, fishes belonging to order Cypriniformes, Perciformes, Ophiocephaliformes, Beloniformes, Clupeiformes and Mastacembeliformes were reported in Bhandara fish market. Major collection of fishes belongs to order Cypriniformes. Fishes belonging to order Cypriniformes are usually preferred in fish culture practices. These fishes are cultured in order to fulfill the demand of consumers. Consumers majorly prefer these fishes as they grow and attain greater size and these are quite nutritive and delicious. In present study we have reported the availability of diverse kind of fishes from Bhandara fish market. These studies will help to explore the freshwater resources of Bhandara District and will also be helpful to carry out the research on these lines.

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