



## ICTHYOFAUNA OF YELDARI RESERVOIR FROM PARBHANI DISTRICT OF MARATHWADA REGION, OF MAHARASHTRA STATE

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**Article History:** Received 26<sup>th</sup> January 2025; Accepted 11<sup>th</sup> March 2025; Published 31<sup>st</sup> March 2025

### ABSTRACT

This study investigates the diversity of fish species in Yeldari Reservoir, located in Parbhani district, Maharashtra. The research was conducted from October 2022 to November 2023 to assess the ichthyofaunal diversity of the reservoir. A total of 37 fish species were recorded, representing 29 genera, 14 families, and 8 orders. The findings highlight the rich biodiversity of the reservoir and contribute to the understanding of its aquatic ecosystem. This study provides valuable insights for fisheries management, conservation efforts, and sustainable utilization of fish resources in the region.

**Keywords:** Cypriniformes, Ecology, diversity, Yeldari reservoir.

### INTRODUCTION

Fish species are unevenly distributed in all major rivers of the world and having over 25,000 species of fishes. These species richness is high in tropical region compared to other parts of the world, usually these regions are called as high level of endemism probably due to the climatic condition of the tropical region are more stable as compared to the temperate regions of the world. Around the world approximately 22,000 species of fishes have been recorded out of which 11% are found in India i.e. 2,420, where the Osteichthyes include 34.55% and Chondrichthyes include 65.45%. In India, there are 2500 species of fishes of which, 930 live in freshwater and 1,570 are marine (Kar, 2003). There are about 450 families of freshwater fishes globally, about 40 represent in India (warm freshwater fishes) about 25 of these families are commercially important. (Day, 1878; Hamilton, 1822) were the first modern writers of Indian fishes.

The Marathwada region of Maharashtra is one of the richest in aquatic resources that includes tributaries of river Godavari, Purna, Painganga, Manjara and Dudhana apart from reservoirs and lakes. In the field of ichthyology valuable contributions have been made by Ahirrao and Mane (2000) who studied ichthyofauna from Parbhani district of Maharashtra state and Sakhare (2001) who studied ichthyofauna of Jawalgaon Reservoir in Solapur

district in Maharashtra state. The present work was mainly undertaken to investigate the fish diversity from this region and it is the first effort in this direction. The survey was done having small and big water resources with fishery potential were selected for collection of ichthyofauna.

### MATERIALS AND METHODS

Yeldari Dam, is an earth fill dam on Purna river near Yeldari in Jintur taluka of Parbhani district in the state of Maharashtra. It is the second largest dam in Marathwada region. Yeldari reservoir is located about 15 km due south west of Jintur town of Parbhani district. Geographically it is located between 19°-43'-00'' N latitude-76°-45'-00''. The present studies focused on ichthyofaunal diversity of Yeldari reservoir in the year of October 2021 to November 2022. Fish samples were collected from the sampling site. Fish samples were collected every week during the study period from the fish landing centers with the help of skilled local fishermen by various fishing crafts, gears with variable mesh size. Sampling points were distributed throughout the site to cover its whole area and location was changed for the collection of fish fauna according to the season. Identification of fishes was done up to species level at fish landing center to get its natural colour, pattern of scales, fins, mouth pattern, identification marks like black spot,

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bloach on operculum, paired and unpaired fins and body parts with the help of standard literature by Munshi & Shrivastava (1988), Hamilton F. (1822). Talwar & Jhingran (1991), Day Francis. (1986), Jayaram *et al.*, (2000), Jayaram (1991 & 1999), Menon (1987) Jyoti & Sharma (2006). Fish species which were not identified on the field (landing center) were preserved in 10% formalin or 5cc of formalin was injected in the belly of fish with disposable syringe and packed in polythene bags. These fish samples were brought to the research laboratory for further identification and were used to identify fish up to the species level (Hiware & Pawar, 2006).

## RESULTS AND DISCUSSION

The fish fauna of Indian reservoirs has been studied by several workers and it has been found that the distribution of fish species is quite variable because of geographical and geological conditions of the area. During the present investigation Altogether 37 species of fishes belonging to 29 genera falling under 8 orders have been identified (Table 1). The order cypriniformes dominated with 15 species was abundant (Graph 1.). Cyprinidae family was dominant during the study period due to their hardy nature and better

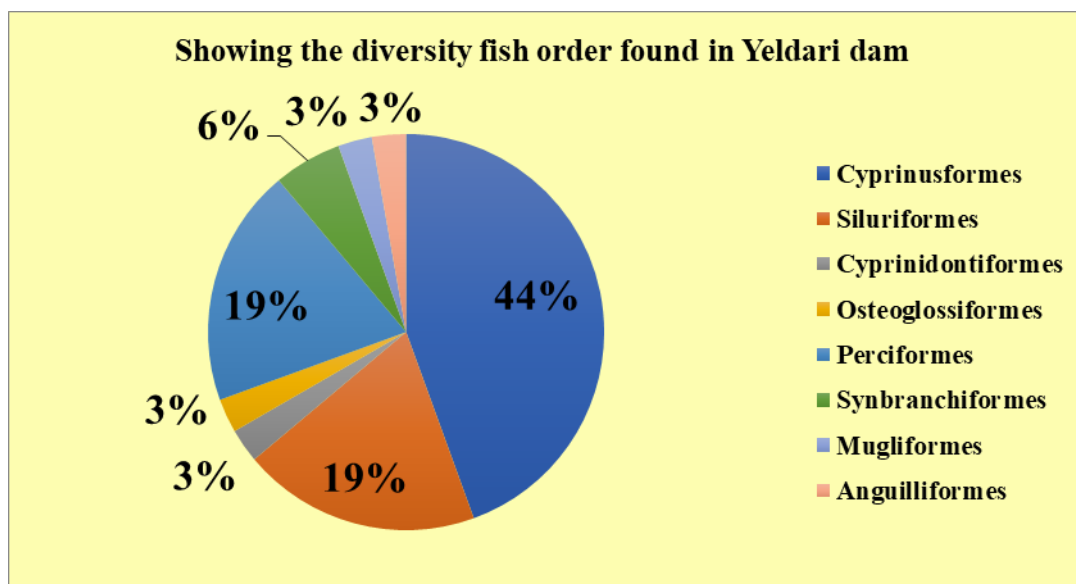
adaptability of the surrounding atmosphere. Mohan *et al.*, (2013), have reported 08 fish species in which Cyprinidae family was dominant with 08 fish species from Chenani Hydroelectric Reservoir, Udhampur (J&K) India Jain.R *et al.*, (2013). Have reported 26 fish species in which Cyprinidae family was dominant with 11 species from Bilawali Tank, Indore (M.P.) Pawar *et al.*, (2014), Have reported 165 fish species in which Family cyprinidae was dominant with 87 fish species from Maharashtra Balkhande & Kulkarni (2015). Have studied 18 fish species from Godavari River at Dhargar Ta. Purna Dist. Parbhani in which cyprinidae family dominant with 08 fish species Jitesh *et al.*, (2013). Have reported 09 fish species from Isapur Reservoir, Maharashtra state, in which cyprinidae family dominant with 05 fish species Basavraja *et al.*, (2014). Have reported 25 species from Anjanapura Reservoir, Karnataka in which Cyprinidae was dominant with 14 fish species Shinde *et al.*, (2009). Have reported 15 fish species where 11 fishes are dominant from family Cyprinidae from Harsool Sawangi Dam Aurangabad Uattam *et al.*, (2013). 21 fish species were reported from Pimpaldari tank, Hingoli, Maharashtra, India in which Cyprinidae family was dominant with 11 fish species Tesia & Bordoloi (2012).



**Figure 1.** Yeldari Dam Parbhani district, Maharashtra.

**Table 1.** Showing Ichthyofauna from Yeldari Dam.

<b>Order</b>	<b>Family</b>	<b>Genus</b>	<b>Species</b>	
Cypriniformes	Cyprinidae	<i>Labeo</i>	<i>rohita</i>	
		<i>Catla</i>	<i>catla</i>	
		<i>Cirrhinus</i>	<i>mirgala</i>	
		<i>Cyprinus</i>	<i>carpio</i>	
		<i>Hypothalmicthys</i>	<i>nobilis</i>	
		<i>Ctenopharyngodon</i>	<i>idella</i>	
		<i>Thynnichthys</i>	<i>sandkhol</i>	
		<i>Salmostoma</i>	<i>phulo</i>	
		<i>Osteobrama</i>	<i>cotio cotio</i>	
		<i>Rasbora</i>	<i>doniconius</i>	
		<i>Rohtee</i>	<i>ogilbi</i>	
		<i>Puntius</i>	<i>ticto</i>	
		<i>Puntius</i>	<i>stigma</i>	
		<i>Puntius sarana</i>	<i>sarana</i>	
Siluriformes	Balitoridae	<i>Amblypharyngodon</i>	<i>mola</i>	
		<i>Nemacheilus</i>	<i>botio botio</i>	
	Siluridae	<i>Ompok</i>	<i>bimaculatus</i>	
		<i>Wallago</i>	<i>attu</i>	
	Bagridae	<i>Mystus</i>	<i>blekeri</i>	
		<i>Mystus</i>	<i>cavisius</i>	
		<i>Mystus</i>	<i>seenghala</i>	
		<i>Rita</i>	<i>rita</i>	
		<i>Clariidae</i>	<i>Clarias</i>	<i>batrachus</i>
		<i>Heteropneustidae</i>	<i>Heteropneustes</i>	<i>fossilis</i>
Cyprinodontiformes	Poeciliidae	<i>Poecilia</i>	<i>reticulata</i>	
Osteoglossiformes	Notopteridae	<i>Notopterus</i>	<i>notopterus</i>	
Perciformes	Channidae	<i>Channa</i>	<i>striatus</i>	
		<i>Channa</i>	<i>puntatus</i>	
		<i>Channa</i>	<i>gachua</i>	
		<i>Channa</i>	<i>marulius</i>	
	<i>Cichlidae</i>	<i>Oreochromis</i>	<i>mossambica</i>	
	Centropomidae	<i>Chanda</i>	<i>nama</i>	
		<i>Chanda</i>	<i>ranga</i>	
	Synbranchiformes	Mastacembalidae	<i>Macrognathus</i>	<i>pancalus</i>
<i>Mastacembelus</i>			<i>armatus</i>	
Mugliformes	Mugilidae	<i>Rhinomugil</i>	<i>corsula</i>	
Anguilliformes	Anguillidae	<i>Anguilla</i>	<i>bengalensis</i>	



**Figure 2.** Showing the diversity fish order found in Yeldari dam.

Next in abundance are the fishes coming under the order siluriformes in which *Mystus* is dominant with 3 species, while the order Anguilliformes & Mugiliformes has only one dominant species. Hiware (2006) studied ichthyofauna of four districts of Marathwada region of Maharashtra. Sakhare (2007) reported 29 fish belonging to 20 genera falling in 4 orders from Yeldari reservoir of Parbhani district (Figure 2). The present investigation on ichthyofauna is somewhat similar to that of Sakhare (2007). Similarly, Hiware and Pawar (2006) recorded 43 fish species from Nath Sagar Dam; Paithan reservoir in Aurangabad Dist. suggesting that the fish diversity from the reservoir under study is rich as compared to Nath Sagar Dam. (Pawar, 2014) found the diversity and richness of fishes in the selected sites of the river Narmada in Madhya Pradesh, with a total of 52 species of fishes identified. Because the water is suited for faunal diversity, especially fish, Siddheshwar reservoir has the richest fish fauna. There is a need for the conservation of fish diversity.

## CONCLUSION

The present study highlights the fish diversity of Yeldari Reservoir, located in Parbhani district, Maharashtra. A total of 37 fish species belonging to 29 genera, 14 families, and 8 orders were recorded during the study period. The order Cypriniformes was found to be the most dominant, with 15 species, followed by Siluriformes, where *Mystus* was the most abundant genus with three species. Other orders, such as Anguilliformes and Mugiliformes, were represented by only one species each. The dominance of the Cyprinidae family aligns with findings from other studies conducted in various reservoirs across India, indicating their adaptability and resilience to environmental conditions. However, maintaining this biodiversity requires proper conservation measures. The increasing pressure of anthropogenic activities, habitat degradation, and overfishing can threaten

fish populations. Conservation efforts, sustainable fishing practices, and periodic monitoring of fish diversity are essential for preserving the aquatic ecosystem of Yeldari Reservoir. Future research should focus on ecological assessments and the impact of environmental changes on fish diversity to ensure long-term sustainability.

## ACKNOWLEDGMENT

The authors express sincere thanks to the head of the Department of Zoology, Sunderrao Solanke Mahavidyalaya, Majalgaon, Dist- Beed for the facilities provided to carry out this research work.

## CONFLICT OF INTERESTS

The authors declare no conflict of interest

## ETHICS APPROVAL

Not applicable

## REFERENCES

- Ahirrao, S. D., & Mane, A. S. (2000). The diversity of ichthyofauna, taxonomy and fisheries from some fresh waters of Parbhani district (MS). *Journal of Aquatic Biology*, 15(1&2), 40-43.
- Balkhande JV, Kulkarni AN. (2015). Studies of Ichthyofaunal diversity of Godavari River at DhangerTakli Ta Purna Dist: Parbhani Maharashtra, India. *International Journal of Aquatic Biology*, 1(5),187-189.
- Basavraj D, Narayana J, Kiran BR, Puttaiah ET. (2014). Fish Diversity and abundance in relation to water quality of Anjanpura reservoir Karnataka, India. *International*

- Journal of Current Microbiology and Applied Sciences*, 3,747-757.
- Day F. (1878). The fishes of India, being A natural history of the fishes known to inhabit the seas and fresh waters of India, Burma and Ceylon. Ceylon text and atlas in 4 pts., London, (1-2).
- Day Francis. (1986) The fishes of India, being a natural history of the fishes known to inhabit the seas and fresh waters of India, Burma and Ceylon. Today and tomorrow's Book Agency New Delhi, 1-2, 45.
- Hamilton F. (1822). An account of the fishes found in the river Ganges and its branches. I-VII. Printed for Archibald Constable and company, Edinburgh and Hurst, Robinson and Co - 90, Cheapside London, 1822, 405.
- Hiware, C. J. (2006). Ichthyofauna from four districts of Marathwada region, Maharashtra, India. *Zoos' Print Journal*. 21(1), 2137-2139.
- Hiware, C. J. and Pawar, R. T. (2006). Ichthyofauna of Paithan Reservoir (Nath Sagar dam) in Aurangabad District of Marathwada Region, Maharashtra State. *Ecology and Environment*. APH Publishing Corporation New Delhi Chapter, 22 page. 209-215.
- Hiware, C. J., Pawar, R. T., Gaikwad, J. M., & Sonawane, S. R. (2015). Classification and Identification of Freshwater Fishes. Daya Publishing House, Astral Publication New Delhi. ISBN: 9789351243168.
- Jain R, Choudhary P, Dhakad NK. (2013). Study on Ichthyofaunal Diversity of Bilawali Tank in Indore (M.P.), *JCBPS*.; 3(1), 336-344.
- Jayaram KC, Das J Jeyachandra. (2000). Revision of the Genus *Labeo*Cuvier from the Indian region with a discussion on its phylogeny and zoogeography (Pisces: Cypriniformes, Cyprinidae, Cyprinidae). *Records of the ZSI Occasional paper no.183*, ZSI Calcutta, 139.
- Jayaram KC. (1991). Revision of the genus, *Puntius* Hamilton from the Indian region (Pisces: Cypriniformes: Cyprinidae: Cyprininae). *Records of Zoological Survey of India*, Occasional Paper no 135, ZSI, Calcutta, 178.
- Jayaram KC. (1999). The freshwater fishes of the Indian region. Narmada Publishing House New Delhi, 551.
- Jitesh VK, Ananthan PS, Landge A. (2013). Fish diversity and productivity of Isapur Reservoir, Maharashtra state.; 4,12 -19.
- Jyoti MK, Sharma A. (2006). Fishes Aid to Collection, Preservation and Identification. Daya Publishing House Delhi, 157.
- Kar D. (2003). Fishes of Baraka drainage Mizoram and Tripura in A. Kumar, C. Bhaora and L.K. Singh, (eds.). APH Publishing corporation, New Delhi, 202-211. Maharashtra, India. *IIRRJ*; (IV):43-44.
- Menon AGK. (1987). Fauna of India and the adjacent countries Pisces (Part I). Homalopteridae ZSI, Culcatta,
- Mohan VC, Sharma KK, Sharma A, Watts P. (2013). The Study of Ichthyofaunal Diversity of Chenani Hydroelectric Reservoir, Udhampur (J&K) India, 2(6),8-12.
- Munshi D, Shrivastava JS. (1988). Natural History of fishes and Systematic of freshwater fishes of India. Narendra Publishing House New Delhi- 110006, 235
- Pawara Ravindra H, Patel NG, Patel YE. (2014). Review on freshwater fish diversity of Maharashtra, India, *JEZS* 2(5), 358-364.
- Pawar, R. (2014). Ichthyofauna of Majalgaon reservoir from beed district of Marathwada Region, Maharashtra State. *Discovery*, 20, 7-11.
- Sakhare, V. B. (2007). Reservoir Fisheries and Limnology, Narendra Publishing House, Delhi, pp 187
- Shinde SE, Pathan TS, Bhandare RY, Sonawane DL. (2009). Investigate 03 exotic fish species from Ichthyofaunal Diversity of HarsoolSavangi Dam, District Aurangabad, (M.S.) India. *World Journal of Fish and Marine Sciences*, 1(3), 141-143.
- Talwar PK, Jhingran A. (1991). Inland fishes of India and adjacent countries. Oxford and IBH Publisher, New Delhi, (1-2), 1158
- Tesia C, Bordoloi S. (2012). Ichthyofaunal Diversity of Charju River, Tirap District, Arunachal Pradesh, India. *Asian Journal of Experimental Biological Sciences*, 3(1)82-86.
- Uattam M. Jayabhaye, Lahane LD. (2013). Studies on Ichthyofaunal Diversity of Pimpaldari tank, Hingoli.