

## DIVERSITY ICHTHYOFAUNA OF SAIKHEDA DAMS IN GHATANJI REGION OF YAVATMAL DISTRICT, MAHARASHTRA (INDIA)

V. J. Gawande and A. K. Patki

S. P. M. Science and Gilani Arts, Commerce College, Ghatanji, Dist. Yavatmal (M.S.) India

### Abstract

A study was conducted during February 2021 to January 2023 to assess ichthyofaunal diversity from Saikheda dams, Ghatanji region of Indian State Maharashtra. During study, total of 36 species belonging to 06 orders (Cypriniformes, Perciformes, Siluriformes, Synbranchiformes, Beloniformes and Osteoglossiformes) and 11 families were recorded. These families were Cyprinidae (21), Bagaridae (03), Ambassidae (02), Mastocembelidae (02), Cobitidae (01), Cichlidae (01), Gobiidae (01), Channidae (02), Siluridae (01), Belonidae (01) and Notopteridae (01), of these species; 08 were Abundant, 11 were Common, 04 were Frequent, 07 were Occasional while 07 were Rare. The present study cleared that the Saikheda Dams accommodates the rich diversity of edible fishes.

**Keywords:** Diversity, Ichthyofauna, Saikheda Dam, Ghatanji, Yavatmal, Maharashtra

### Introduction

Fish are an important resource for humans worldwide, especially as food. Fish is a highly nutritive food that preferred by human. Throughout history, humans have utilized fish as a food source. Historically and today, most fish protein has come by means of catching wild fish. However, aquaculture, or fish farming, which has been practiced since last many years in India, is becoming increasingly important in many nations (Shubin, 2009).

Overall, about one-sixth of the world's protein is estimated to be provided by fish. That proportion is considerably elevated in some developing nations and regions heavily dependent on the sea. In a similar manner, fish have been tied to trade. Catching fish for the purpose of food or sport is known as fishing, while the organized effort by humans to catch fish is called a fishery. Fisheries are a huge global business and provide income for millions of people. The annual yield from all fisheries worldwide is about 154 million tons, with popular species including herring, cod, anchovy, tuna, flounder, and salmon (Helfman, 2007).

This important biota of the nature is threatened by many factors like anthropogenic activities and environmental alternations. Overfishing is a major threat to edible fish such as cod and tuna. Overfishing eventually causes population collapse because the survivors cannot produce enough young to replace those removed. Such commercial extinction does not mean that the species is extinct; merely that it can no longer sustain a fishery (Mathew, 2022).

Hence in this concern, an attempt was made assess the present status of ichthyofauna of Saikheda Dams in Ghatanji region of Yavatmal District of Indian state Maharashtra.

### Materials And Methods

A study was conducted during February 2021 to January 2023 to assess ichthyofaunal diversity from Saikheda dams, Ghatanji region of Indian State Maharashtra. Saikheda Dam is an earthfill dam on Khuni river. Saikheda Dam was constructed as part of irrigation projects by Government of Maharashtra in the year 1972. Dam is located between 20.11°N 78.47°E. The height of the dam above lowest foundation is 23.77 m (78.0 ft) while the length is 1,740 m (5,710 ft). The volume content is 909 km<sup>3</sup> (218 cu mi) and gross storage capacity is 38,511.00 km<sup>3</sup> (9,239.28 cu mi). During monsoon reservoir gets enough water but in post monsoon period particularly March and April water level is very much reduced. The reservoir is surrounded by red laterite soil and black cotton soil. The inland reservoir is fed by seasonal drainage to its periphery and nearby local streams and springs (Yavatmal Gazetteer, 2022).

The climate of this district is characterized by a hot summer, well-distributed rainfall during the southwest monsoon season and generally dry weather during the rest of the year. The cold season is from December to February. This is followed by the hot season from March to May. The southwest monsoon season is from June to September while October and November constitute the post-monsoon season (Falling Rain Genomics 2021-2023).

The effective protocol was adopted. Fish specimens were collected personally as well with the help fisher man by using dragnets, cast-nets, gillnets etc. in the study period. The trapped fishes were handled carefully, immediately photographed, and immediately released into water stream. The fishes were identified with help of visible morphological characters. The morphometric characters were observed and identified with the help of standard keys and books of Talwar and

Jhingran (1991); Jayaram and Sanyal (2003); Jayaram (2010). Assuming that the fishing effort for a given type of net was constant, the relative abundance of the fish was grossly categorized into four categories, namely: abundant, common, moderate and rare (Joshi *et al.*, 2012).

### Results And Discussion

The study was conducted during February 2021 to January 2023 to assess the ichthyofaunal status of Saikheda dams. During study, total of 36 species

belonging to 06 orders (Cypriniformes Perciformes, Siluriformes, Synbranchiformes, Beloniformes and Osteoglossiformes) and 11 families were recorded. These families were Cyprinidae (21), Bagaridae (03), Ambassidae (02), Mastocembelidae (02), Cobitidae (01), Cichlidae (01), Gobiidae (01), Channidae (02), Siluridae (01), Belonidae (01) and Notopteridae (01), of these species; 08 were Abundant, 11 were Common, 04 were Frequent, 07 were Occasional while 07 were Rare.

**Table 4.2.1: Checklist of Ichthyofauna of Saikheda Dam**

A	<b>ORDER: CYPRINIFORMES</b>		<b>Common Name</b>	<b>Status</b>
I	<b>Family: Cyprinidae</b>			
	1.	<i>Amblypharyngodon mola</i> (Hemilton,1822)	Mopda	O
	2.	<i>Catla catla</i> (Hamilton-Buchanan,1822)	Catla	A
	3.	<i>Cirrhinus mrigala</i> (Hemilton,1822)	Lalpari	R
	4.	<i>Crossocheilus latius</i> (Hemilton,1822)	Borai	C
	5.	<i>Cyprinus carpio</i> (Linnaeus,1758)	Kaman	A
	6.	<i>Garra mullya</i> (Hemilton,1822)	Dende	C
	7.	<i>Hypothalmichthys molitrix</i> (Valenciennes,1844)	Chandera	C
	8.	<i>Labeo boga</i> (Hamilton- Buchanan,1822)	Tembti	C
	9.	<i>Labeo calbasu</i> (Hemilton,1822)	Karaunt	F
	10.	<i>Labeo pangusia</i> (Hemilton-Buchanan,1822)	Boharya	O
	11.	<i>Labeo rohita</i> (Hamilton-Buchanan,1822)	Rohu	A
	12.	<i>Osteobrama catio</i> (Silas,1952)	Kharpati	F
	13.	<i>Puntitus chola</i> (Hemilton-Buchanan,1822)	Tepri	O
	14.	<i>Puntitus dorsalis</i> (Jerdon, 1849)	Podshi	C
	15.	<i>Puntius sarana</i> (Hamilton, 1822)	Shikkar	C
	16.	<i>Puntius sophore</i> (Hemilton,1822)	Kharati	C
	17.	<i>Rasbora daniconius</i> (Hamilton-Buchanan, 1822)	Ajra	F
	18.	<i>Salmostoma bacaila</i> (Hamilton, 1822)	Chal	C
	19.	<i>Salmostoma horai</i> (Silas, 1951)	Udan	R
	20.	<i>Thyriichthys sandkhol</i> (Sykes,1838)	Sandkoli	O
	21.	<i>Tor khudree</i> (Sykes,1839)	Temri	F
II	<b>Family: Cobitidae</b>			
	22.	<i>Lepidocephalus thermalis</i> (Valenciennes,1846)	Girgos	R
B	<b>ORDER : PERCIFORMES</b>			
III	<b>Family: Ambassidae</b>			
	23.	<i>Parambassis ranga</i> (Hamilton, 1822)	Zanjra	C
	24.	<i>Chanda nama</i> (Hemilton-Buchanan, 1822)	Chandva	O
IV	<b>Family: Cichlidae</b>			
	25.	<i>Oreochromis mossambica</i> (Peters,1852)	Kombada	O
V	<b>Family: Gobiidae</b>			
	26.	<i>Glossogobinus giuris</i> (Hemilton-Buchanan,1822)	Dhangarya	R
VI	<b>Family: Channidae</b>			
	27.	<i>Channa punctatus</i> (Bloach, 1793)	Dokh	A
	28.	<i>Channa marulis</i> (Hemilton- Buchanan, 1822)	Marrel	A

<b>C</b>	<b>ORDER: SILURIFORMES</b>				
<b>VII</b>	<b>Family: Bagaridae</b>				
	29.	<i>Mystus cavasius</i> (Hamilton-Buchanan, 1822)	Katirna	C	
	30.	<i>Mystus montanus</i> (Jerdon, 1849)	Shingat	C	
	31.	<i>Sperata seenghala</i> (Sykes, 1841)	Singata	A	
<b>VIII</b>	<b>Family: Siluridae</b>				
	32.	<i>Ompak bimaculatus</i> (Bloch, 1797)	Patola	A	
<b>D</b>	<b>ORDER: SYNBRANCHIFORMES</b>				
<b>IX</b>	<b>Family: Mastacembelidae</b>				
	33.	<i>Macrognathus pancalus</i> (Hamilton, 1822)	Bam	O	
	34.	<i>Mastocembelus armatus</i> (Lacepede, 1800)	Wair	R	
<b>E</b>	<b>ORDER: BELONIFORMES</b>				
<b>X</b>	<b>Family: Belonidae</b>				
	35.	<i>Xenentodon cancila</i> (Hamilton-Buchanan, 1822)	Chatari	A	
<b>F</b>	<b>ORDER: OSTEOGLOSSIFORMES</b>				
	<b>Family: Notopteridae</b>				
<b>XI</b>	36.	<i>Notopterus notopterus</i> (Gunther, 1839)	Bhangad	R	

The maximum diversity was reported during late monsoon the winter. The least species were encountered during the months of summer to early monsoon. The catch success was high during winter and it was least during summer while moderate in the months of monsoon. The observed fish species composition was found to be rich in Saikheda Dams, and pattern is in well agreement with many of previous studies that mainly deals with fish diversity of aquatic ecosystem. These recent studies mainly included Chaudhary and Patil (2010), Joshi *et al.* (2012), Kharat *et al.* (2012), Paliwal *et al.* (2013), Jaybhaye and Lahane (2013), Kamble and Mudkhede (2013), Sheikh (2014), Pawara *et al.* (2014), Laxmappa *et al.* (2015), Ubarhande *et al.* (2016), Telkhade and Jambhule (2017) and Donde and Patil (2018) and name a few.

### Conclusion

The present study cleared that the Saikheda Dams accommodates the rich diversity of edible fishes. But this diversity can be affected by overfishing and other pollution causing anthropogenic activities. Though the water of these sites is not that much suitable for drinking purpose but can be used for drinking after proper processing/ filtration. But water of Saikheda Dams is suitable for irrigation and fish farming. It was also noticed that fish production plays an important role in the socio-economic life of study area. It is an important source of income and employment to millions of rural farmers. Hence it is necessary to adopt the better strategy for conservation of water body and fish diversity of Saikheda Dams in Ghatanji region of Yavatmal District of Indian state Maharashtra.

### References

- Chaudhary M. S., Patil Y. B., 2010. Diversity of Fish Fauna in River Tapi, Bhusawal Tahsil. *Int. Ref. Res. J.*, 1 (15): 73-74
- Donde S. S. and A. L. Patil (2018). Study of Fish Diversity in Vaitarna River of Wada Taluka of Palghar District in Maharashtra, India. *Int. J. Curr. Microbiol. App. Sci* (2018) 7(5): 201-206
- Falling Rain Genomics, 2015. Database of Yavatmal District Physiography and Climates. Redirected from [www.fallingrain.com](http://www.fallingrain.com)
- Helfman G. S., 2007. Fish Conservation: A Guide to Understanding and Restoring Global Aquatic Biodiversity and Fishery Resources. Island Press. Pp. 711.
- Jayaram K.C., 2010. *The fresh water fishes of the Indian Region*. Narendra Publishing House, Delhi: pp. 551
- Jayaram K., Sanyal A., 2003. A taxonomic revision of the fishes of the genus *Mystus scopoli* (Family: Begridae) *Records of the Zoological survey of India occasional paper no. 207*: 141-152
- Jayabhaye U., Lahane L., 2013. Studies on Ichthyofaunal Diversity of Pimpaldari tank Hingoli, Maharashtra, India. *Int. Ind. Ref. Res. J.*, 4(4): 54-55
- Joshi P. S., Tantarapale S. A., Tantarapale V. T., Kulkarni K. M., 2012. Ichthyological fauna of Buldhana District, Maharashtra (India). *O. Int. Intd. Res. J.* 2(2): 111-115
- Kamble A. T., Mudkhede L. M., 2013. Study of fish fauna and productivity of Loni reservoir, Tq. Kinwat (Maharashtra). *Int. J. Biomed. Adv. Res.*, 4 (3): 155-159

- Kharat S., Paingankar S., Dahanukumar N., 2012. Freshwater fish fauna of Krishna River at Wai, northern Western Ghats, India. *J. Threat. Taxa*, 4 (6): 2644-2652
- Laxmappa B., Bakshi R., Narayana D., 2015. Studies on ichthyofaunal diversity of Krishna River in Mahabubnagar district, Telangana, India. *Int. J. Fish. Aqua. Stud.*, 2(5): 99-104
- Mathew S. 2022. A Study on the Ichthyofauna diversity of Meenachil River, Thazhathangady Region, Kottayam, Kerala. *Int. J. Adv. Res. Biol. Sci.* 9(2): 42-51.
- Paliwal G. T., Bhandarkar S. V., Bhandarkar W. R., 2013. Ichthyofaunal Diversity, Fisheries And Its Conservation In Itiadoh Dam Reservoir District Gondia Maharashtra. *Int. J. of Life Sciences*, 1(4): 308-312
- Pawara R.H., Patel N. G., Patel Y. E., 2014. Review on Freshwater fish Diversity of Maharashtra (India) *J. Ent. Zool. Stud.*, 2 (5): 358-364
- Sheikh S. R., 2014. Studies on Ichthyofaunal diversity of Pranhita River, Sironcha, Dist: Gadchiroli, Maharashtra, India. *Int. J. Fish. Aqua. Stud.*, 1(5): 144-147
- Shubin N., 2009. Your inner fish: A journey into the 3.5 billion year history of the human body. Vintage Books Pp 354.
- Talwar P.K., Jhingran A. G., 1991. Inland fishes of India and adjacent countries, Vol. 1 and 2, Oxford and IBH Publisher, New Delhi. pp. 1-158
- Telkhade P.M. and S. H. Jambhule (2017). Fish Diversity Of Lohaha Lake, Lohara Dist-Chandrapur Maharashtra, India. *International Journal Of Researches In Biosciences, Agriculture and Technology*. 5 (1): 62-65
- Ubarhande S. B., Barote R.V., Adhale S.B., 2016. Ichthyofaunal diversity from Khadakpurns dam district Buldhana, Maharashtra, India. *Aquatic Studies*, 4 (3):362-366
- Yavatmal Gazetteer, 2022. Database of Yavatmal District redirected from official website of Yavatmal District (M.S.), India, [www.yavatmal.nic.in](http://www.yavatmal.nic.in).