PRELIMINARY INVESTIGATION OF ICTHYOFAUNAL DIVERSITY FROM WAGHADI RESERVIOR DIST.YAVATAMAL (M.S.) INDIA.

Vishal Gawande[1], Dr. AbhayPatki*[2], Ved Patki[3]

[1] Research student, Dept. of Zoology, S. P. M. Science and GilaniArt Commerce College Ghatanji Dist. Yavatmal, Maharashtra, India.
[2]Dept. of Zoology, S. P. M. Science and GilaniArt Commerce College Ghatanji Dist. Yavatmal, Maharashtra, India.
[3] Dept. of Zoology, Indira Mahavidyalaya, Kalamb, Maharashtra, India.

ABSTRACT

Because of anthropogenic activity, the fresh water ecosystem is constantly at risk. Fish samples were collected for the study from February 2021 to January 2022 over the course of a year. A total of 20 species from 10 distinct families were identified in the current study.

***Keywords:**: fish diversity, wetland ecosystem ,waghadi dam, yavatmal.*

15. Introduction

The Vidarbha region is abundant in natural resources, including forests, freshwater aquatic life, and a remarkable variety of ichthyofaunal species. Fish diversity enhances the stability of the aquatic ecosystem in the region of concern, however anthropogenic activities have an impact on both the aquatic and terrestrial habitat's floral and animal diversity.

A good bioindicator of water quality is fish variety (Madhusudan et al., 2011; Patole, 2014). Due to constant anthropogenic stress, fish diversity is progressively reducing every day. This diversity not only adds to the species richness of our planet but when declined also has some deleterious repercussions on fisheries (Sakhare, 2001)

Numerous researchers have examined the taxonomy and ichthyofaunal variety of Maharashtra and other states of the nation for the past 200 years. The ichthyofaunal diversity of the HarsoolSavangi dam in the Maharashtra region of Aurangabad was examined by Shinde et al. in 2009. Ubharhande and Sonawane (2012) studied the freshwater fish flora at Paintakli Dam in Maharashtra's Buldhana district.

"Waghadi,D -01427" is the Waghadi Project and Dam's official designation. The Maharashtra government built the Waghadi Dam as part of irrigation initiatives in 1978. The closest city to the dam is Ghatanji in Maharashtra's Yavatmal District. It is built on and impounds the Waghadi River. The dam is a gravity earthfill dam. The dam measures 960 metres in length and 26 metres in height above its lowest base. The project has a spillway, which is 170 metres long. The Dam's catchment area is 23.84 thousand hectors, and the spillway is ungated. 41.11 MCM is the maximum/gross storage capacity. The amount of live storage is 35.36 MCM.

The primary icthyofaunal diversity of Yavatmal'swaghadi reservoir is the objective of the current study.

16. Material and Methods

With the assistance of local fishermen during various seasons, fish were caught from various locations of the Waghadi reservoir. Specimens were brought and preserved in a 10% formalin solution in the laboratory. Fishesh was identified with the aid of neighbourhood fishermen and established texts like Talwar PK and Jhingran A (1991), Jayaram K.C. and Sanyal A (2003).

17. Result and Discussion

In the current study, 20 fish species from 8 different orders divided into 10 different families were identified. The fish species recorded are shown in the table 1 below,

Table 1 - Ichthyofaunal diversity of Waghadi dam (During Feb 2021 to Jan 2022)

S.NO.	ORDER	FAMILY	SPECIES	Local Name
1	Mastocembeliformes	Mastocembelidae	*Macrognathuspancalus*	Bam
2	Cypriniformes	Cyprinidae	*Catlacatla* *Labiorohita* *Labioboga* *Labiobata* *Labiopangsia* *Cirrhinusmrigala* *Puntitusdorsalis* *Puntituschola*	Catla Rohu Chankora Navari Boharya mrigal podshi Tepri
3	Perciformes	Cichlidae	*Tilapia mossambica*	Talapia
		Gobidae	*Glossogobinusgiuris*	Dhangarya
4	Osteoglossiformes	Notopteridae	*Notopterusnotopterus*	Bhangad
5	Synbranchiformes	Channidae	*Channamarulis* *Channanama* *Channastriatus*	Dhokh Chandva Malar
6	Anguilliformes	Anguillidae	*Anguilla bengalensisbengalensis*	Wire
7	Atheriniformes	Belonidae	*Xenentodoncancila*	Chatarya
8	Siluriformes	Siluridae	*Ompakbimaculatus* *Mystuscavasius*	Patola Katarna
		Claridae	*Clariusbatracus*	mangur

Joshi et al.recorded 20 species belonging to 7 families from Purna River at Buldhana district. Sakhare (2001) reported 23 species belonging to 07 orders where Cyprinidae family is dominant with 11 species from Jawalgaon reservoir, Solapur District Maharashtra. This study have similar findings to the above investigations.

Ichthyodiversity from the Malangaon water reservoir containing 17 species of 15 different genera, 07 families and 05 orders were recorded. Khodake, S. P. and Petare, R. K (2020) However, In the present study fishes from total 8 orders are recorded, which shows greater diversity than the earlier investigatinssignifying better less anthropogenic activities in the dam.

18. Conclusion

Extensive investigation about icthyfaunal diversity needs to be done during various seasons to ascertain real time heath of the water reservoir and also to study the extent of anthropogenic disturbances to the water body.

References

1. Bobdey, A. D. (2014) "Icthyodiversity and conservation aspects in a Lake and River ecosystems in Bhandara District of Maharashtra, India: A comprehensive study of surface water bodies." Interdisciplinary Research Journal 4.2: 103-112.
2. Jayaram K.C. and Sanyal A. (2003): A taxonomic revision of he fishes of the genus Mystusscopoli (Family: Begridae) Records of the Zoological survey of India occasional paper no. 207 ZSI Culcatta pp. 141.
3. .Patole, S. S. Ichthyofunal diversity of Nandurbar district (Northwest Khandesh region) of Maharashtra (India). Int.J. Fisheries and Aqua. studies. 2(2):167-172 (2014).
4. .Madhusudan, V., Amrutsagar, V. and Lohar, P. S. Diversity of Mollusca and Fish in Gondoor and Nakane Lakes in Dhulia, Northwest Maharashtra, India. J. Ecobiotechnol, 3(6): 16-2 (2011)
5. Sakhare, V. B. Ichthyofauna of Jawalgaon reservoir in Solapur district of Maharashtra. J. Aqua Biol., 16(1 and 2): 31-33 (2001)
6. Joshi, P. S., S. A. Tantarpale, V. T. Tantarpale, K. M. Kulkarni (2012). Ichthyological Fauna of Buldhana District, Maharashtra (India). Online International Interdisciplinary Research Journal, 2 (2): 111-115.
7. 19.Shinde, S.E., Paithane, R. Y., Bhandare, A. And Sonawane, D. L. Ichthyofaunal diversity of HarsoolSavangi dam, district Aurangabad (M.S.), India. Wrold J. Fish Mar. Sci., 1(3):141-143 (2009).
8. Khodake S.P., P. Borale R and Petare, R.K. (2014). Ichthyofaunal diversity in Jamkhedi reservoir in Dhule district of Maharashtra, India, j. Environ. Res. Develop. 9(1), 177-183.
9. Khodake, S. P. and Petare, R. K (2020). ICHTHYODIVERSITY IN MALANGAON WATER RESERVOIR IN KHANDESH REGION OF MAHARASHTRA, INDIA, Volume 8, Issue 4 April 2020 | ISSN: 2320-2882
10. Niraj K. 2012."Study of Ichthyofaunal biodiversity of Turkaulia Lake, East-Champaran, Bihar, India." Biol. Sci. Vol. 1. No. 1.
11. Pandarkar A.K, Pawar B.A. and Shendge A.N. (2014). Ichthyofaunal studies of Visapur reservoir in relation to fish culture, Ahmednagar district, Maharashtra . Flora and fauna. 20 (2), 247-250.
12. Pawar, B. A. (2009) "Studies on water quality and fish diversity of Sadatpurlake in Ahmednagar district Maharashtra." Journal of the Indian Fisheries Association 36: 93-100.
13. Rankhamb, S. V. (2011). Ichthyofaunal Diversity of Godavari River at MudgalTq. Pathri, Dist. Parbhani. Recent Research in Science and Technology, 3(12): 11-13.
14. Sakhare, V. B. (2001). Ichthyofauna of Jawalgoan reservoir. Maharastra, Fishing Chimes, 19 (8): 45-47.
15. Shivakumar R et al. (2018) ichthyofaunan diversity and species richness of lower anicut reservoir Tamilnadu recommendations and conservation action Int J Zoo Animal Biol 1(2): 000111.
16. Talwar PK and Jhingran AG (1991a) Inland fishes of India and adjacent countries, volume 1. Oxford & IBH Publishing Co Pvt Ltd, New Delhi-Calcutta. 542 pp.
17. Ubharhande S. B. and Sonawane S. R. (2012). Study of freshwater fish fauna and water quality at Paintakali dam from Bulhana district, M.S., India, J. Exp. Sci., 3 (7), 4-8.
18. Waware S. K. and Kamdi R.R. (2018) " Fish biodiversity of saikheda dam wetland area of lingti village in kelapurtaluka ." IJRBAT issu 7 vol 1 17-22