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Ichthyofaunal Diversity of Vishnupuri Dam in Nanded, Maharashtra (India)

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Abstract

The Vishnupuri Dam, situated at Asarjan village near Nanded, boasts the distinction of being one of Asia's largest lift irrigation projects. Surrounded by breathtaking scenery, including lush green landscapes, picturesque ghats, and the majestic Ratneshwar hills, this destination offers a treat for nature lovers and spiritual seekers alike. In the present study, a total of 18 fish species belonging to 4 orders and 7 families were recorded from Vishnupuri Dam. Vishnupuri dam is situated at latitude of 19.46676° N and a longitude of 76.52692° E. The Vishnupuri Dam, built on the Godavari River in Nanded, is one of the most important lift irrigation projects in the Marathwada region. The Godavari is the most important river in the Marathwada region. (Pawar 2017).

The concept of this project was conceived by the former Chief Minister of Maharashtra, Late Dr. Shankarrao Chavan, and in his commemoration, the Government of Maharashtra named the reservoir "Shankar Sagar Jalashay". (Sakhare 2015).

The Vishnupuri project provides benefits to the Nanded, Loha, and Kandhar tehsils of Nanded district. The backwater of the Godavari River stretches over 40 kilometers. The culturable command area of the Vishnupuri Dam spans 23,222 hectares.

Keywords: Lift Irrigation, commemoration, Gill net, Drag net, literature, Prompting, Abundant

Introduction

The Vishnupuri Dam, situated at Asarjan village near Nanded, boasts the distinction of being one of Asia's largest lift irrigation projects. Surrounded by breathtaking scenery, including lush green landscapes, picturesque ghats, and the majestic Ratneshwar hills, this destination offers a treat for nature lovers and spiritual seekers alike. The revered Kaleshwar temple draws pilgrims and tourists, while the site comes alive with festivities during Mahashivratri, attracting large crowds. Vishnupuri dam is situated at latitude of 19.46676° N and a longitude of 76.52692° E. The Vishnupuri Dam, built on the Godavari River in Nanded, is one of the most important lift irrigation projects in the Marathwada region. The Godavari is the most important river in the Marathwada region. (Pawar 2017)

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The Vishnupuri project provides benefits to the Nanded, Loha, and Kandhar tehsils of Nanded district. The backwater of the Godavari River stretches over 40 kilometers. The culturable command area of the Vishnupuri Dam spans 23,222 hectares. The reservoir has an irrigable command area of 19,514 hectares. The Vishnupuri Dam has a live storage capacity of 80.79 million cubic meters. Of this, 43.95 million cubic meters is allocated exclusively for the drinking water needs of Nanded city, while 10.26 million cubic meters is reserved for various commercial and industrial purposes. The barrage of this project has 18 vertical gates.

Morphometry of Vishnupuri Dam

Name of the Project	Vishnupuri Dam
Location	Latitude : 19.46676° N Longitude: 76.52692° E
Basin	Godavari
Name of the River	Godavari
Type	Diversion, Lift
Year of completion	1988
Type of Dam	Major irrigation
Command Area	23,222 hectares
Storage capacity	80.79 million cubic meters

Fish diversity of Vishnupuri dam

SN	Scientific Name	Order	Family	Fine food	Commercial	Status
1	<i>Notopterus notopterus</i>	Osteoglossiformes	Notopteridae	Y	Y	A
2	<i>Notopterus chitala</i>	--/--	--/--	Y	Y	A
3	<i>Catla catla</i>	Cypriniformes	Cyprinidae	Y	Y	A
4	<i>Cirrhinus mrigala</i>	--/--	--/--	Y	Y	A
5	<i>Labeo rohita</i>	--/--	--/--	Y	Y	A
6	<i>Labeo bata</i>	--/--	--/--	Y	Y	A
7	<i>Labeo calbusa</i>	--/--	--/--	Y	Y	A
8	<i>Puntius ticto</i>	--/--	--/--	-	-	-
9	<i>Puntius sarna sarna</i>	--/--	--/--	-	-	-
10	<i>Chela phulo</i>	--/--	--/--	-	-	-
11	<i>Mystus seenghala</i>	Siluriformes	Bagridae	-	Y	A
12	<i>Wallago attu</i>	--/--	Siluridae	-	Y	A
13	<i>Claris batracus</i>	--/--	Claridae	Y	Y	A
14	<i>Channa marulius</i>	--/--	Channidae	Y	Y	A
15	<i>Channa gacchu</i>	--/--	--/--	Y	Y	A
16	<i>Channa striatus</i>	--/--	--/--	-	Y	A
17	<i>Channa punctatus</i>	--/--	--/--	-	Y	A
18	<i>Mastacembelus armalus</i>	Mastacembeliformes	Mestacembelidae	Y	Y	A

Materials and Methods:

The present investigation was carried out to identify various fish species in Vishnupuri Dam over two consecutive periods: June 2022 to May 2023 and June 2023 to May 2024. Fish samples were collected with the assistance of local fishermen and tribal using Gill net, cast net or drag net of mesh size about 2 mm. The identification of fish species was carried out using standard methods and literature, specifically referencing Talwar and Jhingran (1991) and Jayaraman (1981). Collected samples were preserved in 5% Formaline and brought to the laboratory for further investigation.

Results and Discussion:

In the present study, a total of 18 fish species belonging to 4 orders and 7 families were recorded from Vishnupuri Dam. The species identified include: *Catla catla* (Hamilton), *Labeo rohita* (Hamilton), *Labeo bata*, *Labeo calbasu* (Hamilton), *Cirrhinus mrigala* (Hamilton), *Puntius ticto*, *Puntius sarana* (Hamilton), *Chela phulo* (Hamilton), *Notopterus notopterus* (Pallas), *Notopterus chitala* (Hamilton), *Mystus seenghala* (Sykes), *Wallago attu* (Schneider), *Clarias batrachus* (Linnaeus), *Channa marulius* (Hamilton), *Channa punctatus* (Bloch), *Channa gachua*, *Channa striatus*, *Mastacembelus armatus* (Lacepede).

During the investigation, family Cyprinidae belongs to 8 species, family Channidae 4 species and family Notopteridae with 2 species followed by one species in Bagridae, Siluridae, Claridae and Mastacembelidae respectively. India, with its rich array of freshwater bodies, has made ichthyology a significant subject of study for over a century

Discussion:

Freshwater fisheries play a vital role in the Indian economy, prompting numerous research studies on fish and fisheries. For instance, Laxmappa and Bakshi (2016) conducted a study on the inland waters of Telangana State, documenting 165 fish species and discovering several new varieties. Notably, their findings revealed that 58% of the recorded species belonged to the family Cyprinidae, while 22% represented other groups.

Mahender et al. (2016) conducted a study on the Ichthyofauna of Chenugonipally Peddacheruvu Tank in Mehbubnagar district of Telangana. Their research revealed a total of 24 fish species, belonging to 4 orders and 18 genera. Analysis of species richness showed that Cypriniformes was the most abundant order, with 10 species, followed by Perciformes 8 species and Siluriformes 5 species.

Naik et al. (2013) conducted a study on the fish diversity of the Tunga River in Karnataka, recording 37 freshwater fish species. These species were classified into 4 different orders, with Cypriniformes being the most dominant, comprising 23 species. The other orders included Siluriformes 11 species, Perciformes 2 species, and Symbranchiformes 1 species.

Shinde (2018) documented 10 fish species belonging to 5 orders, 7 families, and 10 genera during the study period. The ichthyofauna of Katepura Reservoir revealed a dominance of the order Siluriformes, with 4 species, followed by Cypriniformes 3 species, Perciformes 2 species and Symbranchiformes 1 species.

Conclusion:

In The Present Investigation Total 18 fish Species were observed among Then family Cyprinidae belongs to 8 species, family Channidae 4 species and family Notopteridae with 2 species followed by one species in Bagridae,

Siluridae, Claridae and Mestacembelidae respectively

Jawale et al. (2017) conducted an analysis of the freshwater fish fauna in Osmanabad district, documenting a total of 26 fish species, representing 12 families and 6 orders.

Baraskar (2024) documented 21 fish species from the Murambi Reservoir in Beed district. The order Cypriniformes was found to be dominant, comprising 10 species, followed by Perciformes 5 species, Siluriformes 3 species, Osteoglossiformes 2 species, Cyprinodontiformes 1 species.

Pawar (2018) conducted a study on ecological and predatory fish species in Limboti Dam, Nanded, and reported the presence of 14 species belonging to various orders.

Shillewar and Totawar (2017) documented 21 fish species, belonging to 4 orders, 12 genera, and 6 families. The order Cypriniformes was dominant, comprising 11 species, followed by Siluriformes and Channaliformes 4 species each, and Culpieformes 2 species.

Kadam et al. (2022) conducted a study on Vishnupuri Dam and recorded 16 fish species. The family Cyprinidae was found to be dominant, with 8 species, followed by Claridae and Channidae, each with 3 species. The family Notopteridae was represented by 2 species.

Tamloorkar et al. (2020) investigated the fish diversity of the Godavari River under hot climate conditions, documenting 24 fish species, representing 12 families and 7 orders.

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Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

References:

1. Sakhare V.B. 2015. Fish and Fisheries of Indian Reservoirs. Daya Publishing House, A Division of Astral International (P) Limited, New Delhi.
2. Laxmppa, B. and Ravinder Rao Bakshi, 2016. A Checklist of Fishes of Telangana State, India. International Journal of Fisheries and Aquatic Studies. 4 (4):35-42.
3. Mahender, J., B. Laxmppa, T. Jagadeeswara; A.V. Rajshekhar, 2016. Study on Ichthyofauna of Chenugonipally Peddachuruvu Tank in Mehbubnagar District, Telangana, India. Int. Jur. of Fisheries and Aquatic Studies: 4(1):101-106.
4. Kumar Nail., A.S., Jitendra Kumar: V. Mahesh: S. Benakappa, 2013. Assessment of Fish Diversity of Tunga River, Karnataka, India. Nat. Sci.: 11(2):82-87.
5. Shinde A.H., 2018. Freshwater Fish fauna of Katepura Reservoir, District Akola, Maharashtra, India. International Journal of Life Sciences. 6(4):1053-1061.
6. Jawale, C.A., Rajput K.H. and Ugale B.I., 2017. Existence of Freshwater Fish Faunal Diversity in Osmanabad District (MS). India. International Journal of Life Sciences. 5(4):644-648.
7. Baraskar, A.G., 2024. Ichthyofaunal Diversity of Murambi Reservoir of Beed District, Maharashtra. International Journal of Scientific Research in Science and Technology. Vol.11(10):PP 95-97.
8. Pawar, S.K., 2018. Ichthyofaunal Diversity of Fisheries in Gangadharam Dam, Nanded District, India. Int. Jur of Sci. Engg. Vol.6 (6): PP 251-254.
9. Tamloorkar, H.L., Rajkumar K., Chandrashekhar P. and Bhaskar, A., 2020. Species of Fishes which Survive in the Hot Climate Conditions of Godavari River Maharashtra region, District Nanded, Maharashtra, India. Int. Res. Jur. Of Sci. and Engg. A10. PP 114-118.
10. Pawar, S.K., 2017. Water Quality Assessment of Vishnupuri Dam in Nanded District, Maharashtra, India. International Journal of Life Sciences. Vol.5 (4): 758-761.
11. Shillewar, K.S. and Totawar, D.V., 2017. Freshwater Fish Fauna of Vishnupuri Dam in Nanded, Maharashtra, India. International Journal of Life Sciences. Vol. 5(2): 283-285.
12. Talwar, P.K. and Jhingran, A.G., 1991. Inland Fishes of India and Adjacent Countries. Vols.
13. 1&2. Oxford and IBH Publishing Co. Pvt., New Delhi.
14. Jayraman, K.C., 1988. The Fresh water Fishes of India, Pakistan, Bangladesh, Burma and Srilanka. Handbook of Zoological Survey of India, 1981. No.2. Xii + 475 pp.