

Ichthyofaunal Diversity of Wainganga river near AA Energy plant Desaiganj (Wadsa), Dist - Gadchiroli, Maharashtra (India).

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Manuscript Details

Available online on <http://www.irjse.in>
ISSN: 2322-0015

Cite this article as:

Kamble SM and Indurkar US. Ichthyofaunal Diversity of Wainganga river near AA Energy plant Desaiganj (Wadsa), Dist - Gadchiroli, Maharashtra (India)., *Int. Res. Journal of Science & Engineering*, February 2020, Special Issue A7 : 402-406.

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ABSTRACT

Ichthyofaunal diversity of Wainganga river bank, near AA Energy plant Desaiganj (Wadsa), Dist - Gadchiroli, Maharashtra (India) was conducted to assess the biodiversity of fishes. The research exposes the ichthyofauna in the particular ecosystem which hardly studied about little known fish variety. The present study deals with the ichthyofaunal diversity of proposed site during the year 2017-2019. In this part of present study 16 species of fishes belonging to 4 orders and 8 families were observed.

Keywords: Wainganga river, Ichthyofaunal diversity, AA Energy plant, Wadsa.

INTRODUCTION

Wainganga is a river in India, It originate in the Mahadeo Hills in Mundara near village Gopalganj in Seoni Madhya Pradesh. It is a tributary of the Godavari River. The river flows south through the states of Madhya Pradesh and Maharashtra, roughly 579 km. This river known by the Pranahita River, after joining the Wardha River, the united stream, which empties into the Godavari River at Kaleshwaram (Telangana). Balaghat and Bhandara are the major cities located on the bank of the Wainganga River, whereas Pauni and Desaiganj are smaller urban centers on the river banks. The Wainganga River is the water lifeline of these cities and principal source of water .

Biodiversity is the short form of biological diversity. It is considered as an umbrella term referring to organisms found within the living world, i.e. the number, variety, and variability of living organisms[1]. Biodiversity is the variety and variability of life on Earth. Biodiversity is a measure of variation at the genetic, species, and ecosystem level. The fish diversity is a good indicator of health of aquatic ecosystem. A good biodiversity represents the well-adjusted ecosystem. Fishes are very important to maintain aquatic ecosystem. They also indicate quality of water. Fishes are catch out for the purpose of food and nutrition. Fish diet provides rich amount of proteins, fats, vitamins and other nutrients. Fishes has nutritive and medicinal value and It helps to maintain health of people.

Database of ICAR National Bureau of Fish Genetic Resources (NBFGR) contains 2,868 indigenous species of which 877 species are found in freshwaters, 113 in brackish water and 1,878 in marine water, which belong to 39 orders, 225 families and 852 genera [2].

The research work is carried out on wainganga river Near AA Energy plant, Desaiganj (Wadsa), Gadchiroli, (MH), India, While studying the ichthyofaunal diversity of this region some species of fishes were found in this region which are commercially important. Present study is undertaken to study fresh water bio diversity of proposed site.

STUDY AREA

The proposed study site of Wainganga River is situated near AA Energy plant, Desaiganj (Wadsa), Dist- Gadchiroli, Maharashtra (India). This site is located between range 20°37'12"N 79°56'29"E to 20°36'02"N 79°56'32"E.

METHODOLOGY

Fishes were collected from proposed site with the help of local fishermen and using fish nets and by using other local techniques (i.e. by using pots and other utensils, etc). Photographs of fishes are taken using good quality camera and then Species identification and confirmation were carrying out with the help of

standard keys and books literature of Day[3], Jayaram[4] and Talwar and Jhingran[5].

OBSERVATIONS

In the present investigation, 16 species of fishes belonging to 4 orders and 8 families were observed. Out of 6 species from order Cypriniformes, 6 different species from Siluriforms, 3 species from Anabantiformes and 1 species from Perciformes order were observed. Family from Cyprinidae were dominant over Channidae and Bagridae followed by other four family.

RESULTS AND DISCUSSION

During the present investigation different fish varieties are observed in the site of Wainganga river situated near AA Energy plant, Desaiganj (Wadsa), Dist- Gadchiroli. It shows the ichthyofaunal bio diversity in that region. 16 species of fishes belonging to 4 orders and 8 families were observed. 6 species from order Cypriniformes 6 different species from Siluriforms, 3 species from Anabantiformes and 1 species from Perciformes order were studied. Indurkar, and Pathan [6], Studied on ichthyofauna and found Out of 6 orders the Cypriniformes was observed dominant with 7 different species followed by Siluriforms with 3 different species. Waware and Kamdi[7] studied the same. They found the order Cypriniformes was found to be dominant among fishes. Total 9 species of fishes were observed belonging to or Cypriniformes and family Cyprinidae. The second largest order observed at Nawargaon Lake was Siluriformes. Perciformes, two species belonging to Ophiocephaliformes and one species belonging to Osteoglossiforme.. Gadekar[8] studied the members of order Cypriniformes were dominated by with 22 species followed by Siluriformes with 10 species, Ophiocephaliformes with 6 species, Synbranchiformes with 5 species, Perciformes with 3 species, Cyprinodontiformes and Clupeiformes with 2 species and Anguilliformes with 1 species. 8 orders representing by 51 fish species, order Cypriniformes was dominant group with 22 species.

Table 1: Ichthyofaunal Diversity of Wainganga River zone, near AA Energy plant, Desaiganj (Wadsa)

Sr. No.	Scineticfic name	Order	Family
1	<i>Anabas testudineus</i>	Perciformes	Anabantidae
2	<i>Catla catla</i>	Cypriniformes	Cyprinidae
3	<i>Chhana punctate</i>	<u>Anabantiformes</u>	<u>Channidae</u>
4	<i>Chhana striata</i>	<u>Anabantiformes</u>	Channidae
5	<i>Cirrhinus cirrhosis</i>	<u>Cypriniformes</u>	<u>Cyprinidae</u>
6	<i>Heteropneustes fossilis</i>	<u>Siluriformes</u>	<u>Heteropneustidae</u>
7	<i>Labeo rohita</i>	Cypriniformes,	Cyprinidae
8	<i>Lepidocephalichthys gaunea</i>	Cypriniformes	Cobitidae
9	<i>Mystus cavassius</i>	Siluriformes	Bagridae
10	<i>Mystus tengara</i>	<u>Siluriformes</u>	<u>Bagridae</u>
11	<i>Mystus vittatus</i>	<u>Siluriformes</u>	<u>Bagridae</u>
12	<i>Ophiocephalus punctatus</i>	<u>Anabantiformes</u>	<u>Channidae</u>
13	<i>Pangasius pangasius</i>	<u>Siluriformes</u>	<u>Pangasiidae</u>
14	<i>Puntius brevis</i>	<u>Cypriniformes</u>	<u>Cyprinidae</u>
15	<i>Puntiuss ophore</i>	Cypriniformes	Cyprinidae
16	<i>Wallago attu</i>	<u>Siluriformes</u>	<u>Siluridae</u>

Family wise distribution - 5 different species from Cyprinidae family, 3 different species from Bagridae family, 3 species from Channidae family, 1 species each from family Cobitidae, Anabantidae, Heteropneustidae, Siluridae, and Pangasiidae. Solanki *et al* [9] studied the same family Cyprinidae was dominant (12 species), followed by Ophiocephalidae (4 species) and Siluridae (3 species). Indurkar and Pathan [6] gives Family wise distribution showed dominance of Cyprinidae with 6 species followed by Channidae with 02, Cobitidae, Bagridae, Pangasiidae, Mastacembelidae, Notopteridae and Cichlidae with 1 species. Among the different species Labeo and Catla were observed dominant in Order Cypriniformes and least appearance Siluriformes species in his research.

Many researchers have studied on ichthyofaunal diversity from different fresh water bodies of India among them some are discussed. Gadekar [10] recorded 51 species of 31 different genera 15 families and 8 orders were from the Wainganga river during January 2012-December 2013. Solanki *et al* [9] studied Ichthyofauna Of Wainganga River at Balaghat, Madhya Pradesh, On the basis of percentage

composition and species richness, family Cyprinidae was dominant (12 species), followed by Ophiocephalidae (4 species) and Siluridae (3 species). Gedekar and Tijare[8] studied the fish diversity of Wainganga River at Markandadeo and revealed that 49 species of 33 different genera, 15 families and 7 orders were recorded. Rathod and Shinde [11] studied the diversity of ichthyofaunal of Wainganga River at Pauni, it revealed that 41 species of 28 different genera 15 families and 5 orders. The members of Order Cypriniformes were dominated by 17 species followed by Perciformes 7 species followed by Siluriformes with 4 species followed by Synbranchiformes two species and Beloniformes one species. Sheikh [12]studied Ichthyofaunal diversity of Pranhita River, Sironcha, Dist: Gadchiroli, Maharashtra, India , During this study of 37 species of primary freshwater fishes belonging to 08 orders 11 families and 21 genera recorded from the pranhita river at sironcha and number of catches carried out during June 2011 to July 2013. Nikam, *et al* [13], combinely studied Ichthyofaunal Diversity of Ashti Lake, Tal. Mohol, Dist. Solapur (M.S.), During present investigation 23 species of fishes belonging to 5 orders and 12 families were identified. Khobragade [14], studied

Ichthyofaunal diversity at the confluence of Pravara and Godavari Rivers (M.S.) India, in this study they revealed the occurrence of 21 fish species belonging to 6 orders. The order Cypriniformes was dominant with 10 fish species followed by order Perciformes with 5 species, order Beloniformes and Synbranchiformes with 2 species each; and Siluriformes and Osteoglossiformes, with 1 species each. Heda [15], studied Fish diversity studies of two rivers of the northeastern Godavari basin, combining study of both river number of species ranges from 47 to 56. The difference in number of species is may consider due to anthropogenic factors that include pollution and damming. Sivakumar *et al.*[16], studied Ichthyofaunal Diversity and Species Richness of Lower Anicut Reservoir, Tamil Nadu, India: Recommendations and Conservation Action. This study result shows 79 species under 11 orders and 21 families were recorded from Kollidam River, Lower Anicut during the study period. Bera, *et al* [17], studied Ichthyofaunal Diversity and Water Quality in the Kangsabati Reservoir, West Bengal, India, Among this study of ichthyofaunal diversity previously conducted for this region in large aquatic bodies like the Kangsabati Reservoir, reported the occurrence of 26 fish species belonging to 5 orders, 7 families, and 15 genera in Godavari river at Mudgal. Tijare and Shastrakar[18], studied an inventory of ichthyofaunal diversity which consists of 32 species from 24 different genera and 12 families belonging to 7 orders.

CONCLUSION

This fishes are commonly caught by fisherman and local peoples and use for eating habits and for commercial purpose. It helps to improve their economy. These all collected fishes are having economic importance and sold after collection in the local fish market. It is suggested that the fishery authorities should investigate and practice the proper management of fishery resources according to the ecological principle. The fisherman's should make aware about fishing and scientific training methods which may help in high yield of fish production in the Wainganga river bank region upstream and downstream situated near AA Energy plant, Desaignanj (Wadsa), Dist- Gadchiroli.

Acknowledgement: The authors are thankful to the principal, Head of the department and laboratory assistant of Zoology department, N. H. College, Bramhapuri, Dist. - Chandrapur (M.S) India for providing laboratory and library facilities and for identification of specimen.

Conflicts of interest: The authors stated that no conflicts of interest.

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