

Study of diversity of edible fish species in Vena river, Hinganghat (MS)

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Abstract

Hinganghat is one of the developing cities in the Wardha District. The city's Vena River encircles the area on two sides. Fish are the most recognized types of aquatic creatures and are the sole food source obtained from wild populations. Fish are among the most significant vertebrate groups for humans, having a variety of effects on his existence. Millions of people suffer from malnutrition and hunger, and fishes are an excellent source of nutrition that can help us conquer our nutritional challenges. Fish act as superb recycles of the nutrients. Fishes are very important from biodiversity point of view.

Therefore, the current research aims of the study of diversity of edible fish species in Vena river, Hinganghat. Fishes were collected from local fisherman by fishing nets during morning period. Collected fish were preserved in 4% formalin. And then did of observation of that fishes. During the present study, total 18 fish species belonging to 15 genera and 11 families were collected and identified in this site.

(Keywords: Diversity, Fishes, River.)

Introduction

Hinganghat is one of the developing cities in the Wardha District. The average elevation of the city of Hinganghat is modest, at 215 (705ft) above sea level. The city's Vena River encircles the area on two sides.[1]

A tributary of the Wardha River, the Hinganghat River is also known as the "Vena River," and it joins the Pranhita River, which eventually empties into the Godavari River. Prior to independence, Hinganghat was in the centre of India; however, following the division of India and Pakistan, Nagpur is now referred to as the center of India.[2]

Fish are the most recognized types of aquatic creatures and are the sole food source obtained from wild populations.[3] They are distributed in wide range of aquatic ecosystems. All fishes belong to kingdom Animalia, Phylum Chordata and class Pisces. Fish are among the most significant vertebrate groups for humans, having a variety of effects on his existence. Millions of people suffer from malnutrition and hunger, and fishes are an excellent source of nutrition that can help us conquer our nutritional challenges.

Fishes make significant contributions to their ecosystem by providing essential nutrients that sustain the entire system. Fish act as superb recycles of the nutrients. Fishes are very important from biodiversity point of view. Therefore, the major research aim of the current study is to check the variety of edible fish species resides in it

Materials and Methods

Monthly collections of fish were made from the site with the help of local fisherman by fishing nets during the period from June 2023-August 2024. The collected fishes were preserved in 4% formalin and brought to the laboratory for identification. A field kit containing scale, measuring tape, rope, buckets, preservatives, trays, thermometer etc., was regularly used. Monthly survey of fishes was carried out during early morning. Fish were collected from the sampling sites between 5.00 and 9.00 am. The collected samples from four different points of each site.

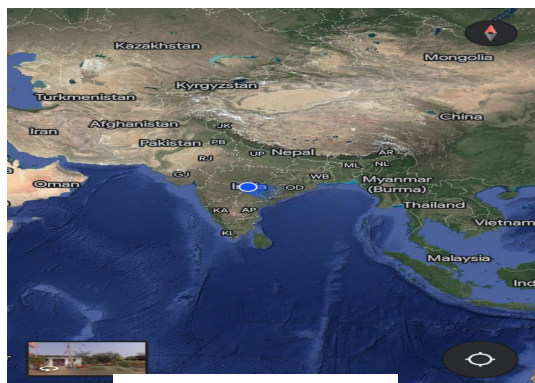


Fig.1 Showing map

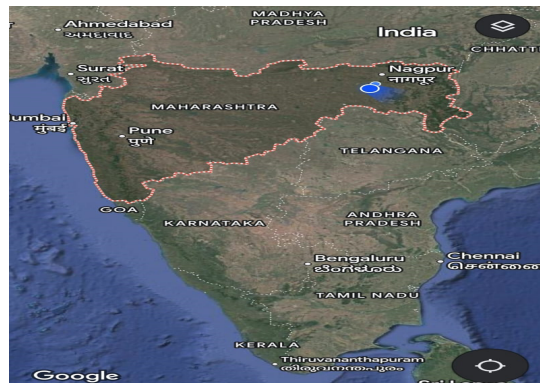


Fig 2 Showing map of

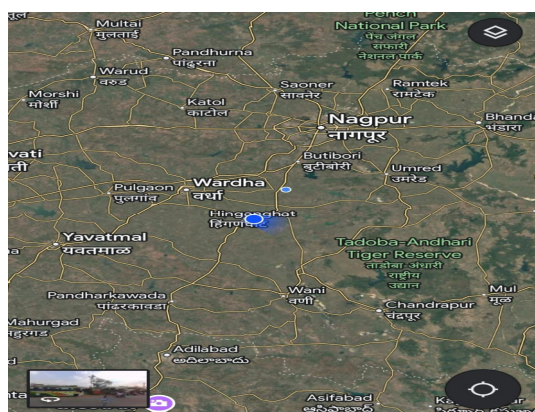


Fig.3 Showing map of

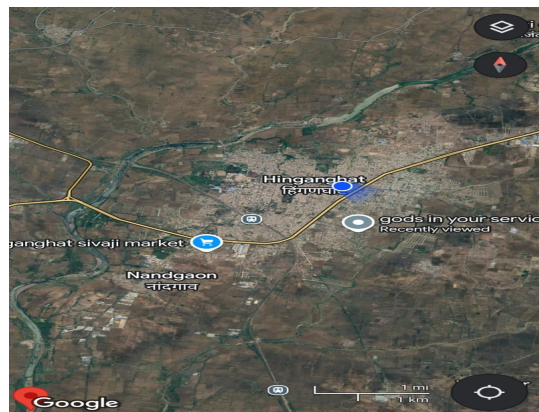


Fig.4 Showing map of Vena
river in Hinganghat



Fig 5. Showing map of four study site of
Vena river

Result and Discussion

Sr. No.	Class	Order	Family	Genus and Species	Local name
1	Actinopterygii	Cypriniformes	Cyprinidae	<i>Rosboradaniconius</i>	Kaneri
2	Actinopterygii	Cypriniformes	Cyprinidae	<i>Labeofimbriatus</i>	Tamb
3	Actinopterygii	Cypriniformes	Cyprinidae	<i>Labeorohita</i>	Rohu
4	Actinopterygii	Cypriniformes	Cyprinidae	<i>Puntius sarana</i>	Podshi
5	Actinopterygii	Cypriniformes	Cyprinidae	<i>Labeobata</i>	Banta
6	Actinopterygii	Cypriniformes	Cyprinidae	<i>Catlacatla</i>	Catla
7	Actinopterygii	Osteoglossiformes	Notopteridae	<i>Notopterusnotopterus</i>	Patoli
8	Actinopterygii	Siluriformes	Clariidae	<i>Clariusbatrachus</i>	Magur/Vahur
9	Actinopterygii	Siluriformes	Bagridae	<i>Mystusvittatus</i>	Katwa
10	Actinopterygii	Gobiiformes	Gobidae	<i>Glossogobiusguiris</i>	Ghasra
11	Actinopterygii	Synbranchiformes	Mastacembelidae	<i>Mastacembeluspancalus</i>	Bam/Vam
12	Actinopterygii	Anabantiformes	Channidae	<i>Channapunctata</i>	Snake headed fish
13	Actinopterygii	Beloniformes	Belonidae	<i>Xenodoncancila</i>	needlefish
14	Actinopterygii	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Karp
15	Actinopterygii	Cichliformes	Cichlidae	<i>Tilapia sparrmanii</i>	Tilapi
16	Actinopterygii	Anabantiformes	Anabantidae	<i>Anabas testudineus</i>	Climbing fish
17	Actinopterygii	Siluriformes	Siluridae	<i>Wallago attu</i>	Pahari
18	Actinopterygii	Cypriniformes	Cyprinidae	<i>Puntius chola</i>	Olive barb

Table 1. List of fresh water fishes found in four study site of Vena river



Rosboradaniconius



Labeofimbriatus



Labeorohita



Puntius sarana



Labeobata



Notopterusnotopterus



Catlacatla



Clariusbatrachus



Mystusvittatus



Mastacembeluspancalus



Glossogobiusguiris



Channapunctata



Xenentodon cancila



Cyprinus carpio



Tilapia sparrmanii



Anabas testudineus



Wallago attu



Puntius chola

Photographs of fishes given in Table 1.

During the present study, total 18 fish species belonging to 15 genera and 11 families were collected and identified in this site. The detail of these fishes is listed in Table 1. The family-Cyprinidae was observed as the most abundant.

Conclusion

A study of the diversity of edible fish species in a river provides valuable insights into the ecological health of the aquatic ecosystem and its potential for sustainable food resources. The investigation into the diversity of edible fish species within Vena river, Hinganghat revealed a Moderate level of species richness, with 18 species identified. This diversity reflects the complex interplay of environmental factors, including water quality, habitat availability, and anthropogenic influences.

The presence of e.g. Kaneri, Rohu, Tamb, Catla, Vahur, Tilapi, etc commercially important species, highlights the river's significance as a source of food and livelihood for local communities. The diversity of edible fish species serves as an indicator of the river's overall ecological health. Edible fish species represent a vital source of protein and income for local communities.

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