

# **Ichthyofaunal Diversity of Atpadi Lake, Tal-Atpadi, Dist-Sangli (MS) India**

**Shivaji M. Vibhute**

Department of Zoology, Shrimant Babasaheb Deshmukh Mahavidyalaya, Atpadi, M.S., India

**Abstract:** *The present study to find out ichthyofaunal diversity of Atpadi Lake was carried out between Feb. 2018 to Jan. 2020. The samples were collected at four stations with the help of local fishermen. The specimens were collected during the period Feb. 2018 to Jan. 2020, and studied the fish diversity of the lake water. Out of 25 fish specimens identified, 14 were from order Cypriniformes, 7 from order Siluriformes, 3 from Perciformes and 1 from order Synbranchiformes. By analyzing the data, it is confirmed that the lake is rich in ichthyofauna and needs to be more exploited for commercial fishery and management for conservation of native ichthyofauna is must.*

**Keywords:** Atpadi lake, Ichthyofauna, etc.

## **I. INTRODUCTION**

Fishes are the rich source of aquatic food rich in protein source inhabiting aquatic life. Fishes are the indicators of status of aquatic body related with aquatic pollution. Due to various anthropogenic activities in the catchment area like sewage disposal, industrial waste dumping, industrial effluents, domestic animal waste, vehicle washing the biochemical status of aquatic body makes the water body polluted that may hamper the aquatic life in that water body and makes the water body unfit for any human use. Fish has been recognized as suitable for biological assessment due to its easy identification and economic value (Siligato & Bolumer, 2001). Ichthyofauna has been widely used as ecological monitors to determine the level of degradation and health of water body at different scales (Vijayalaxmi et.al. 2010).

Plafkin et.al. (1989) monitored that there are many advantages of using fish diversity as biological indicators. Earlier studies made on ichthyofauna of different water body resources in India (Jayram, 1981 & Mishra et.al, 2003). Pawar et.al (2006) studies ichthyofauna of Pethwadaj dam, Nanded, Kulkarni et.al (2008) studied fish and fisheries of Derala Tank, Nanded District, Maharashtra, Ravinder (2010) studied biodiversity of fishes in Dharamsagar reservoir, Warangal district, Andhra Pradesh. Nikam et.al studied fish diversity at Asthi Lake, Solapur district. The objective of the study was to collect data regarding diversity of ichthyofauna of Atpadi Lake and to suggest some remedial measures to explore the productivity of this lake.

## **II. MATERIALS AND METHODS**

### **Study Area**

The fish samples were collected from Atpadi lake monthly during the period Feb. 2018 to Jan. 2020. This lake is located near Atpadi town 5 km to southwest to Atpadi city, Tal-Atpadi Dist.- Sangli (M.S.). The Lake is located in eastern part of Sangli District in drought prone area. The water from lake is used for irrigation purpose by eastern part of Atpadi tahasil.

### **Methods**

The fish samples were collected from four different collection stations of study area from Feb. 2018 to Jan. 2020 with the help of local fishermen using gill net. The collected samples were documented through photography. Then the samples were brought to the laboratory for their identification and preserved in 10% formaldehyde solution. The fish fauna was identified with the help of standard keys of Day (1878), Jayram (1981) and Talwar and Jhingran (1991).



**III. RESULT AND DISCUSSION**

Total 39900 species of vertebrate fauna is recognized worldwide of which 21723 species belongs to ichthyofauna of which 930 belongs to fresh water and remaining to marine water (Jayram 1991). Fresh water lakes, ponds and manmade farm ponds may fulfill additional food requirement of human population, create more job opportunities and will help in uplifting socioeconomic status of poor fishermen. In the present study 25 fish specimens were identified, 14 were from order Cypriniformes, 7 from order Siluriformes, 3 from Perciformes and 1 from order Synbranchiformes. Among all orders Cypriniformes were dominant comprising 14 species. These were Labeo angra, Cirrhinus mrigala, Cirrhinus fulungee, Catla catla, Lebeo calbasu, Osteobrama cotio cotio, Labeo sindensis, Puntius jerdoni, Cirrhinus reba, Puntius amphibious, Garra mullya, Garra gotyla gotyla, Salmostoma navacula belonging to cyprinidae family. The order siluriformes were represented by 7 species these were Mystus malabarius, Rita rita, Mystus monta, Aorichthys aor, Ompok bimaculatus, Heteropneustes fossilis, Eutropiichthys murius belonging to Heteropneustidae and Schibeidae family. Order synbranchiformes was represented by Mastacembelus a. armatus belonging to Mastacembelidae family. While order perciformes was represented by Glossogobius giuris, Lactarius lactarius, Pseudambassis ranga belonging to Gobiidae, Lactariidae and Ambassidae family. In present investigation the order Cypriniformes was dominant with 14 species followed by order siluriformes with 7 species, order synbranchiformes with 1 species and order perciformes with 3 species.

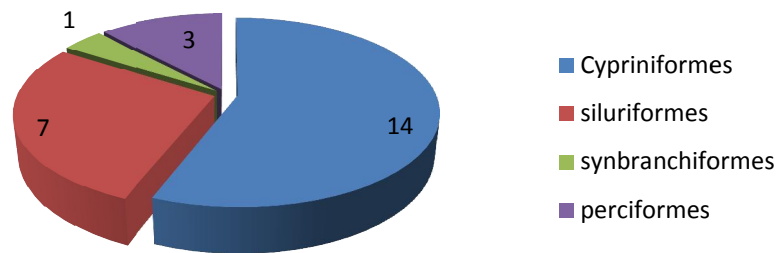
| ORDER         | FAMILY     | SUB FAMILY                 | SPECIES                             |
|---------------|------------|----------------------------|-------------------------------------|
| Cypriniformes | Cyprinidae | Cyprininae                 | Puntius ticto (Ham – Buch)          |
|               |            |                            | Labeo angra (Ham – Buch)            |
|               |            |                            | Cirrhinus mrigala (Ham – Buch)      |
|               |            |                            | Cirrhinus fulungee (Sykes)          |
|               |            |                            | Catla catla (Ham – Buch)            |
|               |            |                            | Lebeo calbasu (Ham- Buch)           |
|               |            |                            | Osteobrama cotio cotio (Ham – Buch) |
|               |            |                            | Labeo sindensis (Day)               |
|               |            |                            | Puntius jerdoni (Day)               |
|               |            |                            | Cirrhinus reba (Ham- Buch)          |
|               |            |                            | Puntius amphibious (Val)            |
|               |            |                            |                                     |
|               |            |                            |                                     |
|               |            |                            |                                     |
|               |            |                            |                                     |
|               | Garrinae   | Garra mullya (Sykes)       |                                     |
|               |            | Garra gotyla gotyla (Gray) |                                     |
|               |            |                            |                                     |
|               |            | Cultrinae                  | Salmostoma navacula (Valenciennes)  |
|               |            |                            |                                     |
| Siluriformes  | Bagridae   |                            | Mystus malabarius (Jerdon)          |
|               |            |                            | Rita rita (Ham- Buch)               |
|               |            |                            | Mystus montanus (Jerdon)            |
|               |            |                            | Aorichthys aor (Ham- Buch)          |
|               |            | Siluridae                  |                                     |



|                  |                  |  |                                     |
|------------------|------------------|--|-------------------------------------|
|                  |                  |  |                                     |
|                  | Heteropneustidae |  | Heteropneustes fossilis (Bloch)     |
|                  |                  |  |                                     |
|                  | Schilbeidae      |  | Eutropiichthys murius (Ham- Buch)   |
|                  |                  |  |                                     |
| Synbranchiformes | Mastacembelidae  |  | Mastacembelus a. armatus (Lacepede) |
|                  |                  |  |                                     |
| Perciformes      | Gobiidae         |  | Glossogobius giuris (Ham – Buch)    |
|                  |                  |  |                                     |
|                  | Lactariidae      |  | Lactarius lactarius (Schneider)     |
|                  | Ambassidae       |  | Pseudambassis ranga (Ham- Buch)     |

| Sr.No. | Order            | Number Of Species |
|--------|------------------|-------------------|
| 1      | Cypriniformes    | 14                |
| 2      | Siluriformes     | 7                 |
| 3      | Synbranchiformes | 1                 |
| 4      | Perciformes      | 3                 |

**Fig.1 Orderwise comparison of Ichthyofauna**



#### IV. CONCLUSION

After analyzing findings of ichthyofauna recorded in Atpadi lake, it was found that this lake is rich in ichthyofaunal diversity. Fluctuations in fish community is correlated with other physico-chemical and biological parameters of this lake. Habitat degradation, anthropogenic activity, sewage disposal, etc are some of the reasons for adversely affecting the occurrence of ichthyofauna in this lake. Proper management of this lake may help to boost the fish production and conservation of habitat.

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