

## RESEARCH ARTICLE

# CHECKLIST OF FRESH WATER FISHES OF THE PALER RESERVOIR IN KHAMMAM DISTRICT, TELANGANA, INDIA

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## ABSTRACT

The present study is focused on the fish fauna of Paler reservoir. The results of the present study confirmed the occurrence of 28 species of fishes belonging to 21 genera, 12 families and 7 orders. It was found that the order Cypriniformes was dominant with (13 species) followed by order Perciformes with (7 species), Siluriformes with (3 species), Synbranchiformes with (2 species), Channiformes, Beloniformes and Osteoglossiformes, was identified with one species each. Thus the reservoir had shown more diversity and it also contains good potentiality for fish fauna.

**Key Words:** Fish Fauna, Paler Reservoir, Fish Diversity, Fresh Water

## INTRODUCTION

Most of the Fresh water resources of the country are vast and varied such as rivers, tributaries, streams, reservoirs, lakes, canals, tanks, ponds. At Present all over the world number of reservoirs has been increased there are about 19,370 reservoirs present with a surface area of 3.15 million hectares. Andhra Pradesh has 102 reservoirs in which 7 are major, 26 medium, and 69 minor reservoirs with a water spread area of 2,34,269 hectares. Reservoirs are mainly used for irrigation and power generation, but in India, they are almost invariably utilized for fish culture. Sir Francis Day (1878)<sup>1</sup> has listed 351 genera and 1,418 species found in the seas and rivers all over India. Total 450 families of fresh water fishes have been recorded across the world. Jayaram (1981) listed out 742 freshwater fish species in India. Talwar and Jhingran (1994) observed 2546 fish species in India and adjacent countries. Devi and Indra (2012) recorded the checklist of 667 fresh water fishes in India. The fish fauna of Telangana has been reported by several workers. Present investigations were carried out to study the checklist of freshwater fishes of the Paler reservoir in Khammam district.

## MATERIALS AND METHODS

### Study area

To evaluate the check list of fresh water fishes of the Paler reservoir in Khammam district, Telangana, India which lies

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between North latitude 17° 12' and East longitude 79° 54'. The total catchment area of reservoir is 651.24 sq.meters. The climatic conditions of the study area can be categorized as hot summer, cool winter and rainy season. The region gets maximum rainfall from south west monsoon. This particular region gets maximum of its rain fall from June to September. During the study period i.e. January 2010 to December 2011. Highest rainfall was observed in the month of June. The average rainfall of this study area is 790 mm. The reservoir water is generally used for drinking, agriculture, boating (recreation), electricity (hydropower) generation and fish culture.

### Collection of fish sample

The fishes were collected from the paler reservoir from different stations during the year January 2010 to December 2011 with the help of local fishermen and examined for color pattern and preserved in 10% formaldehyde and identified by following standard reference given by, Mishra (1968), Datta Munshi and Srivastava (1985), Menon (1999).

## RESULTS AND DISCUSSION

Fishes are one of the major components of the aquatic ecosystem they serve as food for variety of animals and human beings. The fish fauna is an important aspect of fishery potential of water body. Wide diversity of fish species is found due to differences in geographical, geological and demographical conditions. Many research works have been carried out on fish fauna in different Indian reservoirs.

Khammam district contains lakes, reservoirs, fresh water bodies, ponds etc.

Subanerekha river in Singbhum district of Jharkhand, India. In the present study, fish fauna collected from the Paler reservoir and their population status, IUCN Status and Camp status are

**Table 1. Showing Fish Fauna of Paler Reservoir**

| ORDER                    | SPECIES                                     | COMMON NAME             | LOCAL NAME      | POPULATION STATUS | IUCN STATUS | CAMP STATUS |
|--------------------------|---|-------------------------|-----------------|-------------------|-------------|-------------|
| Cpriniformes             | 1.salmastomabacaila (Hamilton)              | Large razor bellyminnow | Chandamama      | A                 | LC          | DD          |
|                          | 2.Esomus daniconius                         | Flying barb             | Dhoban          | C                 | LC          | DD          |
|                          | 3.Parluciosomadaniconius (Hamilton)         | Black line rosborra     |                 | C                 |             |             |
|                          | 4.Puntius chola(Hamilton)                   | Swamp barb              | Paraka          | A                 | LC          | VU          |
|                          | 5.Puntius sophore (Hamilton)                | Stigma barb             | BuddaParaka     | A                 | LC          | LRnt        |
|                          | 6.Puntiusticto (Hamilton)                   | Ticto barb              | Paraka          | A                 | LC          | LRnt        |
|                          | 7.Puntius amphibious (Hamilton)             | Banded khavali          | Paraka          | C                 | LC          | LRnt        |
|                          | 8.Puntius conchoniuis (Hamilton)            | Arc fin swan barb       | Gaddiparaka     | A                 | LC          | LRnt        |
|                          | 9. Puntius filamentous                      | soft fin swan barb      | Kijan           | R                 | NA          | DD          |
|                          | 10.Puntius terio                            | Terio barb              | Pillaparaka     | A                 | LC          | LRnt        |
|                          | 11.Osteobrama cotiocotio                    | Cotio                   | Kagithamparaka  | A                 | LC          | LRnt        |
|                          | 12.Catla cattla (Hamilton-Buchanan )        | Catla                   | botcha          | C                 | LC          | LRnt        |
|                          | 13.Labeo rohita (Hamilton-Buchanan)         | Rohu                    | Ravvu           | C                 | LC          | LRnt        |
| Osteoglossiformes        |   |                         |                 |                   |             |             |
| Notopteridaes            | 14. Notopterusnotopterus (Pallas)           | Feather back            | Vellenka        | C                 | LC          | LRnt        |
| Siluriformes             |   |                         |                 |                   |             |             |
| Bagridae                 | 15. Mystusbleekeri(day)                     | Day's mystus            | Guddijella      | A                 | LC          | VU          |
|                          | 16.Aorichthyes seenghala (skyes)            | Seperataseenaghala      | Gangajella      | A                 | LC          | DD          |
| Siluridae                | 17.Ompokpadda (Hamilton)                    | Pabda cat fish          | Gogalae         | C                 | EN          | DD          |
| Beloniformes             |   |                         |                 |                   |             |             |
| Belonidae                | 18.Xenotodon concila(Hamilton)              | Fresh water garfish     | Kongamuthichapa | C                 | LC          | LRnt        |
| Mastacembelidae          | 19.Macrognaathuspunculus (Bloch)            | Lesser spiny eel        | ChinniPapera    | A                 | LC          | LRnt        |
|                          | 20.Mastacebelus armatus (Lacepede/Hamilton) | spiny eel               | Papera          | A                 | LC          | VU          |
| Perciformes              |   |                         |                 |                   |             |             |
| Ambassidae/<br>Chandidae | 21.Chandanama (Hamilton)                    | Elongate glassperchlet  | Siravara        | C                 | LC          | NE          |
|                          | 22.Pseudambassis ranga(Hamilton)            | Indian glassy fish      | Podugusiravara  | M                 | LC          | NE          |
| Cichlidae                | 23.Etrophus suratensis (Bloch)              | Green chromid           | Pamplet         | C                 | LC          | NE          |
|                          | 24.Etrophusmaculatus (Bloch)                | Omagechromid            | Pandiparaka     | M                 | LC          | NE          |
|                          | 25. Osteochromismossambica                  | Mozambique tilpia       | Chinnaguraka    | C                 | NT          | NE          |
| Gobidae                  | 26.Glossgobius giuris                       | Tankgobi                | Uskedonhi       | A                 | LC          | LRnt        |
| Nandidae                 | 27.Nandus nandus(Hamilton)                  | Mud perch               | Gangugetchu     | M                 | LC          | LRnt        |
| Channiformes             |   |                         |                 |                   |             |             |
| Channidae                | 28.Channa punctatus (Bloch)                 | Spotted snake head      | Kora matta      | C                 | LC          | LRnt        |

A-Abundant (76-100% of the total catch), C- Common (51-75% of the total catch), M-Moderate (26-50% of the total catch), R- Rare (1-25% of the total catch),EN-Endangered, VU-Vulnerable LRnt- Lower risk near threatened, LRlc-Lower risk least concern, LC-Least concern,NA-Not Assessed, DD-Data Deficient NF-Not Evaluated and NT-Near Threatened

The district has abundant fish fauna, however some species of this region found to be extinct, therefore precautionary measures have to be taken to protect the genetic resources. The major reason behind the decline of various fish fauna may be due to industrialization, urbanization, over fishing of juveniles and destruction of natural ecosystem and environment. Fish fauna survey has been carried out by number of workers. Sakhare (2001) recorded the occurrence of 23 fish species belonging to 7 orders in Jawalgaov reservoir in Solapur district of Maharashtra. Pisca et al. (2000) identified fishes belonging to four orders and 28 species from Ibrahimbagh reservoir of Hyderabad. Tapaskumar et al. (2003) observed 75 species of fish belonging to 50 genera, 23 families and six orders in

noted in Table 1. In this study total fishes belongto28 species which belongs to 21 genera, 12 families and 7 orders. The order Cypriniformes was found to be dominant with 13 species followed by order Perciformes with 7 species and Siluriformes with 3 species, Synbranchiformes with 2 species, Channiformes, Beloniformes and Osteoglossiformes, were represented with one species each. The present investigation has shown similarity with earlier studies on the fish fauna of the Lower Manair reservoir in Karimnagar District, Telangana recorded by Thirupathaiah et al. (2013). Baburao has recorded 32 fish species belonging to six orders with 11 families in Himayathsagar Lake, Hyderabad. Robert T.R, C.A.N. et al, Gohilmahendrasinh et al expressed that theycyprinidae species

were more dominant than other families. Jadhav recorded 58 species of fishes in river Koyana. Recorded order-wise percentage of fishes are presented in Figure 1. Cypriniformes 46%, Perciformes 25%, Siluriformes 11%, Synbranchiformes 7%, Channiformes 4%, and Osteoglossiformes 3%.

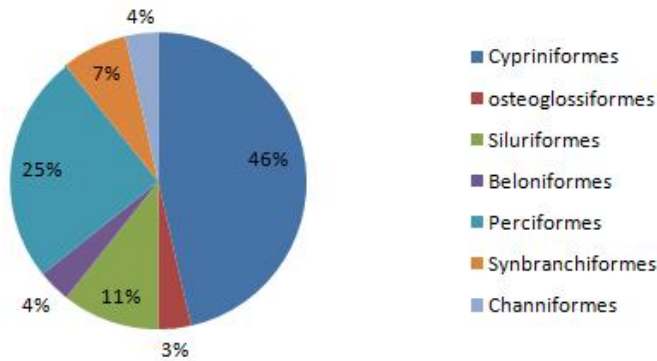


Fig. 1. Order-wise percentage composition of fishes in study area

### Conclusion

The present study concluded that the diversity of fish fauna is more in Paler reservoir and it is also identified that the reservoir has good potentiality for fish production. Hence, there is an urgent need to create awareness among local people on the importance of the reservoir habitat and its fish fauna and the need to conserve them for future generations.

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