ICHTHYOFANAUL DIVERSITY IN SILISERH RESERVOIR NEAR ALWAR CITY, RAJASTHAN

Harinder Singh Banyal and Sanjeev Kumar

Desert Regional Centre, Zoological Survey of India, Jodhpur, Rajasthan-342005

[Corresponding author E-mail: dr.harinderbanyal@gmail.com]

Received: 25-07-2016

Fish samples were collected from Siliserh reservoir during 2016 to evaluate the composition of Ichthyofaunal diversity. 18 spp. of fishes were reported from the reservoir. Cypriniformes was the dominant order (11 spp.) followed by Perciformes (4 spp.), Siluriformes (2 spp.), and Synbranchiformes (1 sp.).

Fish Seed Committee of the Government of India designated all water bodies having more than 200 ha in area as reservoirs. In spite of disastrous faunistic changes due to impoundment, Indian reservoirs preserve a rich diversity of fish species. The fish fauna of a reservoir basically symbolizes the faunal diversity of the parent riverine system. Studies conducted so far have revealed that, big reservoirs, on an average, harbour 60 species of fishes, of which at least 40 contribute to the commercial fisheries. Indob-Gangetic carps, commonly known as Indian major carps, inhabit a noticeable place among the commercially significant fishes. Rajasthan is the biggest state of India with varied topography and discernible diverse geological divisions. Commercial reservoir fisheries also exist in Rajasthan state where dams are constructed mainly for agricultural irrigation purposes, and fishery is of secondary importance. Rajasthan has around 153 444 ha of water area inundated under reservoirs, more than a third of which fall under the category of small reservoirs only. Of the 423 reservoirs listed in Rajasthan, only four are in the big category, while the small and medium sized reservoir number 389 and 30 share respectively. Alwar district is part of the Aravalli range & geographically situated between 27° 34' North Latitude and 76° 35' East Longitude at an elevation of 270 meters AML. Alwar district also has moderate potential of reservoir fisheries.

During present studies 17 spp. of fishes were reported from this reservoir. Cypriniformes was the dominating order of fishes (11 spp.) followed by Perciformes (4 spp.), Siluriformes (2 spp.) and Mastacembeliformes (1 sp.).

Among carps, *Catla catla* (Hamilton), *Cyprinus carpio* (Linnaeus), *Rasbora daniconius* (Ham.), *Salmophasia bacaila* (Ham.), *Osteobramacotio* (Ham.), *Pethia ticto* (Hamilton), *Labeo rohita* (Hamilton), *Labeo bata* (Hamilton), *Labeo calbasu* (Ham.), *Cirrhinus mrigala* (Ham.), *Systemus sarana* (Hamilton) were dominant in fish catch. Catfishes viz.: *Wallago attu* (Bloch & Sch.) and *Sperata seenghia* (Sykes); *Mastacembelus armatus* (Lacepede) (Synbranchiformes) *Channapunctata* (Bloch) *Chanda nama* (Ham.) *Oreochromis mossambicus* (Peters) and *Glossogobius giuris* (Ham.), (Perciformes) were least in fish catch. Seeding of most of Indian major carps including *Cyprinus carpio* (Linnaeus) which is an introduced exotic fish is done in this reservoir hence; presence of these fishes is justified. Occurrence of *Oreochromis mossambicus* (Peters) in the reservoir is a matter of concern.

MATERIAL AND METHODS

Fishes were collected mainly by using cast & Gillnets. Hand net, scoop net, drag net and baited hooks were also used. The fishes were preserved in 10% formalin for further studies and were identified following standard references.

RESULTS AND DISCUSSION

Fish fauna of Rajasthan is known mainly by the work of Hora et al., Datta et al., Johal et al., Yazdani, Mohan and Singh, and Mohan, et al. Not much information regarding the fish fauna from the central Rajasthan wetlands is known in this regard Siliserh reservoir is not a exception.

During present studies 17 spp. of fishes were reported from this reservoir. Cypriniformes was the dominating order of fishes (11 spp.) followed by Perciformes (4 spp.), Siluriformes (2 spp.) and Mastacembeliformes (1 sp.).

Among carps, *Catla catla* (Hamilton), *Cyprinus carpio* (Linnaeus), *Rasbora daniconius* (Ham.), *Salmophasia bacaila* (Ham.), *Osteobramacotio* (Ham.), *Pethia ticto* (Hamilton), *Labeo rohita* (Hamilton), *Labeo bata* (Hamilton), *Labeo calbasu* (Ham.), *Cirrhinus mrigala* (Ham.), *Systemus sarana* (Hamilton) were dominant in fish catch. Catfishes viz.: *Wallago attu* (Bloch & Sch.) and *Sperata seenghia* (Sykes); *Mastacembelus armatus* (Lacepede) (Synbranchiformes) *Channapunctata* (Bloch) *Chanda nama* (Ham.) *Oreochromis mossambicus* (Peters) and *Glossogobius giuris* (Ham.), (Perciformes) were least in fish catch. Seeding of most of Indian major carps including *Cyprinus carpio* (Linnaeus) which is an introduced exotic fish is done in this reservoir hence; presence of these fishes is justified. Occurrence of *Oreochromis mossambicus* (Peters) in the reservoir is a matter of concern.
& strategies should be made to check its further proliferation. The reservoir under report holds water depending upon the rainfall. There is an increasing pressure on this man made wetland for irrigation and other household purposes, probably these factors act as limiting factors for fish diversity reported from this reservoir. Mohan and Singh\textsuperscript{9}, & Sharma and Rose\textsuperscript{11} have also made similar observations on the water bodies of the Rajasthan. Hence, it is crucial to sustain critical water level in the reservoir under report for the betterment of aquatic fauna especially fishes.

List of the fishes reported from the reservoir with classification is given below:

**Class: Actinopterygii**
**Order: Cypriniformes**
**Family: Cyprinidae**
- **Genus: Salmophasia** Swainson
  - **Salmophasia bacaila** (Hamilton, 1822)
- **Genus: Rasbora** Bleeker
  - **Rasbora daniconius** (Hamilton, 1822)
- **Genus: Osteobrama** Heckel
  - **Osteobrama cotio** (Hamilton, 1822)
- **Genus: Pethia** Pethiyagoda\textit{et al.}
  - **Pethia ticto** (Hamilton, 1822)
- **Genus: Systomus** McClelland
  - **Systomus sarana** (Hamilton, 1822)
- **Genus: Catla** Valenciennes
  - **Catla catla** (Hamilton, 1822)
- **Genus: Cirrhinus** Cuvier
  - **Cirrhinus mrigala** (Cuvier)
  - **Cirrhinus mrigala** (Cuvier)
- **Genus: Labeo** Cuvier
  - **Labeo calbasu** (Hamilton, 1822)
  - **Labeo rohita** (Hamilton, 1822)
  - **Labeo bata** (Hamilton, 1822)
- **Genus: Cyprinus** Linnaeus
  - **Cyprinus carpio** Linnaeus, 1758
- **Order: Siluriformes**
  - **Family: Bagridae**
    - **Genus: Sperata** Holly
      - **Sperata seenghala** (Sykes, 1839)
  - **Family: WallagoBleeker**
    - **Wallago attu** (Bloch & Schneider, 1801)
- **Family: Mastacembelidae**
  - **Genus: Mastacembelus** Scopoli
    - **Mastacembelus armatus** (Lacepede, 1800)
- **Order: Perciformes**
  - **Family: Channidae**
    - **Genus: Channa** Scopoli
      - **Channa punctata** (Bloch, 1793)
  - **Family: Ambassidae**
    - **Genus: Chanda** Hamilton
      - **Chandanama Hamilton, 1822**
  - **Family: Gobiidae**
    - **Genus: Glossogobius** Gill
      - **Glossogobius giuris** (Hamilton, 1822)
  - **Family: Cichlidae**
    - **Genus: Oreochromis** Gunther
      - **Oreochromis mosambicus** (Peters, 1852)

**ACKNOWLEDGMENTS**

Authors are thankful to Dr. Kailash Chandra, Director, Zoological Survey of India, for providing necessary facilities to undertake present work.

**REFERENCES**