Rec. zool. Surv. India : **101** (Part 3–4) : 109-114, 2003

ON THE FISH FAUNA OF KOIL SAGAR, MAHBUBNAGAR DISTRICT, ANDHRA PRADESH, SOUTH INDIA WITH SUGGESTIONS FOR CONSERVATION OF ITS VULNERABLE SPECIES

R. P. BARMAN

Zoological Sruvey of India, FPS Building, Kolkata-700 017, India

INTRODUCTION

The present study is based on a collection of fishes from the Koil sagar (Longitude 77.46°E and Latitude 16.44°N), Mahbubnagar district, Andhra Pradesh during a faunistic survey for the collection of freshwater fishes of Andhra Pradesh by the author (Barman, 1993). It appears that there is no faunal account of the fishes of the Koil sagar reservoir which has been constructed in one of the tributaries of the River Krishna of the south India. Therefore, an attempt has been made to make an account of the fishes of this reservoir. A total number of 39 species belonging to 26 genera, 12 families and 5 orders have been recorded in this work. In addition to this, the endemic species and threatened species (endangered, vulnerable and rare) of our country, occurring in the Koil sagar have been designated as per the definitions and guidance of the IUCN for determining the status of the fishes. The arrangement of the classification is followed here is that of Greenwood *et al.*, (1966) and Jayaram (1981). Local names of the fishes are given along with the names of the species.

TOPOGRAPHY OF THE KOIL SAGAR RESERVOIR

Koil sagar project is one of the important reservoirs of the Mahbubnagar district (15.55° to 17.20°N and 77° to 79.12°E), Andhra Pradesh for the irrigation water resources and for the development of fisheries in the district. This reservoir is situated at a distance of 35 kms from Mahbubnagar district, the district head quarters. The construction of this reservoir was started in the year 1949 and was completed in the year 1955. The reservoir has been constructed across Peddavagu, one of the tributaries of the River Krishna and Nakklavagu. Water spread area of this reservoir is about 800 hectares and maximum depth is 15.8 m. Average rain fall of this region is 68.6 cm. The bed is composed of sand rocks, mud etc. The feeding source of this reservoir is rain water which comes from 38.4 kms through Peddavagu and 11.2 kms from Nakkalavagu. The surplus water joins in the river Krishna after a distance of 57.6 kms from the reservoir.

SYSTEMATIC LIST OF THE FISHES COLLECTED FROM THE KOIL SAGAR WITH THEIR LOCAL NAMES

Order I Osteoglossiformes

Family (1) NOTOPTERIDAE

Genus (i) ***Notopterus*** Lacepede

1. ***N. notopterus*** (Pallas) ... Ulakathatta, Mangali katti (Telugu)

Order II Cypriniformes

Family (2) CYPRINIDAE

Genus (ii) ***Salmostoma*** Swainson

2. ***S. clupeoides*** (Bloch) ... Vellachee candee, Negteli, Vellichi, Nettelai (Tamil)
3. ***S. novacula*** (Valenciennes) ... Nil (Endemic species)
4. ***S. untrahi*** (Day) ... Untrahi (Oriya) (Endemic species)

Genus (iii) ***Esomus*** Swainson

5. ***E. danricus*** (Hamilton) ... Asta pakke (Telugu)
6. ***E. thermoicos*** (Valenciennes) ... Messai paravai (Tamil)

Genus (iv) ***Danio*** Hamilton

7. ***D. aequipinnatus*** (McClelland) ... Salai paravai (Tamil)

Genus (v) ***Parluciosoma*** Howes

8. ***P. daniconius*** (Hamilton) ... Jobidayee, Narangi (Telugu)

Genus (vi) ***Barilius*** Hamilton

9. ***B. bendelisis*** (Hamilton) ... Aguskitti, Marritan candee, Vannathi kendai (Tamil)

Genus (vii) ***Barbodes*** Bleeker

10. ***B. sarana sarana*** (Hamilton) ... Kannaku, Kakoo, Kadoon, Kunnamoo, Paraga, Goodha paraga, Kanga pakki (Tamil) (Vulnerable species)

Genus (viii) ***Puntius*** Hamilton

11. ***P. chola*** (Hamilton) ... Chaddu paddaka, Pakki (Telugu) (Vulnerable species)
12. ***P. conchonius*** (Hamilton) ... Pittia kerundi (Oriya) (Vulnerable species)
13. ***P. parrah*** Day ... Parrah perlee (Malayalam) (Endemic and Endangered species)
14. ***P. sophore*** (Hamilton) ... Budda pakka, Chadu parega, Chedu perigi (Telugu)
15. ***P. ticto*** (Hamilton) ... Parigi (Telugu)

Genus (ix) ***Osteobrama*** Heckel

16. ***O. cotio cotio*** (Hamilton) ... Patta kunju (Tamil)

Genus (x) ***Labeo*** Cuvier

17. ***L. ariza*** (Hamilton) ... Coal, Kolarinjan, Coali Kendai (Tamil) (Endemic and Endangered species)
18. ***L. calbasu*** (Hamilton) ... Kaki bontha, Kaki gandi, Kaki bocha, Nallachithraya, Nalla gandu meenu (Telugu)
19. ***L. fimbriatus*** (Bloch) ... Yerra gandu meenu, Gandu meenu (Telugu)
20. ***L. rohita*** (Hamilton) ... Kannadi kendai (Tamil)

Genus (xi) ***Cirrhinus*** Oken

21. ***C. mrigala*** (Hamilton) ... Yerra mosu, Bellala mosu (Telugu)
22. ***C. reba*** (Hamilton) ... Arju, Yerra thoka mosu, Eele mosu, Chittahri, Chitthrai (Telugu) (Vulnerable species)

Genus (xii) ***Catla*** Valenciennes

23. ***C. catla*** (Hamilton) ... Botchee, Krishna botcha, Botcha (Telugu)

Genus (xiii) ***Garra*** Hamilton

24. ***G. gotyla gotyla*** (Gray) ... Bettwa (Orya) (Vulnerable species)

Order III Siluriformes

Family (3) BAGRIDAE

Genus (xiv) ***Mystus*** Scopoli

25. ***M. cavasius*** (Hamilton) ... Thella jella, Muti jella, Nahara jella (Telugu)
26. ***M. vittatus*** (Bloch) ... Suku jella, Erra jella (Telugu) (Vulnerable species)

Genus (xv) ***Aorichthys*** Wu

27. ***A. seenghala*** (Sykes) ... Multi jellah, Senghala, Nara jella, Keeru jella (Telugu) (Vulnerable species)

Family (4) SILURIDAE

Genus (xvi) ***Ompok*** Lacepede

28. ***O. bimaculatus*** (Bloch) ... Duka dumu, Jella, Theenuva (Telugu) (Endangered species)

Genus (xvii) ***Wallago*** Bleeker

29. ***W. attu*** (Schneider) ... Valuga, Wallagah, Valaga (Telugu)

Family (5) CLARIIDAE

Genus (xviii) ***Clarias*** Scopoli

30. ***C. batrachus*** (Linnaeus) ... Marpoo, Marpulu (Telugu) (Vulnerable species)

Family (6) HETEROPNEUSTIDAE

Genus (xix) ***Heteropneustes*** Muller

31. ***H. fossilis*** (Bloch) ... Ingilayee, Mapu jella, Marpu (Telugu) (Vulnerable species)

Order IV Channiformes

Family (7) CHANNIDAE

Genus (xx) ***Channa*** Scopoli

32. ***C. marulius*** (Hamilton) ... Poola malle, Poola matta, Pula chapa, Sowarah (Telugu)
33. ***C. punctatus*** (Bloch) ... Mitta, Matta gidassa, Kodhadhalau, Curru meenu, Muttah (Telugu)

Order V Perciformes

Family (8) CHANDIDAE

Genus (xxi) ***Chanda*** Hamilton

34. ***C. nama*** (Hamilton) ... Akku rati, Aku rati (Telugu)

Genus (xxii) ***Pseudambassis*** Bleeker

35. ***P. ranga*** (Hamilton) ... Laal chandee (Oriya), Kannadi meen (Tamil)

Family (9) CICHLIDAE

Genus (xxiii) ***Etroplus*** Cuvier

36. ***E. suratensis*** (Bloch) ... Cahimara, Duvvena chapa (Telugu)

Family (10) MUGILIDAE

Genus (xxiv) ***Rhinomugil*** Gill

37. ***R. corsula*** (Hamilton) ... Mazhugu meen (Tamil) (Vulnerable species)

Family (11) GOBIIDAE

Genus (xxv) ***Glossogobius*** Gill

38. ***G. giuris giuris*** (Hamilton) ... Bullee-kokah, Taika dondu (Telugu)

Family (12) ANABANTIDAE

Genus (xxvi) ***Anabas*** Cuvier

39. ***A. testudineus*** (Bloch) ... Sennal, Pauni eyri, Panaieeri kendai, Panai yeri kendai (Tamil) (Vulnerable species)

DISCUSSIONS

The present work has recorded 39 species under 26 genera, 12 families and 5 orders from the Koil sagar reservoir, Mahbubnagar district, Andhra Pradesh. This list of fishes shows that this water body harbours 14 threatened (3 endangered and 11 vulnerable species) besides 4 endemic species of freshwater fishes of India (Molur & Walker, 1998) and (Menon, 1999). It has been noted that among the high priced commercial important fishes of this reservoir are different species of *Labeo* Cuvier such as *L. ariza. L. calbasu. L. fimbriatus, L. rohita* and some other economically important species are *Catla catla, Aorichthys seenghala, Ompok bimaculatus, Wallago attu, Clarias batrachus, Heteropneustes fossilis, Channa marulius, Channa punctatus, Rhinomugil corsula, Glossogobius giuris* and *Anabas testudineus.*

CONSERVATIONS METHODS SUGGESTED

Since Koil sagar may be treated as one of the wetlands of India its faunal resources particularly the fish fauna should be monitored and a proper management of its faunal contents as a whole are very much needed. It may be mentioned here that wetlands are the breeding grounds of many commercially important riverine fishes, therefore, their proper maintenance and preservation are very essential for supplying animal protein to the local people residing nearby the areas of this water body in particular. Two important riverine edible fishes of India, viz., *Wallago attu* and *Catla catla* are found in this Koil sagar and these two riverine fishes also utilize this water body for their breeding grounds. The connection between the River Krishna and the Koil sagar should be monitored and properly maintained. Otherwise migration of these two very important commercial fishes will be disturbed which may lead to decline of their populations in near future. In addition to these, 11 vulnerable and 3 endangered species of freshwater fishes of India are also found in this reservoir. Considering the above facts habitat alteration of these fishes due to expanding agricultural practices, removal of gravel and sand from the bed of this water body should be carefully considered. Since fishes are very sensitive to the pollution, discharge of effluents to this water body should be prevented or prohibited. At the same time overfishing of the Koil sagar specially during the breeding seasons should monitored and controlled to protect the riverine commercially important fishes. Since 14 threatened and 4 endemic species of freshwater fishes of India are found in this water body conservation measures may be considered to maintain their population in an adequate number.

ACKNOWLEDGEMENTS

I am grateful to Dr. J. R. B. Alfred, Director and to Dr. S. K. Chanda, Deputy Director, Zoological Survey of India, Calcutta for their encouragements and necessary facilities. Thanks are also due to the Director of Fisheries, Govt. of Andhra Pradesh, Hyderabad and to Shri B. S. Prakash Rao, the

then Inspector of Fisheries, Mahbubnagar district, Andhra Pradesh for necessary assistance during the period of my survey of the Koil sagar.

REFERENCES

Barman, R. P. 1993. Fauna of Andhra Pradesh, Part-I : Fishes. *State Fauna Series.* **5** : 89-334. Zoological Survey of India publication, Govt. of India.

Greenwood, P. H., Rosen, D. E., Weitzman, S. H. and Myers, G. G. 1966. Phyletic studies of teleostean fishes with a provisional classification of the living fishes forms. *Bull. Am. Mus. nat. Hist.,* **131** : 339-456, pls. 21-23

Jayaram, K. C. 1981. The Freshwater Fishes of India, Pakistan, Bangladesh, Burma and Sri Lanka. A hand book, Zoological Survey of India, Govt. of India, xxii + 475

Menon, A. G. K. 1999. Check list of Freshwater Fishes of India. *Rec. zool. Surv. India. Occ. Paper No.* : **175** : i-xxviii + 1-366.

Molur, S. & Walker, S. (eds.) (1998). Report of the workshop "Conservation Assessment and Management Plan for Freshwater Fishes of India", Zoo Outreach Organisation, Conservation Breeding Specialist Group, India, Coimbatore, India. 156 p.