

A CHECKLIST OF THE ENDEMIC AND THREATENED FISHES OF WESTERN GHATS

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INTRODUCTION

The Western Ghats, an important biogeographic zone of India and one of the global hotspots, offer beautiful niches to the piscine fauna of the region. The Ghats having about 1400 km. long almost continuous chain of hills, obstruct southwest monsoon and forms major water shade for Peninsular India. It gives rise to three east flowing major rivers like Godavari, Krishna and Cauvery as well as many short west flowing rivers viz. Vaitarana, Savitri, Vashishthi, Shastri and number of their tributaries. Higher degree of precepitation, moderate climate and huge forest cover in the Western Ghats supports plenty of aquatic life including fish fauna. More than 60 million years old tropical ecosystem of Western Ghats, having senile topography and many naturally portected streams, ponds and rivulets enrich high degree of endemism among ichthyofauna. Yet, out of 135 species of fishes known from northern part of Western Ghats, about 38% are under threat and few are on the verge of extinction.

The present work is based on study carried out by examining the huge fish collection present at WRS/ZSI, Pune collected from 1960-1995 (Yadav 1997).

MATERIAL AND METHODS

The colection was made by using cast net, bag net, water net etc. in rivers; by blocking a small portion of hillstream or by drying out smaller ponds.

The fish specimens were instantly fixed in the 4.5% Formaldehyde solution. Larger specimens were injected with conc. Formaldehyde, while medium sized specimens were given a silt on belly. After 4-5 hour's fixation, the fish specimens were washed with water and preserved in Rectified spirit with detailed label of locality, Dt., Coll. etc.

The specimens were indentified by examining the shape of snout, presence/absence and number of barbules by studying meristic characters (which do not vary with age) e. g. number of dorsal fin rays number of scales in lateral line, scales from dorsal fin to 1.1 and 1.1 to ventral fin, circumpeduncular scales etc. Relative proportion of Head length to standard length, Body depth to body length were also studied. The work of day (1875-78) and the latest books, Menon (1964, 1987), Jayaram (1981, 1991) and Talwar & Jhingran (1991) were consulted. Doubtful fish specimens were compared with the standard Reference collection.

Endemic fishes are considered as those occurring only in the Western Ghats and nowhere else. Obviously these are primary freshwater and hillstream fishes.

Threatened is a taxon which is facing high risk of extinction in the wild, in immediate future, if the casual factors continue operating. Threatened category falls under three sub groups : Critically Endangered, Endangered and Vulnerable.

By assuming identical methods of collection with the aid of good quality equipments, a data on the fish collection for the last 35 years (i. e. 1960 to 1995) have been analysed by evaluating number of fishes collected per survey, occurrence, abundance of fishes was found out (Yadav, 1997).

ENDEMIC & THREATENED FISHES OF NORTHERN PART OF W. GHATS

Order : CYPRINIFORMES

Family : CYPRINIDAE

Sub family : RASBORINAE

*1. *Barilius evezardi* Day

*2. *Barilius gatensis* (Val.)

*3. *Danio fraseri* Hora & Mukerji

*4. *Rasbora labiosa* Mukerji

Sub family : CYPRININAE

5. *Cirrhinus cirrhosa* (Bloch)

*6. *Gonoproktopterus curmuca* (Ham.-Buch.)

8. *Labeo calbasu* (Ham.-Buch.)

9. *Labeo dussumieri* (Val.)

10. *Labeo fimbriatus* (Bloch)

11. *Labeo kontius* (Jerdon)

*12. *Labeo potail* (Sykes)

*13. *Neolissochilus hexagonolepis* (McClelland)

*14. *Osteobrama bhimensis* Singh & Yazdani

*15. *Puntius caveriensis* (Hora)

*16. *Puntius carnaticus* (Jerdon)

*17. *Puntius crescentus* Yazdani & Singh

*18. *Puntius deccanensis* Yazdani & Rao

*19. *Puntius fasciatus fasciatus* (Jerdon)

*20. *Puntius f. pradhani* Tilak

*21. *Puntius fraseri* (Hora & Misra)

*22. *Puntius jerdoni* (Day)

23. *Puntius narayani* (Hora)

Order PERCIFORMES
Family NANDIDAE

*50. *Pristolepis marginata* (Jerdon)

Order SYNBRANCHYFORMES
Family SYNBRANCHIDAE

*51 *Monopterus indicus* (Silas & Dawson)

* Endemic

RESULTS & DISCUSSION

The present study submits 51 species of fishes which are threatened of which 40 spp. are endemic to this region. (Table I), out of these, 3 cyprinids are restricted to the west flowing rivers. The present list incorporates 12 species recommend by Menon (1988) and Anonymous (1991) and 8 by Yazdani (1991).

The west flowing rivers of the Western Ghats having restricted range of distribution for fishes exhibit an interesting piscine fauna. These are *Puntius crescentus* Yazdani & Singh (Kalinadi river Karwar, Karnataka), *P. fasciatus* pradhani Tilak (Molem, Goa) and *P. setnai* Chhapgar & Sane (Sanguem, Goa).

Although speciation and extinction are natural phenomena, extinction due to human invasion, chemical sources etc, is harmful. Further, Menon (1994) elaborated the definition of extinction, i.e. if species not definitely located in the wild, during the last 50 years, then only it can be called as 'Extinct'

Despite several efforts of ichthyologists from W. R. S. Pune we could not collect *Rasbora labiosa* Mukerji and *Puntius fraseri* Hora & Misra (1939), from their type locality i.e. Darna river a tributary of Godavari river, Nasik Dist. Maharashtra. Hence it is suggested that these two species may be considered as extinct.

Anthropological activities and heavy industrial pollution throwing uncontrollable effluent water in rivers, inichthyofauna of Western Ghats is under threat.

For conserving precious ichthyofauna of Western Ghats, urgent steps like putting ban on mass killing of fishes, strict observance of close period during breeding season, enforcement of new fishery law, protecting fish life, provision of fish ladder, fish-refugia, eradication of water pollution, formation of fish sanctuaries etc. must be taken seriously.

TABLE I : % Composition of threatened & endemic fishes of Western Ghats

Sr. No.	Order	Endemic	Threatened
1.	Cypriniformes (n = 85)	23.5%	40%
2.	Siluriformes (n = 28)	17.8%	32%

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