

OCCASIONAL PAPER NO. 277

Ichthyofauna of Indira Gandhi Wildlife Sanctuary

K. REMA DEVI
T.J. INDRA
M.B. RAGHUNATHAN



ZOOLOGICAL SURVEY OF INDIA

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**RECORDS OF THE
ZOOLOGICAL SURVEY OF INDIA**

**Ichthyofauna of Indira Gandhi
Wildlife Sanctuary, Tamil Nadu**

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INTRODUCTION

A major part of the Anaimalai Hill Ranges in Tamil Nadu, declared open in 1976 as the Indira Gandhi Wildlife Sanctuary and National Park (Map 1), is an important segment of Western Ghats, which harbours many endemic species. This unique ecological tract generally classified as the 'Anaimalais' is rich in biodiversity. The Sanctuary covers an area of 958 sq. km. including 108 sq. km. of National Park. It was the erstwhile Coimbatore South Division spreading over the present Valparai, Pollachi and Udumalpet Taluk of Coimbatore District and portion of Kodaikanal Taluk of Madurai District. The Sanctuary located mainly in the Valparai Taluk lies between latitude 10°12" and 10°54" North and longitudes 76°44" and 79°48" East. It is so varied and diversified in its topography, rainfall, climate and temperature that it supports a wide variety of unique Fauna and Flora. The Forests here exhibit a wide diversity in terrain and climate, with elevations ranging from 340 m to 2200 m and with rainfall from 750 mm to 5000 mm. The forests range from the tropical wet evergreen, tropical moist deciduous, tropical dry deciduous, montane wet temperate, tropical thorny, dry savannah to bamboo forests and reeds. The area gets both Southwest and Northeast monsoon.

A few perennial and many seasonal streams drain the sanctuary viz. Aliyar, Kallar, Sholayar, Italiar, Chinnar, Periyar, Varagalaiyar, Palar, Nirar, Kurumalayar and Vandaiyar. The major reservoirs are Thirumurthy Dam, Aliyar Dam, Amaravathi Dam, Sholayar Dam and Nirar Dam, (Plates XI-XVI).

In order to study the Fauna of the Sanctuary in accordance with the approved plan of research work, six extensive surveys were carried out by the Scientists of the Southern Regional Station, during 1996-98 and a total of 4741 specimens were collected belonging to 60 species under 18 families and 8 orders. The specimens were registered and deposited in the reserve collections of the Southern Regional Station.

SURVEY DETAILS ARE AS FOLLOWS :

From 02.02.96 – 20.02.96 by Dr. M. B. Raghunathan (M. B. R.)

From 30.03.96 – 16.04.96 by Dr. M. S. Ravichandran (M. S. R.)

From 19.11.96 – 09.12.96 by Dr. M. S. Ravichandran

From 14.08.97 – 28.08 97 by Dr. M. B. Raghunathan

From 08.12.97 – 23.12.97 by Dr. M. Mary Bai and (M. M. B.)

From 10.02.98 – 02.03.98 by Dr. M. S. Ravichandran

The present paper deals with the systematic list of the species, identifications being based on Day (1875-1878), Jayaram (1999, 2006), Menon (1999) and Talwar and Jhingran (1991). Under each species necessary references, details of material examined viz. length range in Standard Length (SL), register numbers, locality, date, collector's

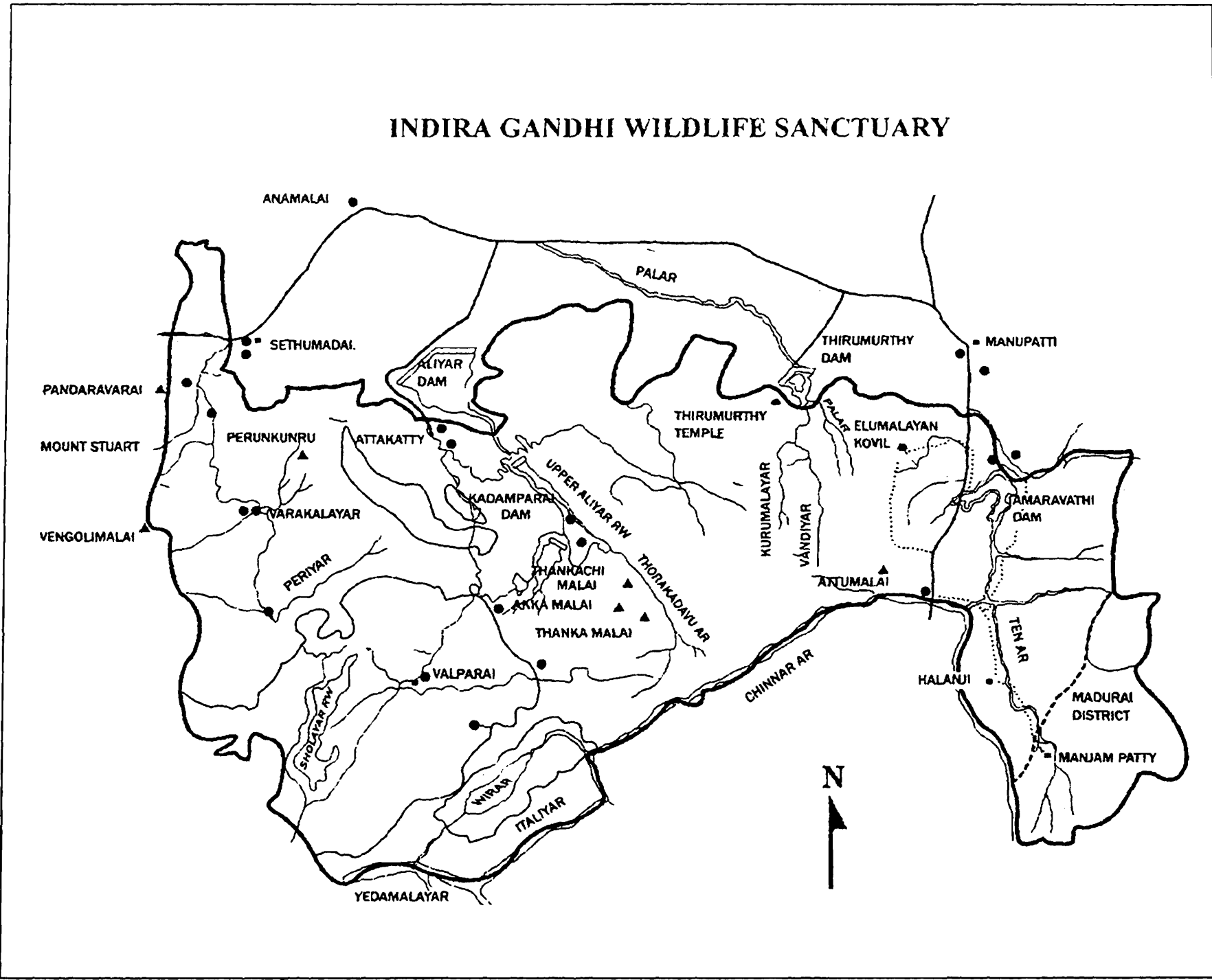


Fig. 1. Map : Ichthyofauna of Indira Gandhi Wildlife Sanctuary, Tamil Nadu

name, distribution and remarks if any, are included (Characters within parenthesis are those reported in Talwar and Jhingran, 1991). Plates I-XVI including photographs of all the species and some localities surveyed are included at the end of the text.

- * New reports to Anaimalai Hill ranges (42 species)
- # Species endemic to Western Ghats (20 species)
- @ Species common to IGWLS and Sri Lanka (24 species)

LIST OF SPECIES

Subdivision OSTEOGLOSSOMORPHA
Order OSTEOGLOSSIFORMES
Family NOTOPTERIDAE

1. *Notopterus notopterus* (Pallas)*

Subdivision EUTELEOSTEI
Order CYPRINIFORMES
Family CYPRINIDAE
Subfamily DANIONINAE

Tribe **Oxygasterini**

- 2. *Salmophasia acinaces* (Valenciennes) (= *Chela argentea* Day) #
- 3. *Salmophasia clupeoides* (Bloch)*
- 4. *Barilius bendelisis* (Hamilton)*
- 5. *Barilius gatensis* (Valenciennes) #

Tribe **Danionini**

- 6. *Esomus thermoicos* (Valenciennes)* @
- 7. *Devatio malabaricus* (Jerdon) @
- 8. *Rasbora caverii* (Jerdon)* @
- 9. *Rasbora daniconius* (Hamilton) @
- 10. *Amblypharyngodon microlepis* (Bleeker)*

Subfamily CYPRININAE
Tribe **Cyprinini**
Subtribe **Cyprini**

- 11. *Cyprinus carpio communis* (Linnaeus)* @

Subtribe **Tores**

- 12. *Tor khudree* (Sykes) @

Tribe **Systemi**

13. *Puntius carnaticus* (Jerdon) #
14. *Puntius sarana subnasutus* (Valenciennes)* @
15. *Hypselobarbus curmuca* (Hamilton) #
16. *Hypselobarbus dobsoni* (Day) #
17. *Hypselobarbus dubius* (Day)* #
18. *Hypselobarbus jerdoni* (Day)* #
19. *Puntius amphibius* (Valenciennes) @
20. *Puntius bimaculatus* (Bleeker)* @
21. *Puntius cauveriensis* (Hora)*
22. *Puntius chola* (Hamilton)* @
23. *Puntius conchoni* (Hamilton)* @
24. *Puntius dorsalis* (Jerdon) @
25. *Puntius filamentosus* (Valenciennes) @
26. *Puntius fasciatus* (Jerdon) #
27. *Puntius melanostigma* (Day)* #
28. *Puntius punctatus* (Day)
29. *Puntius sophore* (Hamilton)*

Tribe **Labeonini**

30. *Cirrhinus cirrhosus* (Bloch)*
31. *Catla catla* (Hamilton)* @
32. *Labeo rohita* (Hamilton)* @

Subfamily **GARRINAE**

33. *Garra hughii* (Silas)* #
34. *Garra mcClellandi* (Jerdon)* #
35. *Garra mullya* (Sykes)

Family **BALITORIDAE**Subfamily **BALITORINAE**

36. *Bhavana australis* (Jerdon)* #

Subfamily **NEMACHEILINAE**

37. *Schistura denisoni denisoni* (Day)* #

Order SYNBRANCHIFORMES
 Suborder MASTACEMBELOIDEI
 Family MASTACEMBELIDAE

53. *Mastacembelus armatus* (Lacepede) @

54. *Mastacembelus malabaricus* (Jerdon)* #

Order PERCIFORMES
 Suborder PERCOIDEI
 Family CHANDIDAE

55. *Chanda nama* Hamilton*

Family NANDIDAE
 Subfamily PRISTOLEPIDINAE

56. *Pristolepis marginatus* (Jerdon)* #

Suborder LABROIDEI
 Family CICHLIDAE

57. *Eetroplus maculatus* (Bloch)* @

58. *Oreochromis mossambica* (Peters)* @

Suborder GOBIOIDEI
 Family GOBIIDAE
 Subfamily GOBIINAE

59. *Glossogobius giuris* (Hamilton)* @

Suborder CHANNOIDEI
 Family CHANNIDAE

60. *Channa orientalis* (Schneider) (*C. gachua* (Ham.)) @

SYSTEMATIC ACCOUNT

1. *Notopterus notopterus* (Pallas)* (Plate – I)

1769. *Gymnotus notopterus* Pallas, *Spicil. Zool.*, 7 : 40, pl. 6, fig. 2 (type-locality : ?Indian Ocean).
 1991. *Notopterus notopterus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 64-65.
 1999. *Notopterus notopterus*, Jayaram, *The Freshwater Fishes of The Indian Region* : 19-20.

Material : 1 ex., 225 mm. SL., F.5391, Aliyar, 16.08.97, M. B. R.; 1 ex., 240 mm. SL., F.5435, Amaravathi Dam, 18.12.97, M. M. B.; 1 ex., 205 mm. SL., F.5610, Aliyar,

12.2.98, M. S. R.; 1 ex., 200 mm. SL., F. 5663, Amaravathi Dam, 24.02.98, M. S. R.; 1 ex., 225 mm, SL., F.5688, Kuduthrai, 26.2.98, M. S. R.; 1 ex., 228 mm. SL., F.5703, Thirumurthi Dam, 27.2.98, M. S. R.

Distribution : India; Myanmar; Bangladesh; Indonesia; Malaysia; Nepal; Pakistan; Thailand.

2. *Salmophasia acinaces* (Valenciennes)

(Plate-I)

1842. *Leuciscus acinaces* Valenciennes, *Hist. Nat. Poiss.*, 17 : 509 (type-locality : Kavery drainage, Mysore).

1991. *Salmostoma acinaces*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 321.

1998. *Salmophasia acinaces*, Kottelat, *J. South Asian nat. Hist.*, 3 (1); 117-119.

Material : 1 ex., 82 mm. SL., F.5211, Solaiyar Dam, 14.8.97, M. B. R.; 3 exs., 29-53 mm. SL., F.5335, Valparai, 15.8.97, M. B. R.; 3 exs., 21-77 mm. SL., F.5385, Periyapodham, 17.8.97, M. B. R.; 1 ex., 108 mm. SL., F.5458, Navamalai, 13.12.97, M. M. B.

Remarks : Earlier reported from North and Central Western Ghats, the species is reported here for the first time from Southern Western Ghats. Some additional observations / differences in characters than those given in Talwar and Jhingran (1991) are viz. Ll. 40-43(vs.39-42); L. tr. 7-7 ½ / 2 (vs. 6/3); Predorsal scales 22-26; gill rakers in the lower arm of the first arch 13-14 (vs.15-20).

Distribution : India; Peninsular India; Western Ghats; Nilgiris and Anamalais; Cauvery System and the Thungabhadra River.

3. *Salmophasia clupeioides* (Bloch)*

(Plate - I)

1782. *Cyprinus clupeioides* Bloch, *Naturges ausland. Fische*, 12 : 49, pl. 408, fig. 2 (type-locality: "Indian Ocean" evidently not the ocean but some fresh water).

1991. *Salmostoma clupeioides*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 323.

1998. *Salmophasia acinaces*, Kottelat, *J. South Asian nat. Hist.*, 3 (1); 117-119.

Material : 4 exs., 104-199 mm. SL., F. 4912, Thirumurthi Dam, 11.2.96, M. B. R.; 14 exs., 52-65 mm. SL., F. 5419, Thirumurthi Dam, 19.12.97, M. M. B.; 1 ex., 67 mm. SL., F. 5670, Thoovanam, 24.2.98, M. S. R.

Remarks : A. 3/13-14 (vs.3/11-12); L. tr. 4½-5½ (3-4); Gill rakers 17-20 + 5-6 (vs. 24-29).

In one specimen of length 119.0 mm S.L. (F. 4912) the pelvic fins are absent. In some specimens vertical spots on body is seen. Day (1878) remarked that the usual

height of the body is 5.5 in T. L. while it is extremely slender and 7.5 in T. L. in badly nourished examples from dirty waters of Cooum in Chennai. However from Anaimalai hills some abnormally slender specimens were collected from Thoovanam.

Distribution : India; Peninsular India; Gujarat; Maharashtra; Karnataka; Tamil Nadu and Madhya Pradesh (Cauvery; Godavary; Krishna; Narmada and Tapti River Systems).

4. *Barilius bendelisis* (Hamilton)* (Plate – I)

1807. *Cyprinus bendelisis* Hamilton-Buchanan, *Journey in Mysore*, 3 : 345, pl. 32 (type-locality : Vedawati stream, headwaters of Krishna river *nr.* Heriuru, Mysore).

1991. *Barilius bendelisis*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 346-347.

1999. *Barilius bendelisis*, Jayaram, *The Freshwater Fishes of The Indian Region* : 70-71.

Material : 75 exs., 17.5-84.0 mm. SL., F. 4916, Kudriyar Dam, 15.2.96, M. B. R.; 1 ex., 61 mm. SL., F.4926, Kallapuram. 08.02.96, M. B. R.; 1 ex., 36 mm.SL., F. 4932, Thirumurthi Dam, 11.2.96, M. B. R.; 2 exs., 30-40 mm. SL., F. 5220, Chinnar River, 07.08.97, M. B. R.; 6 exs., 45-50 mm. SL., F. 5339, Kozhumam, 9.8.97, M. B. R.; 3 exs., 40-47 mm. SL., F. 5372, Kudriyar Dam, 9.8.97, M. B. R.; 1 ex., 107 mm. SL., F. 5692, Kuduthurai, 26.2.98, M. S. R.

Remarks : P. 1/12 (vs. 1/14); C. 19; Predorsal scales (PDS) 17-20 (vs.18-20).

Two pairs of well developed barbels and scaly sheath above ventral fins are observed in the present specimens are in contrast to Hamilton's description for *bendelisis*. Tubercles fairly well developed on snout and lower jaw (vs.small and poorly developed on snout and lower jaw).Vertical stripes on body variable in number and also on either side of the same specimen, ranging from 8-12; in one specimen it was 6/7. In addition to the vertical stripes extending from back to the middle of the body, 7-8 horizontal rows of spots are seen, also a black streak behind opercle. Dorsal and caudal fin edges are dark. Several specimens had dark patches on different parts of the body which may be due to parasitic infestation (Plate I)). Black spot disease or diplostomiasis caused by probably the trematode *Diplostomum pigmentata* All the specimens collected from the Kudriyar dam during Feb.1996 had very dark dorsal surface.

Distribution : India; Throughout; Bangladesh; Nepal; Pakistan; Sri Lanka.

5. *Barilius gatensis* (Valenciennes) (Plate – I)

1844. *Leuciscus gatensis* Valenciennes, *Hist. nat. Poiss.*, 17 : 309, pl. 503 (type-locality : Peninsula of India).

1991. *Barilius gatensis*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 349.

1999. *Barilius gatensis*, Jayaram, *The Freshwater Fishes of The Indian Region* : 70-71.

Material : 1 ex., 50 mm. SL., F. 4904, Kadamparai area, 14.2.96, M. B. R.; 6 exs., 45-68 mm. SL., F.4914, Solaiyar Dam, 14.2.96, M. B. R.; 2 exs., 65-66 mm. SL., F. 4945, Attakatti, 17.2.96, M. B. R.; 5 exs., 29-70 mm. SL., F. 5219, Chinnar River, 07.08.97, M. B. R.; 1 ex., 61 mm. SL., F. 5260, Shola Forest near Topslip, 22.2.98, M. S. R.; 4 exs., 28-52 mm. SL., F. 5274, Sarkarpathy, 2.12.96; M. S. R.; 1 ex., 40 mm.SL., F. 5340, Kozhumam, 9.8.97, M. B. R.; 1 ex., 37 mm. SL., Kudriyar Dam, 9.8.97, M. B. R.; 1 ex., 25 mm.SL., Periyapodham, 17.8.97, M. B. R.; 1 ex., 24 mm. SL., Upper Aliyar, 13.2.98, M. S. R.; 5 exs. 26-46 mm. SL. F. 5652, Varagalaiyar, 20.2.98, M. S. R.; 70 exs., 25-62 mm. SL., F.5227, Devikulam, 13.8.97, M. B. R.; 3 exs. 24-27 mm. SL., Kolikamuthi, 21.02.98, M. S. R.; 66 exs., 23-70 mm. SL., F. 5355, Sethumadai canal, 13.8.97, M. B. R.; 2 exs., 44-58 mm.SL., F. 5402, Thirumurthi Dam, 6.8.97, M. B. R.; 18 exs., 20-72 mm. SL., F. 5410, Sarkarpathy, 11.08.97, M. M. B.; 2 exs., 49-65 mm. SL., F. 5443, Thunakadavu Dam, 16.12.97, M. M. B.; 5 exs., 70-89 mm. SL., F. 5448, Solaiyar Dm, 12.12.97, M. M. B.; 4 exs., 50-56 mm. SL., F. 5635, Sarkarpathy, 11.08.97, M. M. B.; 11 exs., 49-68 mm. SL., F. 5642, Nagarwoth, 18.2.98, M. S. R.

Remarks : P.1/12-14 (vs.1/14); C.19; L.1.38-42 (vs. 39-40); PDS.18-20 (vs. 15), Gill rakers 5 +1.

Body slender 3.9 in S.L., 4.9 in T.L. in specimens from Nagerwoth (vs. 3.2-3.5 in S.L.). Regarding the number of barbels in this species there seems to be a lot of discrepancy; Day (1887) writes "two very minute pairs which appear to be wanting" Talwar and Jhingran (1991) mention one minute rostral pair, often wanting and in Jayaram (1991) *gatensis* is keyed to species with only one pair of barbels. The present specimens have two pairs of minute barbels.; well developed tubercles on snout and lower jaw. Parasitic crustacean infestations were observed on the anal fin in the specimens collected from Solaiyar dam during Feb.1996. Vertical bars 11-16 (vs.13-15), in one specimen it was 7/11, in another 11 bars on either side with another row of 5 bars on the lower half of the body; these vertical bars become more or less broken up in adults and appear as oblong spots towards caudal.

Though some specimens bear resemblance to *barna* in their fewer number of lateral bars (10-11), they bear closer affinity to *B.gatensis* in having more number of branched anal rays 12-14 (vs.10-11). Silas however recorded both *gatensis* and *barna* from Anamalai hills.

Distribution : India; W. Ghats.

6. *Esomus thermoicos* (Valenciennes)* (Plate – I)

1842. *Nuria thermoicos* Valenciennes, *Hist. nat. Poiss.*, 16 : 238, pl. 472 (type-locality : hot springs at Kanniya, Sri Lanka).
1991. *Esomus thermoicos*, Talwar & Jhingran, *Inland fishes of India and Adjacent Countries*, Vol 1 : 378-379.

1999. *Esomus thermoicos*, Jayaram *The Freshwater Fishes of The Indian Region* : 75.

Material : 12 exs., 25-66 mm.SL., F.4927, Kallapuram, 08.02.96, M.B.R.; 1 ex., 59 mm.SL., F.4918, Kudriyar Dam, 15.2.96, M.B.R.; 9 exs., 68-80.5 mm.SL., F.4949, Sethumadai canal, 16.2.96, M.B.R.; 1 ex., 63 mm.SL., F.5350, Kallapuram, 09.08.97, M.B.R.; 1 ex., 55.5 mm.SL., F.5380, Amaravathi Nagar, 10.08.97, M.B.R.; 1 ex., 65 mm.SL., F.5441, Thunakadavu Dam, 16.12.97, M.M.B.; 1 ex., 27 mm.SL., Karumalai, 14.02.98, M.S.R.; 20 exs., 33-53 mm.SL., F.5626, Sethumadai canal, 16.2.98, M.S.R.; 20 exs., 19-69 mm.SL., F.5683, Punganodai, 25.2.98, M.S.R.; 23 exs., 20-72 mm.SL., F.5699, Kuduthurai, 26.2.98, M.S.R.; 22 exs., 19-65 mm.SL., F.5707, Thirumurthi Dam, 27.2.98, M.S.R.; 29 exs., 24-52 mm.SL., F.5719, Navalodai, 28.2.98, M.S.R.

Remarks : P.1/11(Vs.1/14); C.19; PDS.17 ½- 20; L.1.33-35 (vs. 32-34); L.1. complete; gill rakers 17 + 5. Bright lateral band. Maxillary reaching 3/4th length of pectoral or tip of inner rays of pectoral fin; in specimens from Kallapuram the barbels reach pectoral tip whereas very short barbels reaching only half length of pectoral fin is seen in specimens from Sethumadai. Outer rays of pectoral mostly much prolonged extending beyond pelvic origin. In specimens from Sethumadai dam body is more elongate and robust and not compressed as observed in other specimens. This species earlier known only from Sri Lanka is now found to be widely distributed in the Western Ghats and plains of Southern India.

Distribution : India; Southern India; Sri Lanka.

7. *Devario malabaricus* (Jerdon) (Plate – II)

1849. *Perilampus malabaricus* Jerdon, *Madras J. Lit. and Sci.*, **15** : 325 (type-locality : Malabar).

1991. *Danio malabaricus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 370-371.

2003. *Devario malabaricus*, Fang Fang, *Copeia*, (4) : 714-728.

Material : 11 exs., 15-27 mm.SL., F.4892, Aliyar, 13.02.96, M.B.R.; 9 exs., 21.5-53 mm.SL., F.4899, Chinnar River, 07.2.96, M.B.R.; 19 exs., 26-41 mm.SL., F.4905, Kadamparai area, 14.2.96, M.B.R.; 30 exs., 30-51 mm.SL., F.4917, Kudriyar Dam, 15.12.96, M.B.R.; 47 exs., 19.5-70.5 mm.SL., F.4925, Kallapuram, 08.02.96, M.B.R.; 7 exs., 53-76 mm.SL., F.4933, Thirumurthi Dam, 11.02.96, M.B.R.; 10 exs., 12.5-18 mm.SL., Varagalaiyar, 04.02.96, M.B.R.; 19 exs., 29-64 mm.SL., F.4942, Valparai, 09.2.96, M.B.R.; 24 exs., 16.5-80 mm.SL., F.4946, Attakatti, 17.2.96, M.B.R.; 18 exs., 39-66 mm.SL., F.4951, Sethumadai canal, 16.2.96, M.B.R.; 2 exs., 20.5-55 mm.SL., F.5261, Shola Forest near Topslip, 30.11.96, M.S.R.; 61 exs., 13.5-51 mm.SL., F.5265, Kilponachi, 21.11.96, M.S.R.; 60 exs., 15-84 mm. SL., F.5269, Upper Aliyar, 22.11.96, M.S.R.; 12 exs., 27-67 mm.SL., F.5275, Sarkarpathy, 2.12.96, M.S.R.; 102 exs., 16-51 mm.SL., F.5281, Sarkarpathy Power House, 03.12.96, M.S.R.; 22 exs., 33-46 mm.SL., F.5212, Solaiyar Dam, 14.8.97, M.B.R.; 45 exs., 17-55 mm.SL., F.5214,

Parambikulam, 13.8.97, M.B.R.; 68 exs., 21-58 mm.SL., F.5228, Devikulam, 13.08.97, M.B.R.; 48 exs., 19.5-50 mm.SL., F.5336, Valparai, 15.8.97. M.B.R.; 7 exs., 37-55 mm.SL., F.5341, Kozhumam, 9.8.97, M.B.R.; 137 exs., 22-55 mm.SL., F.5349, Kallapuram, 09.08.97, M.B.R.; 68 exs., 21-59 mm.SL., F.5356, Sethumadai Canal, 13.8.97, M.B.R.; 8 exs., 39-53 mm.SL., F.5373, Kudriyar Dam, 09.08.97, M.B.R.; 10 exs., 35-50 mm.SL., F.5381, Amaravathi Nagar, 10.8.97, M.B.R.; 50 exs., 21-76 mm.SL., F.5386, Periyapodham, 17.8.97, M.B.R.; 27 exs., 25-55 mm.SL., F.5393, Aliyar, 16.08.97, M.B.R.; 74 exs., 17-61 mm.SL., F.5400, Sarkarpathy, 10.12.97, M.M.B.; 20 exs., 16-65 mm.SL., F.5403, Thirumurthi Dam, 6.8.97, M.B.R.; 237 exs., 23-65 mm.SL., F.5411, Sarkarpathy, 11.08.97, M.B.B.; 99 exs., 31-68 mm.SL., F.5416, Thirumurthi Dam, 19.12.97, M.M.B.; 8 exs., 26-60 mm.SL., F.5422, Chinnar River, 20.12.97, M.M.B.; 9 exs., 30-57 mm.SL., F.5424, Navamalai, 13.12.97, M.M.B.; 6 exs., 49-60 mm.SL., F.5444, Thunakadavu Dam, 16.12.97, M.M.B.; 10 exs., 18-50 mm.SL., F.5449, Aliyar, 14.12.97, M.M.B.; 13 exs., 36-83 mm.SL., F.5459, Navamalai, 13.12.97, M.M.B.; 28 exs., 21-70 mm.SL., F.5617, Upper Aliyar, 13.2.98, M.S.R.; 154 exs., 21-54 mm.SL., F.5620, Karumalai, 14.2.98, M.S.R.; 32 exs., 30-57 mm.SL., F.5622, Anamalai, 15.02.98, M.S.R.; 14 exs., 30-59 mm.SL., F.5625, Sethumadai Canal, 16.02.98, M.S.R.; 30 exs., 19-58 mm.SL., F.5634, Sarkarpathy, 11.8.97, M.M.B.; 74 exs., 16-92 mm.SL., F.5641, Nagarwoth, 18.02.98, M.S.R.; 4 exs., 38-43 mm.SL., F.5654, Varagalaiyar, 20.02.98, M.S.R.; 3 exs., 68-71 mm.SL., F.5671, Thoovanam, 24.02.98, M.S.R.; 4 exs., 50-56 mm.SL., F.5680, Punganodai, 25.02.98, M.S.R.; 2 exs., 57-65 mm.SL., F.5698, Kuduthrai, 26.02.98, M.S.R.; 86 exs., 42-70 mm.SL., F.5701, Thirumurthi Dam, 27.02.98, M.S.R.; 153 exs., 24-69 mm.SL., F.5723, Navalodai, 28.02.98, M.S.R.; 3 exs., 19-44 mm.SL., F.5767, Kolikamuthi, 21.02.98, M.S.R.

Remarks : D.2-3/9-13 (Vs.2/10-13); P.1/11-12 (1/14); A.2-3/13-16 (Vs.3/12-16); L.1.36-39 (Vs.32-34); PDS. 16-19 (Vs.14-15); Gill rakers 9 +1.

Two pairs of barbels, maxillary well developed reaching anterior border of eye, mandibular barbel small; tubercles on lower jaw; spine before eye prominent; lower jaw with six pores on either side. A small fleshy process on pectoral base and axillary scale on pelvic base. The congeneric species *aequipinnatus* and *malabaricus* have been differentiated by Jayaram (1991) by the number of branched rays in the dorsal and anal fins and scales on the lateral line scales which are less in number in *aequipinnatus* compared to *malabaricus*. A phylogenetic study of the *Danio* group has been recently done by Fang Fang (2003) based on which study the striped and barred *Danio* species have been under the genus *Devario*.

Frequency of Distribution-Predorsal scales (N = 39) in <i>D. malabaricus</i>							
Range	15	15.5	16	16.5	17	18	19
No.of specimens	3	1	21	2	11	0	1

Frequency of Distribution-Anal fin rays (N = 107) in <i>D. malabaricus</i>						
Range	13	14	15	16	17	
No.of specimens	5	35	49	16	2	
Frequency of Distribution-Dorsal fin rays (N = 104) in <i>D. malabaricus</i>						
Range	9	10	11	12	13	
No.of specimens	5	22	53	23	1	
Frequency of Distribution-Lateral line scales (N = 38) in <i>D. malabaricus</i>						
Range	36	37	38	39	40	41
No.of specimens	5	4	14	12	2	1

Distribution : India; Krishna and Cauvery River Basins and Throughout Western Ghats; Sri Lanka.

8. *Rasbora caverii* (Jerdon)*
(Plate – II)

1849. *Leuciscus caverii* Jerdon, *Madras J. Sci. & Lit*, **15** : 320 (type-locality : Cauvery River (Karnataka)).

1991. *Rasbora caverii*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 388-389.

1999. *Rasbora caverii*, Jayaram, *The Freshwater Fishes of The Indian Region*, : 82.

Material : 1 ex., 63 mm.SL., F.4919, Kudriyar Dam, 15.02.96, M.B.R.; 11 exs., 21-51.5 mm.SL., F.4928, Kallapuram, 08.2.96, M.B.R.; 5 exs., 22-41 mm.SL., F.5344, Kozhumam, 9.8.97, M.B.R.; 6 exs., 38-68 mm.SL., F.5374, Kudriyar Dam, 09.08.97, M.B.R.; 4 exs., 35-50 mm.SL., F.5382, Amaravathi Nagar, 10.08.97, M.B.R.; 1 ex., 55 mm.SL., F.5417, Thirumurthi Dam, 19.12.97, M.M.B.; 1 ex., 83 mm.SL., F.5672, Thoovanam, 24.02.98, M.S.R.; 8 exs., 32-60 mm.SL., F.5682, Punganodai, 25.2.98, M.S.R.; 4 exs., 30-34 mm.SL., Kuduthurai, 26.2.98, M.S.R.; 1 ex., 37 mm.SL., F.5706, Thirumurthi Dam, 27.2.98, M.S.R.; 2 exs., 30-32 mm.SL., F.5718, Navalodai, 28.2.98, M.S.R.

Remarks : Gill rakers 13 + 3; PDS. 15-16. In specimens from Kallapuram small tubercles are present on body, giving a granulated appearance. *R. caverii* are distinguished from *daniconius* in its less prominent lateral band and dorsal profile being deep and curved. Though the species is reported to occur in Southern India it has not been reported from Anaimalai though its congener has been reported from here.

Distribution : India; Southern India; Notably Karnataka; especially the Cauvery Basin; Javadi Hills; Eastern Ghats; Sri Lanka.

**9. *Rasbora daniconius* (Hamilton)
(Plate – II)**

1822. *Cyprinus daniconius* Hamilton-Buchanan. *Fishes of Ganges* : 327, 391, pl. 15, Fig. 889 (type-locality : rivers of southern Bengal).
1991. *Parluciosoma caverii*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 382-383.
1999. *Rasbora daniconius*, Jayaram, *The Freshwater Fishes of The Indian Region* : 82-83.

Material : 2 exs., 20-21 mm.SL., Karumalai, 14.02.98, M.S.R.; 7 exs., 15-29 mm.SL., F.4893, Aliyar, 13.2.96, M.B.R.; 1 ex., 38 mm.SL., F.4929, Kallapuram, 8.2.96, M.B.R.; 1 ex., 17.5 mm.SL., Varagalaiyar, 4.02.96, M.B.R., 20 exs., 24.5-95 mm. SL., F.4950, Sethumadai Canal, 16.02.96, M.B.R.; 2 exs., 42-58 mm.SL., F.5262, Shola Forest near Top Slip, 30.11.96, M.S.R.; 6 exs., 34-45 mm.SL., F.5222, Chinnar River, 07.08.97, M.B.R.; 5 exs., 27-55 mm.SL., F.5319, Devikulam, 13.08.97, M.B.R.; 9 exs., 45-60 mm.SL., F.5343, Kozhumam, 09.08.97, M.B.R.; 11 exs., 45-58 mm.SL., F.5375, Kudriyar Dam, 09.08.97, M.B.R.; 1 ex., 30 mm.SL., Periyapodham, 17.8.97, M.B.R.; 3 exs., 44-55 mm.SL., F.5423, Chinnar River, 20.12.97, M.M.B.; 4 exs., 30-54 mm.SL., F.5425, Navamalai, 13.12.97, M.M.B.; 1 ex., 37 mm.SL., F.5442, Thunakadavu Dam, 16.12.97, M.M.B.; 1 ex., 45 mm. SL., F.5450, Aliyar, 12.02.98, M.S.R.; 5 exs., 45-73 mm.SL., F.5623, Anamalai, 15.02.98, M.S.R.; 2 exs., 39-72 mm.SL., F.5627, Sethumadai Canal, 16.02.98, M.S.R.; 44 exs., 21-74 mm.SL., F.5647, Thunakadavu Dam, 19.02.98, M.S.R.; 5 exs., 37-54 mm. SL., F.5653, Varagalaiyar, 20.02.98, M.S.R.; 1 ex., 60 mm.SL., F.5673, Thoovanam, 24.02.98, M.S.R.; 1 ex., 65 mm. SL., F.5681, Punganodai, 25.02.98, M.S.R.; 2 exs., 28-35 mm.SL., Kuduthrai, 26.2.98, M.S.R.; 33 exs., 24-84 mm.SL., F.5705, Thirumurthi Dam, 27.02.98, M.S.R.; 87 exs., 18-82 mm. SL., F.5730, Navalodai, 28.02.98, M.S.R.; 7 exs., 40-53 mm. SL., F.5768, Kolikamuthi, 21.02.98, M.S.R.

Remarks : Predorsal scales 14-16; gill rakers 8+1.

Of the two specimens collected from Top Slip 42 and 58 mm SL., the smaller specimen was very elongate, body depth 5.2 in SL. whereas in the larger specimen it was 3.75 in SL.

Distribution : Throughout India; Bangladesh; Thailand; Myanmar; Nepal; Pakistan; Sri Lanka.

**10. *Amblypharyngodon microlepis* (Bleeker)*
(Plate – II)**

1853. *Leuciscus microlepis* Bleeker, *Verh. batav. Genoot. Kunst. Wet.*, 25 : 141 (Type-locality : Bengal).
1991. *Amblypharyngodon microlepis*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 337-338.
1999. *Amblypharyngodon microlepis*, Jayaram. *The Freshwater Fishes of The Indian Region*. : 86.

Material : 61 exs., 28-54 mm.SL., F.4924, Kallapuram, 08.2.96, M.B.R.; 2 exs., 40-45 mm.SL., F.5694, Kuduthrai, 26.2.98, M.S.R.; 2 exs., 28-38 mm.SL., F.5708, Thirumurthi Dam, 27.2.98, M.S.R.; 21 exs., 15-39 mm.SL., F.5717, Navalodai, 28.02.98, M.S.R.

Remarks : L.1.55-62 (vs.55-60); P.D.S.22-23; gill rakers 13. The specimens differ from the typical *microlepis* in being more deep, 3.25-3.75 in SL.(vs. 4-4.4 in SL.), in having 6.5 scale rows vs.5 rows between L.1. and the pelvic fin and the knob at symphysis of lower jaw being not very well developed as in those found in the plains.

Distribution : India; Bengal through Chota-Nagpur to Peninsular India; except the west face of the Western Ghats.

11. *Cyprinus carpio communis* (Linnaeus)* (Plate – II)

1758. *Cyprinus carpio communis* Linnacus, *Systema Naturae*, ed. 10. 1 : 320 (type-Locality : Europe).

1991. *Cyprinus carpio communis*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 184-186.

1999. *Cyprinus carpio communis*, Jayaram, *The Freshwater Fishes of The Indian Region*, : 91.

Material : 1 ex., 95 mm.SL., F.5270, Upper Aliyar, 22.11.96, M.S.R.; 2 exs., 165-170 mm.SL., F.5285, Manamboli, 25.11.96, M.S.R.; 1 ex., 160 mm.SL., F.5290, Manamboli, 28.11.96, M.S.R.; 1 ex., 260 mm.SL., F.5300, Thirumurthi Hills, 2.12.96, M.S.R. ; 1 ex., 210 mm.SL., F.5298, Aliyar, 14.12.97, M.M.B., 1 ex., 175 mm.SL., F.5437, Amaravathi Dam, 18.12.97, M.M.B.; 1 ex., 45 mm.SL., F.5455, Amaravathi Dam, 18.12.97, M.M.B.; 1 ex., 30 mm.SL., F.5651, Thunakadavu Dam, 19.02.98, M.S.R.

Remarks : D.3/17-20 (vs.3-4/18-20); L.tr.5.5-6/5-5.5; P.D.S.10-12; gill rakers 21-29 slightly resembling that of *Gonoproktopterus*. In a specimen of 160 mm.SL. from Manamboli only 1 pair of barbel was present on the left side, whereas on the right side two pairs of barbels were present. Crustacean parasites were observed on the dorsal and anal fins in some specimens. Wide variations were observed in the proportions of head length, body depth, length of caudal peduncle and fin length.

Distribution : Naturally found all through America; China; Europe; Japan; Korea; Taiwan. Introduced into India in 1939.

12. *Tor khudree* (Sykes) (Plate – III)

1839. *Barbus khudree* Sykes, *Trans. zool. Soc. Lond.*, 2 : 357 (type-locality : Mulla Mutha River nr. Poona, Maharashtra).

1991. *Tor khudree* Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 303-305.

1999. *Tor khudree* Jayaram, *The Freshwater Fishes of The Indian Region*, : 96.

Material : 1 ex., 183 mm.SL., F.5284, Manamboli, 25.11.96, M.S.R.

Remarks : L .1.25;L.tr.5/3 (vs.4.5/2.5); P.D.S. 8; D.3/9 osseous ; gill rakers 11 + 4. Head length is slightly shorter than body depth; two pairs of barbels, a small rectangular median mental lobe in the lower jaw. Silas (1951) listed *Barbus (Tor) khudree malabaricus* (Jerdon), and a recent paper Silas et.al. (2005) based on molecular studies treated *khudree* and *malabaricus* as distinct species the latter with a very narrow range of distribution.

Distribution : India : Peninsular India; especially in the hill streams of Karnataka; Kerala; Tamil Nadu and Maharashtra; Sri Lanka.

13. *Puntius carnaticus* (Jerdon)

(Plate – III)

1849. *Barbus carnaticus* Jerdon, *Madras J. Lit. & Sci.*, 15 : 311 (type-locality : Cauvery River).

1991. *Puntius carnaticus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 262-263.

Material : 2 exs., 26.5-74 mm.SL., F.4947, Attakatti, 17.02.96, M.B.R.; 3 exs., 88-115 mm.SL., F.4953; Sethumadai Canal, 16.02.96, M.B.R.; 1 ex., 230 mm.SL., F.5604, Aliyar, 12.02.98, M.S.R.; 2 exs., 54-60 mm.SL., F.5357, Devikulam, 13.8.97, M.B.R.; 5 exs., 15-55. mm.SL., F.5404, Thirumurthi Dam, 6.8.97, M.B.R.

Remarks : L.1.31-33 (vs.28-32); L.tr.5.5-6.5/3-4.5 (vs.5.5/3.5); P.D.S. 10-12; gill rakers 6+2-4. Body elongate, its depth 3.5 (vs.2.5-3.4) in S.L.; head length 4 (vs.4.25-4.75) in S.L. Anal fin long almost reaching caudal base. Dorsal fin origin in middle of body and with concave edge. Its height less than body depth. Fins tinged dark, upper and lower edge of caudal fin tinged black, rows of spots along lateral line and also above and below. Upper half dark with darker mid-lateral streak; faint blotch on caudal base. Tubercles on snout, and minute tubercles on scales. Though Menon (1999) included this species under *Barbodes*, Kottelat (1999) considered this genus as a junior synonym of *Barbonymus*. Though the species *carnaticus* needs to be kept under a separate genus, it is for the time retained under the genus *Puntius* till further revision is done.

Distribution : Peninsular India; Cauvery river systems in Nilgiri; Wynaad and Canara & Anamalai Hills.

14. *Puntius sarana subnasutus* (Valenciennes)*

(Plate – III)

1842. *Barbus subnasutus* Valenciennes, *Hist. nat. Poiss.*, 16 : 154 (type-locality : Pondicherry).

1991. *Puntius sarana subnasutus* Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 285-286.

Material : 1 ex., 201 mm.SL., F.5294, Thirumurthi Hills, 2.12.96, M.S.R.; 1 ex., 182 mm. SL., F.5436, Amaravathi Dam, 18.12.97, M.M.B.

Remarks : L.tr. 5.5-6/3.5-4; H.L. 4(vs.4.4-4.8) in S.L. Eye 4.5 (vs.3.5) in HL; P.D.S.10 (vs.10). Generic placement is as discussed under *carnaticus*.

Distribution : India; Peninsular; Krishna river and South.

15. *Hypselobarbus curmuca* (Hamilton)

(Plate – III)

1807. *Cyprinus curmuca* Hamilton-Buchanan, *Journey in Mysore*, 3 : 344, pl. 30 (type-Localities : Mysore, Western Ghats of India).

1999. *Hypselobarbus curmuca*, Menon, *Check list-Freshwater Fishes of India. Rec.Zool. Surv. India, Occ. Paper No. 175* : 75-77.

Material : 1 ex., 170 mm.SL., F.4936, Thirumurthi Dam, 11.02.96, M.B.R.; 9 exs., 93-195 mm.SL., F.5273, Manamboli, 25.11.96, M.S.R.; 1 ex., 148 mm.SL., F.5292, Manamboli, 28.11.96, M.S.R.; 1 ex., 182 mm.SL., F.5296, Thirumurthi Hills, 2.12.96, M.S.R.

Remarks : D.3/9 (vs.4/9); V.1/9 (vs.1/8); L.tr. 9.5-10.5/4.5-5.5; P.D.S. 13-15 (vs.9); gill rakers 13+6. One pair of barbel; in some specimens prominent tubercles on snout (three small tubercles on either side); last ray of ventral fin broad and thick and with tubercles; anal fin long, reaching caudal base; ventral axillary scale well developed; pectoral fin with muscular base, reaching almost ventral origin; each scale edged black; a dark streak behind opercle.

Distribution : India : Deccan and Mysore Plateau in the Krishna; Godavary and Cauvery rivers.

16. *Hypselobarbus dobsoni* (Day)

(Plate – III)

1876. *Barbus (Barbodes) dobsoni* Day, *J. Linn. Soc. Lond.*, 12 : 574, (type-locality : Deccan).

1999. *Hypselobarbus dobsoni* Menon, *Check list-Freshwater Fishes of India. Rec. Zool. Surv.India, Occ. Paper No.175* : 77.

Material : 30 exs., 18-41 mm.SL., F.5632, Sarkarpathy, 17.02.98, M.S.R.; 6 exs., 21-29 mm.SL., F.5643, Nagarwoth, 18.02.98, M.S.R.; 1 ex., 32 mm.SL., F.5649, Thunakadavu Dam, 19.02.98, M.S.R.; 1 ex., 39 mm.SL., F.5712, , Thirumurthi Dam, 27.02.98, M.S.R.; 4 exs., 25-39 mm.SL, F.5725, Navalodai, 28.2.98, M.S.R.

Remarks : D.3/8 (vs.3-4/ 9). weak, articulated; L.tr.5.5-6/3-3.5; L.l.30 (vs.26-32), curved; P.D.S. 9-11 (vs.12); gill rakers 6-7. Two pairs of very well developed barbels. Sensory pores below eye. H.L. 3.5 in SL., 4.5 in T.L.; height of dorsal slightly shorter than the body depth. Upper half of body dark up to lateral line; a lateral band ending in a blotch on caudal base; dorsal and caudal tips dark.

Talwar and Jhingran (1991) and Jayaram (1999) synonymized *dobsoni* with *jerdoni* retaining them under the genus *Puntius*. However Menon (1999) treated them as separate

species and he placed them under the genus *Hypselobarbus*. Even the placement of this species under this genus is doubtful since the shape of the gill rakers is quite different from those attributed to the genus *Hyselobarbus* (Rainboth, 1989) and is more close to those figured for the genus *Discherodontus*, but then it again differs in its three rows of pharyngeal teeth whereas *Discherodontus* as the name implies is characterized by two rows only. The species are being studied. *H. dobsoni* differs from *H. jerdoni* in having more number of lateral transverse scale rows 5.5-6/3.5 (Vs.5/2.5).

Distribution : India : Western Ghats; Krishna and Cauvery drainages.

17. *Hypselobarbus dubius* (Day)* (Plate – III)

1867. *Puntius (Barbodes) dubius* Day, *Proc. zool. Soc. Lond.*, 291, (type-locality : Bhavani R. at base of Nilgiri Hills, Tamil Nadu).

1999. *Hypselobarbus dubius*, Menon, *Check list–Freshwater Fishes of India. Rec. Zool. Surv. India, Occ. Paper No.175* : 77-78.

Material : 1 ex., 207 mm.SL., F.5439, Amaravathi Dam, 18.12.97, M.M.B.; 1 ex., 250 mm.SL., F.5453, Amaravathi Dam, 18.12.97, M.M.B.; 1 ex., 210 mm.SL., F.5603, Aliyar, 12.02.98, M.S.R.; 1 ex., 355 mm.SL., Amaravathi Dam, 12.04.96, M.S.R.

Remarks : D.4-5/9; L.l. 44-45; P.D.S. 14-15; Ltr. 9-9.5/5.5; gill rakers 16 in lower arm. Two pairs of barbels; dorsal spine strong and osseous Snout with one row of 3-8 pores in some examples from Amaravathi and Aliyar dam (vs. pores absent in Talwar and Jhingran,1991). Snout dolphin like in specimens from Anaimalai. In this species the gill rakers are as figured for the genus *Hypselobarbus* (Rainboth,1989).

Distribution : India : Western Ghats; Bhavani; Cauvery and Manimuthar.

18. *Hypselobarbus jerdoni* (Day)* (Plate – IV)

1870. *Barbus (Barbodes) jerdoni* Day, *Proc. zool. Soc. Lond.*, 372, (type-locality : Mangalore, Karnataka).

1999. *Hypselobarbus jerdoni*, Menon, *Check list–Freshwater Fishes of India. Rec. Zool. Surv. India, Occ. Paper No. 175* : 78-79.

Material : 1 ex., 35 mm.SL., F.5264, Shola Forest near Topslip, 30.11.96, M.S.R.

Remarks : Jayaram (1999) considered *dobsoni*, *pulchellus* and a variety *жердони* var. *maciveri* as synonyms of *жердони* but he retained the species under the genus *Puntius*, as also Talwar (1991), though they had considered the generic name *Gonoproktopterus* to include the large barbs viz. *kolus*, *dubius*, *micropogon*, *thomassi*, *lithopidos* and *curmuca*. Menon considered the generic name *Hypselobarbus* to include all these large barbs. He also considered *жердони* as a distinct species unlike Jayaram and Talwar

(op.cit.). The placement of this species under *Hypselobarbus* needs further study as in the species *dobsoni*. See remarks under *dobsoni*.

Distribution : India : South Karnataka; Kerala; Tamil Nadu and Maharashtra.

19. *Puntius amphibius* (Valenciennes)
(Plate – IV)

1842. *Capoeta amphibia* Valenciennes. *Hist. nat. Poiss.*, 16 : 282, pl. 478 (type-locality : Bombay).

1991. *Puntius amphibius*. Talwar and Jhingran. *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 257-258.

Material : 1 ex., 69 mm.SL., F.4909, Aliyar Canal, 11.02.96, M.B.R.

Remarks : L.tr. 4.5/2.5; gill rakers 26. Dorsal and caudal fins pigmented more towards the edges, a dark oval shaped blotch on 21st to 22nd scale on caudal peduncle, base of caudal fin dark.

Distribution : India : Peninsular India upto Orissa and Rajasthan; Sri Lanka.

20. *Puntius bimaculatus* (Bleeker)*
(Plate – IV)

1864. *Gnathopogon bimaculatus* Bleeker. *Verh. Nat. Holl. Maatsch. Haarlem*, (2) 20 : 17, pl. 4, fig.1 (type-locality : Ceylon).

1991. *Puntius bimaculatus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 259-260.

Material : 2 exs., 15-29 mm.SL., F.4894, Aliyar, 13.02.96, M.B.R.; 3 exs., 20-34 mm.SL., F.4920, Kudriyar Dam, 15.2.96, M.B.R.; 3 exs., 15-18.5 mm.SL., Varagalaiyar, 04.2.96, M.B.R.; 1 ex., 41 mm.SL., F.4952, Sethumadai Canal, 16.2.96, M.B.R.; 2 exs., 42-43, mm.SL., F.5276, Sarkarpathy, 02.12.96, M.S.R.; 2 exs., 27-28 mm.SL., Sarkarpathy Power House, 03.12.96, M.S.R.; 1 ex., 49 mm.SL., F.5215, Parambikulam, 13.08.97, M.B.R.; 2 exs., 38-39 mm.SL. F.5345, Kozhumam, 09.08.97, M.B.R.; 25 exs., 23-50 mm.SL., F.5352, Kallapuram, 09.8.97, M.B.R.; 1 ex., 34 mm.SL., F.5412, Sarkarpathy, 11.08.97, M.M.B.; 1 ex., 57 mm.SL., F.5429, Amaravathi Dam, 18.12.97, M.M.B.; 2 exs., 28-34 mm.SL., F.5629, Sethumadai Canal, 16.02.96, M.B.R.; 1 ex., 37 mm.SL., F.5633, Sarkarpathy, 11.08.97, M.M.B.; 8 exs., 30-37 mm.SL., F.5655, Varagalaiyar, 20.02.98, M.S.R.; 2 exs., 30-32 mm.SL., F.5769, Kolikamuthi, 21.02.98, M.S.R.

Remarks : D.2-3/7(vs.4/7-8); L.tr.4/3 (vs. 3.5/2.5-3.5). This species was earlier described as *puckelli* by Day from Bangalore. Subsequently the species was considered as the young of *dorsalis* by Hora. Later it was found to be a synonym of *bimaculatus* a Sri Lankan species. Presently the species is found to be widely distributed in the Peninsula, extending from the Central and Southern Western Ghats to the Eastern Ghats,

predominantly in the hilly regions. This is the first report of the species from the Anamalai hills.

Distribution : Southern India; Sri Lanka.

21. *Puntius cauveriensis* (Hora)*
(Plate – IV)

1937. *Barbus cauveriensis* Hora, *Rec. Indian Mus.*, 39 (1) : 20, fig. 7 (type –locality : Cauvery river, Coorg, Karnataka State).

1991. *Puntius cauveriensis* Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 263.

Material : 1 ex., 125 mm.SL., F.5665, Amaravathi Dam, 18.12.97, M.M.B.

Distribution : India : Cauvery river; Erode; Tamil Nadu; Kannige river; Kodagu dist; Karnataka; Palghat dist; Kerala; Amaravathi River; Anamalai Hills.

22. *Puntius chola* (Hamilton)*
(Plate – IV)

1822. *Cyprinus chola* Hamilton-Buchanan, *Fishes of Ganges* : 312, 389 (type-locality : Northeastern parts of Bengal).

1991. *Puntius chola*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol.1 : 263-265.

Material : 1 ex., 44 mm.SL., F.5353, Kallapuram, 9.08.97, M.B.R.; 1 ex., 111 mm.SL., F.5428, Amaravathi Dam, 18.12.97, M.M.B.; 18 exs., 68-107 mm.SL., F.5666, Amaravathi Dam, 24.2.98, M.S.R.; 14 exs., 56-120 mm.SL., F.5677, Punganodai, 25.2.98, M.S.R.; 3 exs., 96-100 mm.SL., F.5690, Kuduthrai, 26.02.98, M.S.R.

Remarks : V.1/7(vs. 1/8); A.3/5 (vs.2/5); L.1.25-26 (vs.26-28); PDS.9 (vs.10-12); gill rakers 11 + 5. Body depth 2.6 (vs.2.8-3.1) in SL. The blotch on caudal peduncle on 22nd to 23rd scale.

Distribution : Throughout India; Bangladesh; Myanmar; Nepal; Pakistan; Sri Lanka.

23. *Puntius conchoni* (Hamilton)*
(Plate – IV)

1822. *Cyprinus conchoni* Hamilton, *Fishes of Ganges* : 317, 389 (type-locality : Ponds of north east Bengal and Kosi river and Ami river).

1991. *Puntius conchoni*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 266.

Material : 1 ex., 28.0 mm.SL., F.5213, Solaiyar Dam, 14.08.97, M.B.R.; 2 exs., 23.0-37.0 mm.SL., F.5387, Periyapodam, 17.08.97, M.B.R.; 2 exs., 26.0-36.0 mm.SL.,

F.5394, Aliyar Dam, 16.08.97, M.B.R.; 2 exs., 18.0-36.0 mm.SL., F.5538, Valparai, 15.08.97, M.B.R.

Remarks : L.l. incomplete to almost upto anal fin in some specimens; L.tr. 6/5-5.5.

Distribution : Throughout India; Bangladesh; Nepal; Pakistan.

24. *Puntius dorsalis* (Jerdon)

(Plate – V)

1849. *Systomus dorsalis* Jerdon, *Madras J.Lit. & Sci.*, **15** : 314 (type-locality : Tanks and rivers in neighbourhood of Madras).

1991. *Puntius dorsalis* Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 268-269.

Material : 2 exs., 52-53 mm.SL., F.4954, Sethumadai Canal, 16.02.96, M.B.R.; 3 exs., 132-139 mm.SL., F.5431, Amaravathi Dam, 18.12.97, M.M.B.; 1 ex., 86 mm.SL., F.5724, Navalodai, 28.02.98, M.S.R.

Remarks : L.tr.4.5-5/2.5. Numerous sensory canal pores below eyes and on snout. Upper lip pliated; pectoral reaching beyond pelvic; pelvic reaching anal in specimens from Sethumadai.

Distribution : India : River systems in Andhra Pradesh; Karnataka; Tamil Nadu; Kerala; Orissa & Madhya Pradesh; Sri Lanka.

25. *Puntius filamentosus* (Valenciennes)

(Plate – V)

1844. *Leuciscus filamentosus* Valenciennes, *Hist. nat. Poiss.*, **17** : 96, pl.492 (type-ocality: "l'eseaux douces d' Alypey" = Alleppey, Kerala State).

1991. *Puntius filamentosus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 270-271.

Material : 4 exs., 100 mm.SL., F.4908, Aliyar canal, 11.02.96, M.B.R.; 14 exs., 85-135 mm.SL., F.4911, Thirumurthi Dam, 11.2.96, M.B.R.; 1 ex., 45 mm.SL., F.4931, Kallapuram, 08.02.96, M.B.R.; 1 ex., 38 mm.SL., F.5320, Devikulam, 13.8.97, M.B.R.; 1 ex., 36, mm.SL., F.5337, Valparai, 15.08.97, M.B.R.; 1 ex., 15 mm.SL., F.5392, Aliyar, 16.08.97, M.B.R.; 1 ex., 135 mm.SL. F.5430, Amaravathi Dam, 18.12.97, M.M.B.; 1 ex., 122 mm.SL., F.5611, Aliyar, 12.2.98, M.S.R.; 53 exs., 59-107 mm.SL., F.5664, Amaravathi Dam, 24.02.98, M.S.R.; 34 exs., 63-109 mm.SL., F.5676, Punganodai, 25.02.98, M.S.R.; 15 exs., 69-110 mm.SL., F.5689, Kuduthurai, 26.02.98, M.S.R.; 1 ex., 37 mm.SL., F.5710, Thirumurthi Dam, 27.02.98, M.S.R.; 8 exs., 30-39 mm.SL., F.5726, Navalodai, 28.02.98, M.S.R.; 1 ex., 55 mm.SL., F.5342, Kozhumam, 09.08.97, M.B.R.; 1 ex., 34 mm.SL., F.5351, Kallapuram, 09.08.97, M.B.R.; 1 ex., 57 mm.SL., F.5376, Kudriyar Dam, 9.8.97, M.B.R.

Remarks : L.l.21-23(vs.21); L.tr.5/3; PDS.7; a pair of minute barbels, absent in a specimen collected from Kallapuram; juveniles with 3 vertical bands, one below dorsal, one above anal, and one on caudal base; male specimens with greater part of the bases of scales darker in the upper half of the body; dorsal and anal fin rays prolonged and dark, caudal fin base and tip dark; a dark blotch above anal; a variety with the oval blotch tapering at its posterior end was collected at Kallapuram and rows of spots on caudal base. The *filamentosus* group of India and Srilanka has been revised by Pethyigoda and Kottelat (2005) and a new species described from Kallada River, Kerala.

Distribution : India : Cauvery and Krishna River systems in Andhra Pradesh; Karnataka; Tamil Nadu; Kerala; Goa; Sri Lanka.

26. *Puntius fasciatus* (Jerdon) (Plate - V)

1849. *Cirrhinus fasciatus* Jerdon, *Madras J. Lit. & Sci.*, 15 : 305 (type-locality : Malabar).

1865. *Labeo melanampyx* Day, *Proc. Zool. Soc. Lond.*, p. 317, (type-locality : Wynaad).

1991. *Puntius fasciatus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 269-270.

Material : 4 exs., 35-47 mm.SL., F.4900, Chinnar River, 07.02.96, M.B.R.; 15 exs., 28-43 mm.SL., F.4906, Kadamparai area, 14.2.96, M.B.R.; 1 ex., 35 mm.SL., F.4915, Solaiyar Dam, 14.02.96, M.B.R.; 1 ex., 13.5 mm.SL., Kudriyar Dam, 15.2.96, M.B.R.; 17 exs., 16.5-47 mm. SL., F.4943, Valparai, 4.2.96, M.B.R.; 6 exs., 29-39 mm.SL., F.5263, Shola Forest near Top Slip, 30.11.96, M.S.R.; 38 exs., 14-46 mm.SL., F.5266, Kilponachi, 21.11.96, M.S.R.; 34 exs., 19-66 mm.SL., F.5268, Upper Aliyar, 22.11.96, M.S.R.; 6 exs., 20-30 mm.SL., F.5277, Sarkarpathy, 2.12.96, M.S.R.; 3 exs., 37-58 mm.SL., F.5293, Nerar, 27.11.96, M.S.R.; 5 exs., 18-34 mm.SL., F.5223, Chinnar River, 07.08.97, M.B.R.; 3 exs., 21-29 mm.SL., F.5427, Navamalai, 13.12.97, M.M.B.; 11 exs., 15-37 mm.SL., F.5445, Thunakadavu Dam, 16.12.97, M.M.B.; 1 ex., 15 mm.SL., Aliyar, 12.02.98, M.S.R.; 1 ex., 48 mm.SL., F.5460, Navamalai, 13.12.97, M.M.B.; 106 exs., 24-58 mm.SL., F.5618, Upper Aliyar, 13.02.98, M.S.R.; 346 exs., 19-46 mm.SL., F.5621, Karumalai, 14.02.98, M.S.R.; 2 exs., 21-22 mm.SL., F.5637, Sarkarpathy, 11.08.97, M.M.B.; 4 exs., 22-45 mm.SL., F.5648, Thunakadavu Dam, 19.02.98, M.S.R.; 51 exs., 19-56 mm.SL., F.5766, Kolikamuthi, 21.02.98, M.S.R.; 35 exs., 28-50 mm.SL., F.5656, Varagalaiyar, 20.2.98, M.S.R.; 3 exs., 32-60 mm.SL., F.5660, Shola Forest near Top slip, 22.2.98, M.S.R.

Remarks : L.l.21 (vs.18-20); gill rakers 2-4 at the junction of the lower and upper arm. Usually with 3 prominent bands, in mature specimens the ground colour is dark with the bands merging with the dark ground colour, and tubercles are present on snout and lower jaw; tubercles were also present in a small specimen 37 mm S.L. collected

during November 96 from Nerar. In a specimen of length 58 mm SL from upper Aliyar which appeared to be a gravid female, when dissected, was found to harbour two large Acanthocephalan parasites in the body cavity measuring 66mm and 94 mm respectively.

Distribution : Peninsular India; Western Ghats; Goa; South Canara through Travancore hills to Nagercoil. Also Nilgiris; Cauvery drainage.

27. *Puntius melanostigma* (Day)*
(Plate – V)

1878. *Barbus melanostigma* Day, *Fishes of India* : 573, pl.143, fig.1 (type-locality : Wynaad, Kerala).

1991. *Puntius melanostigma*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 275.

Material : 1 ex., 51 mm.SL., F.5628, Sethumadai canal, 16.02.98, M.S.R.

Remarks : Resembles *P. amphibius* in the presence of one pair of barbels and the blotch on the caudal peduncle but differs from the same in its deeper body and more number of lateral scales 26 (vs.23-24) and L.tr. 5/3 (vs. 5/2.5).

Distribution : Southern India : Cauvery River system; Wynaad Hills and Bhavani River; A new report to Anamalai Hills.

28. *Puntius punctatus* (Day)
(Plate – V)

1878. *Barbus punctatus* Day, *Fishes of India*, p.577, pl.144, fig.7.

1999. *Puntius punctatus*, Menon, *Check list – Freshwater Fishes of India*. Rec. zool. Surv. India, Occ. Paper No.175 : 99.

Material : 1 ex., 42.0 mm.SL., F.5418, Thirumurthi Dam, 19.12.97, M.M.B.; 1 ex., 40.0 mm.SL., F.5426, Navamalai, 13.12.97, M.M.B.; 5 exs., 30-40 mm. SL., F.5630, Sethumadai canal, 16.02.98, M.S.R.; 1 ex., 35 mm.SL., F.5691, Kuduthurai, 26.02.98, M.S.R.

Remarks : L.l.24-25; PDS.8.5; L.tr.5/4. Jayaram (1999) and Talwar and Jhingran (1991) considered *punctatus* as synonym of *ticto*, while Menon (1999) kept them as separate species. *Puntius punctatus* is found to differ from *ticto* in its more elongated and slender body whereas it is deeper and more compressed in *ticto*; in the presence of a complete lateral line (vs.incomplete); shoulder spot on one scale below lateral line (vs. on the lateral line); caudal spot large on caudal peduncle above tip of anal fin (vs. small spot on middle of anal fin) and L.tr. 5/4 (vs. 5/3.5-4.5).

Distribution : India : Kerala; Tamil Nadu; Tirunelveli (Tambraparni drainage) and Anamalai Hills.

29. *Puntius sophore* (Hamilton)*
(Plate – V)

1822. *Cyprinus sophore* Hamilton, *Fishes of Ganges*, pp. 310, 389, pl. 19, fig. 86 (type-locality : Ponds and rivers in the Gangetic provinces).

1991. *Puntius sophore*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 288-289.

Material : 1 ex., 62 mm.SL., F.5678, Punganodai, 25.02.98, M.S.R.; 1 ex., 55 mm.SL., F.5709, Thirumurthi Dam, 27.02.97, M.S.R.; 1 ex., 56 mm. SL., F.5722, Navalodai, 28.2.98, M.S.R.

Remarks : Though widely distributed, this is the first report to Anamalais.

Distribution : Throughout India; Bangladesh; Myanmar; Nepal; Pakistan; Sri Lanka.

30. *Cirrhinus cirrhosus* (Bloch)*
(Plate – VI)

1795. *Cyprinus cirrhosus* Bloch *Naturges, ausland, Fishche*, 9 : 52, fig.411 (type- locality : Cauvery river), Tamil Nadu.

1991. *Cirrhinus cirrhosus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 170-171.

Material : 17 exs., 48-65 mm.SL., F.5432, Amaravathi Dam, 18.12.97, M.M.B.; 1 ex., 53 mm.SL., F.5696, Kuduthrai, 26.02.98, M.S.R.; 1 ex., 55 mm. SL., F.5727, Navalodai, 28.2.98, M.S.R.; 1 ex., 235 mm. SL., F.7220, Amaravathi Dam , 12.4.96, M.S.R.

Remarks : D.3-4/11-14 (3-4/13-15) ; L.tr.7.5/7.5 (4.5-5.5/4.5); gill rakers 36. The specimens bear some resemblance to *Cirrhinus mrigala* in the presence of more number of lateral transverse row of scales but differs from the same in the presence of two pairs of barbells; in a specimen from Navalodai the maxillary barbel is very small and present only on one side. In juveniles the dorsal fin tip is dark and about nine lateral stripes are seen on the body and a blotch on the caudal fin base.

Distribution : India : Cauvery; Godavary and Krishna river systems in South India.

31. *Catla catla* (Hamilton)*
(Plate – II)

1822. *Cyprinus catla* Hamilton, *Fishes of Ganges* : 287, pl. 13, fig. 81, (type-Locality : rivers and tanks of Bengal)

1991. *Catla catla*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 163-165.

1999. *Catla catla* Jayaram, *The Freshwater Fishes of The Indian Region*, : 131.

Material : 1 ex., 115.0 mm.SL., F.5667, Amaravathi Dam, 24.02.98, M.S.R.

Remarks : Introduced as a food fish and cultured in the reservoirs of Anamalais.

Distribution : Throughout India up to Krishna River; but introduced into the Cauvery river system; Bangladesh; Nepal; Pakistan; Thailand.

32. *Labeo rohita* (Hamilton)*
(Plate – VI)

1822. *Cyprinus rohita* Hamilton-Buchanan, *Fishes of Ganges* : 301, 388, pl. 36, fig. 85 (type-locality : Fresh-water rivers of Gangetic provinces).

1991. *Labeo rohita*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 219-220.

Material : 1 ex., 300 mm. SL., F.5602, Aliyar, 12.02.98, M.S.R.; 1 ex., 85 mm.SL., F.5714, Thirumurthi Dam, 27.02.98, M.S.R.

Distribution : India : Throughout Bangladesh; Myanmar; Nepal; Pakistan; Sri Lanka.

33. *Garra hughii* (Silas)*
(Plate – VI)

1955. *Garra hughii* Silas, *Rec. Indian Mus.*, **52** (1) : 2, pl.4, figs.1-4, (type-locality : Lower Vauguvarrae Estate, Travancore, Kerala State).

1991. *Garra hughii*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 424-425.

Material : 180 exs., 37-88 mm.SL., F.5328-5330, Kilkallar, 05.04.96, M.S.R.; 5 exs., 55-73 mm.SL., F.5773, Upper Aliyar, 13.02.98, M.S.R.

Remarks : High variation in scalation among the peninsular species of *Garra* especially in *G.hughii* was observed and discussed (Rema Devi and Indra,1999) and a revised key to the species was provided. This is an additional record to the Anamalais.

Distribution : India: Cardamom; Palni Hills & Anamalai Hills. W. Ghats.

34. *Garra mcClellandi* (Jerdon)*
(Plate – VI)

1849. *Gonorhynchus mcClellandi* Jerdon, 1849, *Madras J. Lit & Sci.*, **15** : 309 (type-locality : Bowany river and Manantoddy river at base of Nilgiris).

1991. *Garra mcClellandi*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 428.

Material : 2 exs., 16-49 mm.SL., F.5414, Sarkarpathy, 11.08.97, M.M.B.; 1 ex., (juv.), 21 mm. SL., Navamalai, 13.12.97, M.M.B.

Remarks : Though the lateral line count is 34 and the distance between anus to anal fin is 3.5 times in pelvic to anal fin as in *mullya*, the body is more slender and the post

dorsal distance much greater and bears more affinity to *McClellandi*. This is a new record to Anamalai hills.

Distribution : India : Western Ghats; Cauvery drainage; Nilgiris & Anamalais.

35. *Garra mullya* (Sykes) (Plate – VI)

1841. *Chondrostoma mullya* Sykes, *Trans. zool. Soc. Lond.*, 2 : 359, pl.62 fig.3 type-locality : Bheema river at Daunde, nr. Poona).

1991. *Garra mullya*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 429.

Material : 13 exs., 91-154 mm.SL., F.4913, Thirumurthi Dam, 11.02.96, M.B.R.; 2 exs., 40-42 mm. SL., F.4903, Chinnar River, 07.2.96, M.B.R.; 2 exs., 73-74 mm. SL., F.4955, Sethumadai canal, 16.02.96, M.B.R.; 1 ex., 33 mm. SL., F.5272, Upper Aliyar, 22.11.96, M.S.R.; 9 exs., 17-31 mm.SL., F.5278, Sarkarpathy, 2.12.96, M.S.R.; 1 ex., 71 mm. SL., F.5283, Sarkarpathy Power House, 3.12.96, M.S.R.; 18 exs., 20-40 mm. SL., F.5224, Chinnar River, 07.08.97, M.B.R.; 3 exs., 25-40 mm. SL., F.5332, Devikulam, 13.8.97, M.B.R.; 1 ex., 39.5 mm. SL., F.5446, Thunakadavu Dam, 16.12.97, M.M.B.; 1 ex., 55 mm.SL., F.5631, Sethumadai canal, 16.02.98, M.S.R.; 8 exs., 22-40 mm. SL., F.5638, Sarkarpathy, 11.08.97, M.M.B.; 4 exs., 42-84 mm.SL., F.5640, Nagarwoth, 18.02.98, M.S.R.; 4 exs., 30-48 mm.SL., F.5657, Varagalaiyar, 20.02.97, M.S.R.; 6 exs., 29-43 mm.SL., F.5770, Kolikamuthi, 21.02.98, M.S.R.; 1 ex., 31 mm.SL., F.5729, Navalodai, 28.2.98, M.S.R.

Distribution : Throughout India except Assam and the Himalaya.

36. *Bhavana australis* (Jerdon)* (Plate – VI)

1849. *Platycaura australis* Jerdon, *Madras J. Lit. & Sci.*, 15 : 333 (type-locality : Walliar, Nilgiris).

1991. *Bhavana australis*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. 1 : 449-450.

Material : 1 ex., 24 mm. SL., F.4948, Attakatti, 17.02.96, M.B.R.; 1 ex., 30 mm.SL., F.5331, Devikulam, 13.8.97, M.B.R.; 6 exs., 20-43 mm.SL., F.5639, Sarkarpathy, 11.08.97, M.M.B.; 2 exs., 31-35 mm. SL., F.5645, Nagarwoth, 18.02.96 M.S.R.

Remarks : Meristic characters fall within the range given in Talwar & Jhingran (1991). Dorsal fin with a band in the middle, irregular spots on the sides of the body, ventral surface pale and scaleless upto anal fin origin or even beyond. Scales are not prominent. Head with minute tubercles. Pectoral fin reaches pelvic fin. Caudal fin forked and the lower lobe longer. New report to Anamalais.

Distribution : India : Central and Southern Western Ghats.

**37. *Schistura denisoni denisoni* (Day)*
(Plate – VII)**

1867. *Nemacheilus denisoni* Day, *Proc. zool. Soc. Lond.*, 287, (type-locality : Bhowany river, base of Nilgiris).

1999. *Schistura denisoni denisoni*, Jayaram, *The Freshwater Fishes of the Indian Region* : 181, 188.

Material : 2 exs., 41-43 mm.SL., F.4901, Chinnar River, 07.02.96, M.B.R.; 8 exs., 17-32 mm.SL., F.5226, Chinnar River, 07.08.97, M.B.R.

Remarks : Much variation in body depth was observed. This is a new record to Anamalais.

Distribution : Peninsular India : Maharashtra; Karnataka; Kerala; Tamil Nadu.

**38. *Mesonemacheilus herrei* Nalbant and Banarescu
(Plate – VII)**

1981. *Mesonemacheilus herrei* Nalbant and Banarescu, *Trav. Mus. Hist. nat. Grigore Antipa*, 23 : 203, figs. 1-5 (type-locality : Anamalai Hills, Valparai, Kerala State).

1999. *Mesonemacheilus herrei*, Jayaram, *The Freshwater Fishes of the Indian Region* : 198-199.

Material : 7 exs., 20.5-35 mm. SL., F.4941, Varagalaiyar, 04.02.96, M.B.R.; 12 exs., 35-

52 mm. SL., F.5659, Varagalaiyar, 20.02.98, M.S.R.; 3 exs., 31-48 mm. SL., F.5772, Kolikamuthi, 21.02.98, M.S.R.

Remarks : Talwar and Jhingran (1991) and Menon (1987) considered this species as a synonym of *guentheri*. However Banarescu and Nalbant (1995) considered it a distinct species. Further differences were observed between the species (Rema devi & Indra 2002). This species is endemic to Anamalai Hills.

Distribution : India : Anamalai hills; Valparai; Kerala and Tamil Nadu.

**39. *Nemacheilus monilis* Hora*
(Plate – VII)**

1921. *Nemacheilus monilis* Hora, *Rec. Indian Mus.*, 22 (1) : 19 (type -locality : Bhavani river, at Mettupalayam, base of Nilgiris).

1999. *Nemacheilus monilis* Jayaram, *The Freshwater Fishes of the Indian Region* : 175-176.

Material : 1 ex., 39 mm.SL., F.5218, Chinnar River, 07.08.97, M.B.R.

Remarks : A report on the extension of range of the species from Central Western Ghats beyond the Palghat Gap to Southern Western Ghats was given (Indra *et. al.*, 1998). This is an additional record to Anamalai Hills.

Distribution : India : Bhavani river: Mettupalayam; Nilgiri Hills and Anamalai Hills; Tamil Nadu.

**40. *Lepidocephalus thermalis* (Valenciennes)
(Plate – VII)**

1846. *Cobitis thermalis* Valenciennes, *Hist. nat. Poiss.*, 18 : 78 (type-locality : Malabar).

1991. *Lepidocephalus thermalis*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. I : 527-528.

Material : 3 exs., 26-27 mm.SL., F.4895, Aliyar, 13.02.96, M.B.R.; 9 exs., 50-58 mm.SL., F.4902, Chinnar River, 07.2.96, M.B.R.; 12 exs., 39-49 mm. SL., F.4907, Kadamparai area, 14.2.96, M.B.R.; 11 exs., 24-44 mm.SL., F.4910, Aliyar Canal, 11.02.96, M.B.R.; 15 exs., 28.5-42.5 mm.SL., F.4930, Kallapuram, 08.02.96, M.B.R.; 10 exs., 37-56 mm.SL., F.4940, Varagalaiyar, 04.02.96, M.B.R.; 6 exs., 21.5-40.5 mm.SL., F.4956, Sethumadai Canal, 16.02.96, M.B.R.; 6 exs., 30-57 mm.SL., F.5267, Kilpoonachi, 21.11.96, M.S.R.; 2 exs., 28-35 mm.SL., F.5271, Upper Aliyar, 22.11.96, M.S.R.; 20 exs., 33-53 mm.SL., F.5279, Sarkarpathy, 2.12.96, M.S.R.; 8 exs., 29-41 mm.SL., F.5282, Sarkarpathy Power House, 3.12.96, M.S.R.; 4 exs., 32-44 mm.SL., F.5216, Parambikulam, 13.8.97, M.B.R.; 9 exs., 20-50 mm.SL., F.5225, Chinnar River, 07.08.97, M.B.R.; 1 ex., 44 mm.SL., F.5333, Devikulam, 13.8.97, M.B.R.; 5 exs., 40-48 mm.SL., F.5346, Kozhumam, 9.8.97, M.B.R.; 5 exs., 32-43 mm.SL., F.5354, Kallapuram, 09.08.97, M.B.R.; 4 exs., 27-49 mm.SL., F.5401, Sarkarpathy, 10.12.97, M.M.B.; 6 exs., 31-45 mm.SL., F.5413, Sarkarpathy, 11.08.97, M.M.B.; 1 ex., 49 mm.SL., F.5434, Amaravathi Dam, 12.04.96, M.S.R.; 1 ex., 48 mm.SL., F.5461, Navamalai, 13.12.97, M.M.B.; 18 exs., 35-50 mm.SL., F.5619, Upper Aliyar, 13.02.98, M.S.R.; 11 exs., 36-50 mm.SL., F.5377, Kudriyar Dam, 09.8.97, M.B.R.; 2 exs., 38-45 mm.SL., F.5383, Amaravathi Nagar, 10.8.97, M.B.R.; 1 ex., 50 mm.SL., F.5438, Amaravathi Dam, 18.12.97, M.M.B.; 6 exs., 31-38 mm.SL., F.5624, Anamalai, 15.2.98, M.S.R.; 10 exs., 21-47 mm.SL., F.5636, Sarkarpathy, 11.08.97, M.M.B.; 13 exs., 33-49 mm.SL., F.5644, Nagarwoth, 18.02.98, M.S.R.; 6 exs., 29-58 mm.SL., F.5658, Varagalaiyar, 20.02.98, M.S.R.; 2 exs., 39-43 mm.SL., F.5684, Punganodai, 25.02.98, M.S.R.; 2 exs., 27-43 mm.SL., F.5695, Kuduthrai, 26.02.98, M.S.R.; 1 ex., 36 mm.SL., F.5713, Thirumurthi Dam, 27.02.98, M.S.R.; 5 exs., 40-61 mm.SL., F.5771, Kolikamuthi, 21.02.98, M.S.R.

Remarks : Variations were observed in the colour patterns in specimens collected from Kilpoonachi and Chinnar viz. caudal fin with 3-6 bands from < shape to almost vertical. In one specimen F.4940 there were no prominent blotches on the sides and all fins were plain without any markings.

Distribution : India : Peninsular India; Sri Lanka.

**41. *Mystus cavasius* (Hamilton)*
(Plate – VII)**

1822. *Pimelodus cavasius* Hamilton-Buchanan, *Fishes of Ganges* : 203, 379, pl.11, fig.67 (type-locality : Gangetic provinces).

1991. *Mystus cavasius*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 559-560.

2006. *Mystus cavasius*, Jayaram, *Cat Fishes of India*; 40 (synonymy, description)

Material : 1 ex., 27 mm.SL., F.5646, Nagarwoth, 18.02.98, M.S.R.

Distribution : India; Bangladesh; Pakistan; Myanmar; Thailand.

42. *Mystus malabaricus* (Jerdon)*
(Plate – VII)

1849. *Bagrus malabaricus* Jerdon, *Madras Jour. Lit. & Sci.*, **15** : 338 (type-locality Mountain streams of Malabar).

1991. *Mystus malabaricus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 564-565.

2006. *Mystus malabaricus*, Jayaram, *Cat Fishes of India*; 47 (synonymy, description).

Material : 1 ex., 102 mm.SL., F.5286, Manamboli, 25.11.96, M.S.R.; 2 exs., 86-139 mm.SL., F.5397, Kallapuram, 08.08.97, M.B.R.; 1 ex., 145 mm.SL., F.5455, Amaravathi Dam, 18.12.97, M.M.B.

Remarks : New record to Anamalai Hills.

Distribution : India : Western Ghats; Maharashtra; Karnataka; Kerala and Tamil Nadu.

43. *Mystus montanus* (Jerdon)*
(Plate – VIII)

1849. *Bagrus montanus* Jerdon, *Madras Jour. Lit. & Sci.*, **15** (2) : 337 (type-locality Manantoday, Wynaad, Kerala State).

1991. *Mystus montanus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 567-568.

2006. *Mystus montanus*, Jayaram, *Cat Fishes of India*; 49 (synonymy, description).

Material : 7 exs, 85-112 mm.SL., F.4934, Thirumurthi Dam, 11.2.96, M.B.R.; 1 ex., 42 mm.SL., F.5217, Parambikulam, 13.08.97, M.B.R.; 1 ex., 78 mm.SL., .5398, Kallapuram 08.8.97, M.B.R.; 1 ex., 145 mm. SL., F.5606, Amaravathi Dam, 24.2.98, M.S.R.; 1 ex., 67mm. SL., F.5685, Punganodai, 25.2.98, M.S.R.; 1 ex., 75 mm.SL., F.5715, Thirumurthi Dam, 27.2.98, M.S.R.; 1 ex., 71 mm.SL., F.5728, Navalodai, 28.2.98. M.S.R.

Remarks : The length of maxillary barbels was observed to be of varying length reaching only to middle of pelvic fin to anal base.

Distribution : India : Kerala State; Wayanad range of hills; Tamil Nadu; Western Ghats; Anamalai Hills; Eastern Ghats; Javadi Hills; Madhya Pradesh; Hoshangabad.

44. *Ompok bimaculatus* (Bloch)*
(Plate – VIII)

1797. *Silurus bimaculatus* Bloch, *Ichthyol. Hist. nat. des. Poiss.*, **11** : 17, pl. 364 (type-Localities : Malabar).

1991. *Ompok bimaculatus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 582-583.

2006. *Ompok bimaculatus*, Jayaram, *Cat Fishes of India*; **105** (synonymy, description).

Material : 1 ex., 315 mm.SL., F.5299, Aliyar, 14.12.97, M.M.B.; 1 ex., 215 mm.SL., F.5396, Kallapuram, 08.08.97, M.B.R.; 1 ex., 213 mm.SL., F.5440, Amaravathi Dam, 18.12.97, M.M.B.; 2 exs., 214-474 mm.SL., F.5605, Amaravathi Dam, 24.02.98, M.S.R.; 1 ex., 243 mm.SL., F.5612.

Remarks : A. 2/62-64 (vs.2-3/57-58); C.16-17. Maxillary barbel reaching to ¾th pectoral fin or 1/3rd distance of anal fin. Orbit of eye extending to below gape of mouth. A pair of small mandibular barbels, extending up to end of cheek. Caudal fin pointed. New record to Anamalai hills.

Distribution : Throughout India; Bangladesh; Malaya; Nepal; Pakistan; Sri Lanka; Thailand; Vietnam; Yunnan.

45. *Ompok malabaricus* (Valenciennes)*
(Plate – VIII)

1839. *Silurus malabaricus* Valenciennes, *Hist. nat. Poiss.* **14** : 353 (type-locality : Malabar).

1991. *Ompok malabaricus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 583-584.

2006. *Ompok malabaricus*, Jayaram, *Cat Fishes of India*; **107** (synonymy, description).

Material : 2 exs., 335-375 mm. SL., F. 5451, Lower Aliyar Dam, 11.12. 97, M.M.B.; 1 ex., 250 mm. SL., F. 5608, Amaravathi Dam, 24.12.98, M. S. R.; 1 ex., 232 mm. SL., F. 5613, Aliyar, 12.02.98, M. S. R.; 1 ex., 280 mm. SL., F. 5702, Thirumurthi Dam, 27.02.98, M.S.R.

Remarks : Maxillary barbels extending to ¾ths pectoral fin, caudal fin rounded, pectoral fin rounded at its tips. Orbit of eye restricted to above gape of mouth. Dark in colour and can be easily distinguished from *O. bimaculatus* by the shape of caudal fin and position of eyes.

Distribution : India : Western Ghats; From Goa along the west face of Western Ghats to Tamil Nadu.

46. *Glyptothorax anamalaiensis* Silas
(Plate–VIII)

1951. *Glyptothorax anamalaiensis* Silas, *J. Bombay nat. Hist. Soc.* **50** (2) : 370 (type-locality : Anamalai Hills, Western Ghats).

1991. *Glyptothorax anamalaiensis*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 648.

2006. *Glyptothorax anamalaiensis*, Jayaram, *Cat Fishes of India*; 213 (synonymy, description).

Material : 2 exs., 34-36 mm.SL., F.5415, Sarkarpathy, 10.12.97, M.M.B.

Remarks : Pectoral serrated on its inner edge with 7-10 serrations; C.17. Three yellow bands alternating with three black bands and black spots all over the body are seen in live specimens. From Anamalai Hills three species of *Glyptothorax* have been reported viz. *G.anamalaiensis*, *G.housei* and *G.madraspatanam* (Talwar & Jhingran,1991, Jayaram,1999). However Menon (1999) treated *anamalaiensis* as a synonym of *housei*, (both described from Anamalai Hills) and restricted the distribution of *madraspatanam* to Nilgiris. The present specimens have been however placed as *anamalaiensis* which can be differentiated from *housei* in several characters viz. in the number of branched anal rays (A.3/7 vs.A 2/10); the nature of pliation (adhesive apparatus broader than long vs. longer than broad); D.1/6 vs.1/5; P.1/8 vs.1/9; Pectoral non pliated vs. pliated and the nature of the skin (tuberculated vs. smooth).

This species is endemic to Anamalai hills.

Distribution : India : Anamalai Hills; Kerala & Tamil Nadu.

47. *Heteropneustes fossilis* (Bloch)* (Plate – VIII)

1794. *Silurus fossilis* Bloch, *Naturgesch. Ausl. Fische*, 8 : 46, pl. 370, fig. 2 (type-locality : Tranquebar, Tamil Nadu).

1991. *Heteropneustes fossilis*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 689-690.

2006. *Heteropneustes fossilis*, Jayaram, *Cat Fishes of India*; 313 (synonymy, description).

Material : 1 ex., 110 mmSL., F.4898, Aliyar, 13.02.96, M.B.R.

Distribution : India; Bangladesh; Laos; Myanmar; Nepal; Pakistan; Sri Lanka; Thailand.

48. *Heteropneustes longipectoralis* Rema Devi & Raghunathan* (Plate – VIII)

1999. *Heteropneustes longipectoralis* Rema Devi & Raghunathan, *Rec. zool. Surv. India*, 97 (3) : 109-115 (type-locality : Anamalai Hills).

2006. *Heteropneustes longipectoralis*, Jayaram, *Cat Fishes of India* 314 (synonymy, description)

Material : 4 exs., 147-155 mm.SL., F.4935, Thirumurthi Dam, 11.02.96, M.B.R.

Remarks : The species has been recently described from Anamalai hills (Rema Devi & Raghunathan,1999) based on several morphometric differences and the nature of the air bladder. This species is endemic to the Anamalai Hills.

Distribution : India : Western Ghats; Anamalai Hills.

49. *Rhinomugil corsula* (Hamilton)*
(Plate – IX)

1822. *Mugil corsula* Hamilton-Buchanan, *Fishes of Ganges* : 221, 381, pl.9, fig.97 (type-locality : Ganges river).

1991. *Rhinomugil corsula*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 897-898.

Material : 1 ex., 245 mm.SL., F.5297, Thirumurthi Hills, 2.12.96, M.S.R.

Remarks : An introduced food fish. Not listed in earlier reports.

Distribution : India, Bangladesh; Myanmar; Nepal.

50. *Xenentodon cancila* (Hamilton)*
(Plate – IX)

1822. *Esox cancila* Hamilton-Buchanan, *Fishes of Ganges* : 213, 380, pl. 27, fig. 70 (type-locality : Gangetic provinces).

1991. *Xenentodon cancila*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 743-744.

Material : 1 ex., 92 mm.SL., F.4897, Aliyar, 13.02.96, M.B.R; 1 ex., 110 mm.SL., F.5389, Periyapodham, 17.08.97, M.B.R; 1 ex., 270 mm.SL., F.5649, Aliyar, 12.02.98, M.S.R.

Remarks : Differs from typical *cancila* in its lesser number of predorsal scales (PDS.170 vs.200). This species is a new report to Anamalai Hills.

Distribution : India; Bangladesh; Myanmar; Nepal; Pakistan; Sind; Punjab.

51. *Aplocheilus lineatus* (Valenciennes)
(Plate – IX)

1846. *Panchax lineatum* Valenciennes, *Hist. nat. Poiss.*, 18 : 381 (type-locality : Peninsular India).

1991. *Aplocheilus lineatus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 750-751.

Material : 5 exs., 19-29 mm.SL., F.5447, Thunakadavu Dam, 16.12.96, M.M.B.

Distribution : India : Widely distributed in the Hills of Peninsular India.

52. *Gambusia affinis* (Baird & Girard)*
(Plate – IX)

1853. *Heterandria affinis* Baird and Girard, *Proc. Acad. nat. Sci. Philad.*, 6 : 390 (type-Localities : San Antonio river drainage, Texas).

1991. *Gambusia affinis*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 756-757.

Material : 13 exs., 14-29 mm.SL., F.4944, Valparai, 9.2.96, M.B.R.

Remarks : This introduced species has not been listed from earlier reports.

Distribution : South Eastern United States of America; introduced into India.

**53. *Mastacembelus armatus* (Lacepede)
(Plate – IX)**

1800. *Macrognathus armatus* Lacepede, *Hist. nat. Poiss.*, **2** : 286 (type-locality : Not known).

1991. *Mastacembelus armatus* Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 1031-1032.

Material : 4 exs., 44.5-72 mm. SL., F.4923, Kudriyar Dam, 15.12.96, M.B.R.; 2 exs., 63-173 mm.SL., F.5388, Periyapodham, 17.8.97; M.B.R.; 1 ex., 70 mm. SL., F. 5700, Kuduthrai, 26.2.98, M.S.R.

Distribution : Throughout India; Bangladesh; S. China; Hainan Island; Java; Malaysia; Myanmar; Nepal; Pakistan; Sri Lanka; Sumatra; Thailand; Vietnam.

**54. *Mastacembelus malabaricus* (Jerdon)*
(Plate – IX)**

1849. *Mastacembelus malabaricus* Jerdon, *Madras J. Lit. & Sci.*, **15** : 147 (type-locality : Malabar).

1999. *Macrognathus malabaricus* Menon, *Check list – Freshwater Fishes of India. Rec. zool. Surv. India, Occ. Paper No.175* : 302-303.

Material : 1 ex., 710 mm. SL., F.5609, Amaravathi Dam, 24.02.98, M.S.R.

Remarks : The species *malabaricus* was described by Jerdon (1849) from Malabar and *guentheri* was described subsequently by Day (1865) from Trichoor with remarks that *malabaricus* could be *guentheri* and the greater number of predorsal spines (37) attributed to the species could actually be a print mistake and the number would be 27 as in the species *guentheri*. This was followed by subsequent authors (Talwar & Jhingran, 1991 and Jayaram, 1999) who named the Malabar species as *guentheri* ignoring *malabaricus*. However Menon considered *guentheri* as a synonym of *malabaricus* on priority basis but placed it under the genus *Macrognathus*. Species with dorsal fin spines 32 or less are placed under the genus *Macrognathus* and those with 33 or more under the genus *Mastacembelus* (Jayaram, 1999). In the present specimen from Anaimalais the number of predorsal spines are 36 and we consider the name *malabaricus* more suitable for the species since the maximum number of spines for *guentheri* is 30. Also based on the greater spine count this species is being placed here under the genus *Mastacembelus*. Further studies are required to consider whether the species has a wide variation in dorsal spine count or whether there are two distinct species.

Distribution : India : Kerala; Western Ghats; Tamil Nadu.

55. *Chanda nama* Hamilton*
(Plate – X)

1822. *Chanda nama* Hamilton-Buchanan, *Fishes of Ganges* : 109, 371, pl.39, fig.37 (type-locality : ponds throughout Bengal).

1991. *Chanda nama*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 799-800.

Material : 11 exs., 41-54 mm. SL., F.5420, Thirumurthi Dam, 19.12.97, M.M.B.; 1 ex., 38 mm.SL., F.5686, Punganodai, 25.2.98; M.S.R.; 4 exs., 37-48 mm. SL., F. 5697, Kuduthurai, 26.2.98, M.S.R.; 2 exs., 37-42 mm. SL., F. 5716, Thirumurthi Dam, 27.2.98, M.S.R.; 2 exs., 42-70 mm. SL., F. 5721, Navalodai, 28.2.98, M.S.R.

Remarks : New record to Anamalai hills.

Distribution : Throughout India; Bangladesh; Nepal; Pakistan; Myanmar.

56. *Pristolepis marginatus* (Jerdon)*
(Plate – X)

1848. *Pristolepis marginatus* Jerdon, *Madras J. Lit. & Sci.*, 15 : 141 (type-locality Mananthavady river, North Malabar).

1991. *Pristolepis marginatus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 881.

Material : 5 exs., 101-107 mm. SL., F.5288, Manamboli, 26.11.96, M.S.R.; 1 ex., 110 mm.SL., F.5614, Aliyar, 12.2.98; M.S.R.

Remarks : D.XIII,13 (vs.XIV-XVI,11-14);P.1/12 (vs.1/13-14); gill rakers 6+3 some forked at base; lateral line interrupted 24+8, scales extend to caudal; 4 rows of scales on cheek. This is a new record to Anamalai Hills.

Distribution : India : Wyanaad; Kerala; Anamalai Hills; Tamil Nadu.

57. *Etroplus maculatus* (Bloch)*
(Plate – X)

1785. *Chaetodon maculatus* Bloch, *Syst. Ichth.* : pl. 427, fig.2 (type-locality : India).

1991. *Etroplus maculatus*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 885.

Material : 1 ex., 13 mm.SL., Kozhumam, 8.2.96, M.B.R.; 2 exs., 43-50 mm.SL., F.5348, Kozhumam, 9.8.97; M.B.R.; 1 ex., 39 mm. SL., F.5378, Kudriyar Dam, 9.8.97, M.B.R.; 1 ex., 49 mm.SL., F.5395, Aliyar, 16.8.97; M.B.R.; 1 ex., 78 mm.SL., F.5669, Amaravathi Dam, 24.02.98, M.S.R.

Remarks : Though widely distributed in Peninsular India the species is reported for the first time from Anamalai Hills.

Distribution : Peninsular India : Tamil Nadu; Kerala; Karnataka; Sri Lanka.

58. *Oreochromis mossambica* (Peters)*

(Plate - X)

1852. *Chromis (Tilapia) mossambicus* Peters, *Montab. Akad. Wiss., Berlin* : 681 (type-Locality : Mozambique).

1991. *Oreochromis mossambica*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 887-888.

Material : 4 exs., 12-17.5 mm.SL., Aliyar, 05.12.96, M.S.R.; 10 exs., 16-64 mm.SL., F.4922, Kudriyar Dam, 15.2.96, M.B.R.; 3 exs., 12-14 mm.SL., Kallapuram, 08.2.96, M.B.R.; 2 exs., 90-125 mm.SL., F.4937, Thirumurthi Dam, 11.02.96, M.B.R.; 95 exs., 10-24 mm.SL., Kozhumam, 08.02.96, M.B.R.; 3 exs., 123-140 mm.SL., F.5287, Manamboli, 28.11.96, M.S.R.; 9 exs., 105-130 mm.SL., F.5289, Manamboli, 26.11.96, M.S.R.; 8 exs., 110-160 mm.SL., F.5291, Manamboli, 28.11.96, M.S.R.; 2 exs., 160-238 mm.SL., F.5295, Thirumurthi Hills, 02.12.96, M.S.R.; 2 exs., 63-64 mm.SL., F.5347, Kozhumam, 9.8.97, M.B.R.; 1 ex., 28 mm.SL., Kallapuram, 09.08.97, M.B.R.; 7 exs., 24-90 mm.SL., F.5379, Kudriyar Dam, 9.8.97, M.B.R.; 1 ex., 59 mm.SL., F.5384, Amaravathi Nagar, 10.08.97, M.B.R.; 2 exs., 79-110 mm.SL., F.5399, Kallapuram, 08.8.97, M.B.R.; 3 exs., 142-245 mm.SL., F.5457, Amaravathi Dam, 18.12.97, M.M.B.; 1 ex., 135 mm.SL., F.5607, Amaravathi Dam, 24.02.98, M.S.R.; 1 ex., 124 mm.SL., F.5615, Aliyar, 12.02.98, M.S.R.; 1 ex., 25 mm.SL., Sethumadai Canal, 16.02.98, M.S.R.; 1 ex., 95 mm.SL., F.5650, Thunakadavu Dam, 19.02.98, M.S.R.; 3 exs., 123-168 mm.SL., F.5662, Shola Forest near Top Slip, 22.02.98, M.S.R.; 6 exs., 130-140 mm.SL., F.5668, Amaravathi Dam, 24.02.98; M.S.R.; 2 exs., 150-152 mm.SL., F.5675, Thoovanam, 24.2.98, M.S.R.; 2 exs., 25-74 mm.SL., F.5687, Punganodai, 25.2.98, M.S.R.; 2 exs., 20-33 mm.SL., Kuduthurai, 26.02.98, M.S.R.; 15 exs., 132-165 mm.SL., F.5701, Thirumurthi Dam, 27.2.98, M.S.R.; 30 exs., 18-41 mm.SL., F.5720, Navalodai, 28.02.98, M.S.R.

Remarks : Two colour varieties were encountered. It is known that *O. mossambicus* exhibits sexual dichromism, the males being darker with a red margin on fins and the female paler. However it was also observed that the lateral transverse count and the gape of mouth also showed differences within the sex. The dark specimens have a greater L.tr. count (14 ½ vs. 15 ½), the gape of mouth is wider (2.5 vs. 3.5 in HL).

Distribution : East Africa to Natal; Widely introduced in India; Bangladesh; Pakistan; Sri Lanka.

59. *Glossogobius giuris* (Hamilton)*

(Plate - X)

1822. *Gobius giuris* Hamilton-Buchanan, *Fishes of Ganges* : 51, pl.33, fig.15 (type-locality : Gangetic provinces).

1991. *Glossogobius giuris*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 936.

Material : 3 exs., 43-48 mm.SL., F.4896, Aliyar, 13.2.96, M.B.R.; 7 exs., 71-80 mm.SL., F.4938, Thirumurthi Dam, 11.2.96, M.B.R.; 1 ex., 28 mm.SL., F.5390, Periyapodham, 17.8.97, M.B.R.; 1 ex., 25 mm.SL., F.5421, Thirumurthi Dam, 19.12.97, M.M.B.; 1 ex., 80 mm.SL., F.5433, Amaravathi Dam, 18.12.97, M.M.B.; 1 ex., 175 mm.SL., F.5452, Thirumurthi Dam, 19.12.97, M.M.B.; 1 ex., 40 mm.SL., F.5462, Navamalai, 13.12.97, M.M.B.; 1 ex., 110 mm.SL., F.5674, Thoovanam, 24.2.98, M.S.R.

Remarks : Though widespread in Indian waters this has not been reported earlier from Anamalai Hills.

Distribution : Throughout India; Bangladesh; Myanmar; Nepal; Pakistan; Sri Lanka. It has a wide range of distribution from the East coast of Africa to Japan; Australia and South Pacific.

60. *Channa orientalis* (Bloch & Schneider)

(Plate – X)

1801. *Channa orientalis* Bloch and Schneider, *Syst. Ichth.* : 496, pl.90. fig.2 (type-Locality : India).

1991. *Channa orientalis*, Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries*, Vol. II : 1019-1020.

Material : 1 ex., 47.0 mm.SL., F.4921, Kudriyar Dam, 15.2.96, M.B.R.; 1 ex., 48.0 mm.SL., F.4957, Sethumadai Canal, 16.2.96, M.B.R.; 9 exs., 34.0-90.0 mm.SL., F.4958, Shola Forest near Top Slip, 06.2.96, M.B.R.; 1 ex., 45.0 mm.SL., F.5280, Sarkarpathy, 02.12.96, M.S.R.; 1 ex., 25.0 mm.SL., F.5334, Devikulam, 13.8.97, M.B.R.; 1 ex., 75 mm.SL., Thunakadavu Dam, 19.02.98, M.S.R.; 11 exs., 18-20 mm.SL., Varagalaiyar, 20.2.98, M.S.R.; 38 exs., 37-70 mm.SL., F.5661, Shola Forest near Top Slip, 22.2.98, M.S.R.

Remarks : Silas (1951) reported *Channa gachua* (Ham.) from Anamalai hills which species is considered as a synonym of *C.orientalis* (Jayaram,1999).

Distribution : Throughout India; Afghanistan; Bangladesh; Borneo; Iran; Malaysia; Myanmar; Nepal; Pakistan; Sri Lanka; Thailand;

TABLE—1

FREQUENCY OF OCCURRENCE & DISTRIBUTION OF SPECIES

Species	Frequency of Occ.		Abundance	
	No.	%	No.	%
<i>Notopterus notopterus</i>	4	(10.52)	6	(0.12)
<i>Salmophasia acinaces</i>	4	(10.52)	8	(0.16)
<i>Salmophasia clupeoides</i>	2	(5.26)	19	(0.40)
<i>Barilius bendelisis</i>	6	(15.78)	89	(1.87)
<i>Barilius gatensis</i>	17	(44.73)	209	(4.40)

Species	Frequency of Occ.		Abundance	
	No.	%	No.	%
<i>Esomus thermoicos</i>	10	(26.31)	150	(3.16)
<i>Devario malabaricus</i>	31	(81.57)	1879	(39.63)
<i>Rasbora caverii</i>	9	(23.68)	54	(1.13)
<i>Rasbora daniconius</i>	19	(50)	261	(5.50)
<i>Amblypharyngodon microlepis</i>	4	(10.52)	86	(1.81)
<i>Cyprinus carpio communis</i>	1	(2.64)	16	(0.33)
<i>Tor khudree</i>	1	(2.64)	1	(0.02)
<i>Puntius carnaticus</i>	5	(13.15)	13	(0.27)
<i>Puntius sarana subnasutus</i>	2	(5.26)	2	(0.04)
<i>Hypselobarbus curmuca</i>	3	(7.87)	12	(0.25)
<i>Hypselobarbus dobsoni</i>	5	(13.15)	43	(0.90)
<i>Hypselobarbus dubius</i>	2	(5.26)	4	(0.08)
<i>Hypselobarbus jerdoni</i>	1	(2.64)	1	(0.02)
<i>Puntius amphibius</i>	1	(2.64)	1	(0.02)
<i>Puntius bimaculatus</i>	12	(31.57)	56	(1.18)
<i>Puntius cauveriensis</i>	1	(2.64)	1	(0.02)
<i>Puntius chola</i>	4	(10.52)	37	(0.78)
<i>Puntius conchoniis</i>	4	(10.52)	7	(0.14)
<i>Puntius dorsalis</i>	3	(7.89)	6	(0.12)
<i>Puntius filamentosus</i>	11	(28.94)	138	(2.91)
<i>Puntius fasciatus</i>	17	(44.73)	693	(14.61)
<i>Puntius melanostigma</i>	1	(2.63)	1	(0.02)
<i>Puntius punctatus</i>	4	(10.52)	6	(0.12)
<i>Puntius sophore</i>	3	(7.89)	3	(0.06)
<i>Cirrhinus cirrhosus</i>	4	(10.52)	18	(0.37)
<i>Catla catla</i>	1	(2.64)	1	(0.02)
<i>Labeo rohita</i>	2	(5.26)	2	(0.04)
<i>Garra hughi</i>	2	(5.26)	185	(3.90)
<i>Garra mcClellandi</i>	2	(5.26)	4	(0.08)
<i>Garra mullya</i>	12	(31.58)	74	(1.56)
<i>Bhavanaia australis</i>	4	(10.52)	10	(0.21)
<i>Schistura denisoni denisoni</i>	1	(2.63)	10	(0.21)

Species	Frequency of Occ.		Abundance	
	No.	%	No.	%
<i>Mesonemacheilus herrei</i>	2	(5.26)	22	(0.46)
<i>Nemacheilus monilis</i>	1	(2.63)	1	(0.02)
<i>Lepidocephalus thermalis</i>	24	(63.15)	208	(4.38)
<i>Mystus cavasius</i>	1	(2.63)	1	(0.02)
<i>Mystus malabaricus</i>	3	(7.89)	4	(0.08)
<i>Mystus montanus</i>	6	(15.79)	13	(0.27)
<i>Ompok bimaculatus</i>	3	(7.89)	6	(0.12)
<i>Ompok malabaricus</i>	4	(10.52)	4	(0.08)
<i>Glyptothorax anamalaiensis</i>	1	(2.63)	2	(0.04)
<i>Heteropneustes fossilis</i>	1	(2.63)	1	(0.02)
<i>Heteropneustes longipectoralis</i>	1	(2.63)	4	(0.08)
<i>Rhinomugil corsula</i>	1	(2.63)	1	(0.02)
<i>Xenentodon cancila</i>	1	(2.63)	3	(0.06)
<i>Aplocheilus lineatus</i>	2	(5.26)	5	(0.10)
<i>Gambusia affinis</i>	1	(2.63)	13	(0.27)
<i>Mastacembelus armatus</i>	3	(7.81)	7	(0.14)
<i>Mastacembelus malabaricus</i>	1	(2.63)	1	(0.02)
<i>Chanda nama</i>	5	(13.15)	20	(0.42)
<i>Pristolepis marginatus</i>	2	(5.26)	6	(0.12)
<i>Etroplus maculatus</i>	4	(10.52)	6	(0.12)
<i>Oreochromis mossambica</i>	17	(44.73)	216	(4.55)
<i>Glossogobius giuris</i>	6	(15.78)	16	(0.33)
<i>Channa orientalis</i>	6	(15.78)	63	(1.32)

DISCUSSION

The first report on the fishes of Southern Western Ghats after Day (1865, 1875-78) was by Herre (1942, 1945) who described two new species the Sisorid catfish *Glyptothorax housei* and a Homalopterid, *Homaloptera montana*. Silas (1951) while describing the ichthyofauna of the Anaimalai and Nelliampathi hill ranges, listed 21 species from the Anaimalai hills. The sisorid species which he considered as a variety of *Glyptothorax madraspatanus* was subsequently described by him as a new species *G. anamalaiensis*. The adjoining Cardamom hills were surveyed by Jayaram *et al.* (1976) who reported the distribution of four additional species to Southern Western Ghats. Biju

et al. (1999) Surveyed Parambikulam Wildlife Sanctuary which lies in the valley between the Anaimalai and Nelliampathy Hill Ranges and reported 40 species of which 9 are new additions to the upper reaches of Anaimalai Ranges. A recent paper by Rema Devi *et al.* (2005) on the fish fauna of the Anaimalai Hill Ranges reports 88 species.

The present report is based on the collection of fish fauna from Indira Gandhi Wildlife Sanctuary, which falls within the Tamil Nadu part of the Anaimalai Hills which is restricted to the Eastern part of the Hill Ranges. From here 60 species under 18 families and 8 orders have been described of which 42 species are new additions to the IGWLS in the Anaimalai Hills.

Three species collected by Silas (1951) could not be collected by us viz. *Barilius barna* (Ham.), *Osteochilichthys (Osteochilichthys) thomassi* (Day), *Batasio travancoria* (Hora & Law). Remarks on *B. barna* is given under species description of *B. gatensis*. Of the 13 *Puntius* species collected from IGWLS, 5 have been reported earlier by Silas (1951), viz. *Puntius amphibius*, *carnaticus*, *dorsalis*, *melanampyx* and *ticto*. Two other species placed as *Barbus (Puntius)* by Silas (*op. cit.*) viz. *curmuca* and *dobsoni* are presently known as *Hypselobarbus curmuca* and *H. dobsoni* respectively. *Puntius ticto* reported by Silas from Anaimalai hills is considered here as *P. punctatus*. The species *punctatus* which was considered as a synonym of *P. ticto* is now considered a valid species and is found to replace the widespread congener *P. ticto* in the Western Ghats Menon (1999); *P. bimaculatus* is reported as a new record, this species was considered as the young of *P. dorsalis* which species alone was reported by Silas (*op. cit.*) In this paper both the species are reported. The other *Puntius* species reported for the first time is *conchonius*, *cauveriensis*, *chola*, *filamentosus*, *melanostigma* and *sophore*. The other report of significance is *Garra hughi* described from the Cardamom and Palani hills from the upper Aliyar and Kilkallar rivers and *Garra McClellandi* earlier described and known only in the Cauvery drainage of the Central Western Ghats has been collected from two hill streams of Navamalai and Sirkarpathy in the Anaimalai Hills. Likewise the highly specialized hill-stream loach *Bhavana australis*, a rare species is a new addition to the Anaimalais, earlier known only from the Central Western Ghats. Among the nemacheilids collected from IGWLS, of significance is the collection of the endemic species *N. herrei*. This was considered as a synonym of *guentheri* by Menon but considered distinct by Banarescu and Nalbant (1995). Characters distinguishing *herrei* from its congener *guentheri* has been recently discussed (Rema Devi and Indra, 2002). The only two Siluriform representatives collected by Silas were *Batasio travancoria* Hora & Law and *Glyptothorax* species which was subsequently described by him as a new species. In the present collections eight siluroid species could be collected including a new species of *Heteropneustes* (Rema Devi & Raghunathan, 1999).

Silas recorded *Travancoria jonesi* Hora from Southern Western Ghats, which species was known earlier only from Central Western Ghats. He further reported the distribution of many more species to the southern ranges from Central Division viz. *Salmophasia acinaces* Val. (= *Chela argentea* Day), *Puntius carnaticus* Jerdon (= *Barbus (Puntius)*

carnaticus), *Osteocheilus (Osteochilichthys) thomassi* (Day) and from Travancore to the Cochin section of Anaimalai hills viz. *Barilius bakeri* (Day) and *Batasio travancoria*. In the present paper also many more species have been reported from the Anaimalais which were earlier known only from Central or Northern part of the Western Ghats beyond the Palghat gap viz. *Hypselobarbus dubius* (Day) *H. jerdoni* (Day), *Garra mcClellandi* (Jerdon), *Schistura denisoni* (Day) and *Noemachilus monilis* Hora (Indra et.al., 1998), *Ompok bimaculatus* (Bleeker) and *O. malabaricus* (Val.). It is interesting to observe that many species described from the Bhavani River at the base of the Nilgiri Hills and in Mysore in the Central Division of the Western Ghats are found in the Anaimalai hills, as could be expected since the Cauvery watershed links the Central and Southern Division along the eastern face of the Western Ghats (Silas, 1951). A few species of the Gangetic Provinces which are widely distributed in India but not collected in 1951 by Silas are found presently in the Anaimalais viz. *Mystus cavasius* (Ham.), *Rhinomugil corsula* (Ham.), *Xenentodon cancila* (Ham.), *Chanda nama* Ham. and *Glossogobius giurus* (Ham.). Three exotic species encountered were *Cyprinus carpio communis*, *Gambusia affinis* and *Oreochromis mossambica*.

Of the fishes collected from the IGWLS about one-third (20 species as in Table—1) are endemic to the Western Ghats. Twenty four species (about 40%) are found to be common to Sri Lanka and are also marked in Table—1.

The following five species are endemic to Anaimalai Hills viz. *Homoptera montana* Herre, *Mesonemacheilus herrei* (Nalbant & Banareescu), *Glyptothorax anamalaiensis* Silas, *Glyptothorax housei* Herre and *Heteropneustes longipectoralis* Rema Devi and Raghunathan and *Garra hughii* Silas to the Anaimalai Hill Ranges.

Frequency of occurrence and abundance and percentage values, in the 38 localities surveyed are provided in Table 1. It is observed that *Devario malabaricus* is the most dominant species being found in 31 localities (81.57%) and constitutes 39.63% of the total samples collected. Of the remaining species the most widespread was found to be *Lepidocephalus thermalis* (63.15%) followed by *Rasbora daniconius* (50%), *Barilius gatensis*, *Puntius fasciatus* and *Oreochromis mossambica* (44-45%) respectively. Regarding abundance *Devario malabaricus* is followed by *Puntius fasciatus* (14.61%), *Rasbora daniconius* (55%), *Oreochromis mossambica*, *Barilius gatensis* and *Lepidocephalus thermalis* (4-5%). All the other species were found in less than quarter of the areas surveyed and constitute less than 4-5% of the collections. It is alarming to observe that the exotic and hardy *Oreochromis mossambica* ranks fourth in abundance and sixth in the order of distribution being equally at ease with the highly specialized high altitude and hill stream species though this species is reported only recently from Parambikulam and Indira Gandhi Wild Life Sanctuary.

SUMMARY

The present paper provides the details of the ichthyofauna of the Indira Gandhi Wildlife Sanctuary. A total of 60 species under 18 families and 8 orders are described

with comments on biometric characteristics and systematic status wherever necessary. The paper includes one new species and 40 new reports including 3 exotic species. Several species known earlier only from the Northern or Central Division of the Western Ghats are now reported from the IGWLS in the Southern Division of the Western Ghats. About 33% of the IGWLS fish fauna are found to be endemic to the Western Ghats, 40% are common to the SriLankan fauna and six species are endemic to the Anaimalai hills

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PLATE - I



Notopterus notopterus (Pallas)

Salmophasia acinaces (Valenciennes)



Salmophasia clupeoides (Bloch)

Barilius bendelisis (Hamilton)



Barilius gatensis (Valenciennes)

Esomus thermoicos (Valenciennes)

PLATE - II

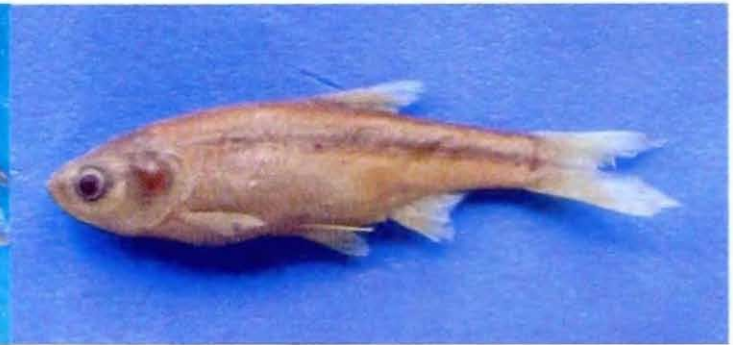
Devario malabaricus (Jerdon)



Rasbora caverii (Jerdon)



Rasbora daniconius (Hamilton)



Amblypharngodon microlepis (Bleeker)



Catla catla (Hamilton)



Cyprinus carpio communis (Linnaeus)

PLATE - III



Tor khudree (Skyles)



Puntius carnaticus (Jerdon)



Puntius sarana subnasutus (Valenciennes)



Hypselobarbus curmuca (Hamilton)



Hypselobarbus dobsoni (Day)



Hypselobarbus dubius (Day)

PLATE - IV



Hypselobarbus jerdoni (Day)

Puntius amphibius (Valenciennes)



Puntius bimaculatus (Bleeker)

Puntius cauveriensis (Hora)



Puntius chola (Hamilton)

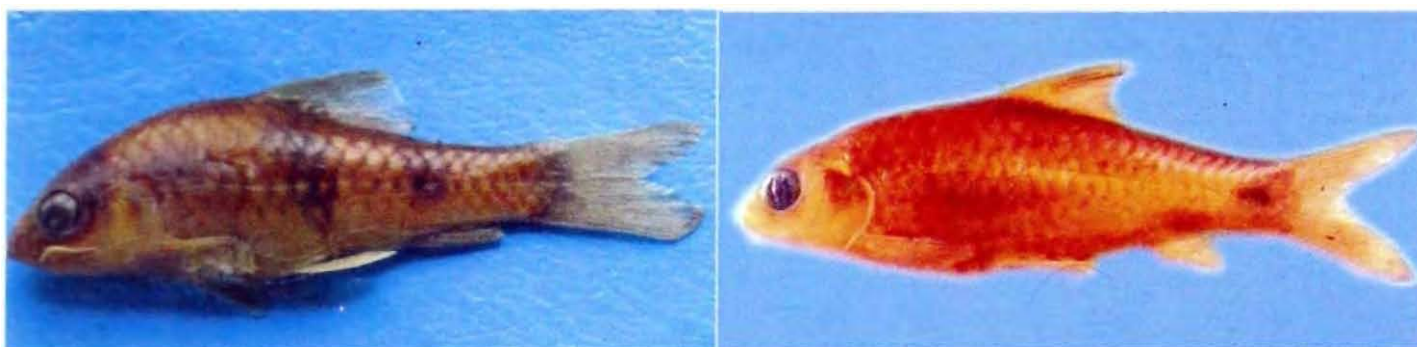
Puntius conchoni (Hamilton)

PLATE - V



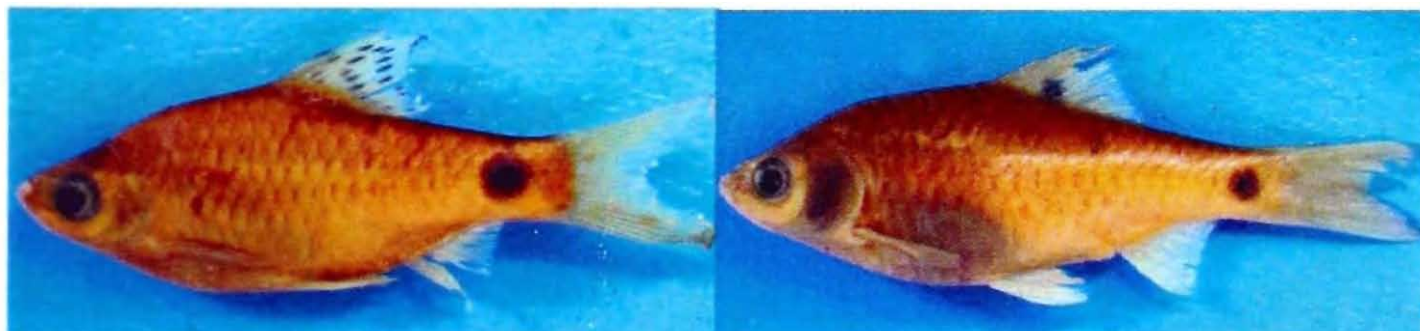
Puntius dorsalis (Jerdon)

Puntius filamentosus (Valenciennes)



Puntius fasciatus (Day)

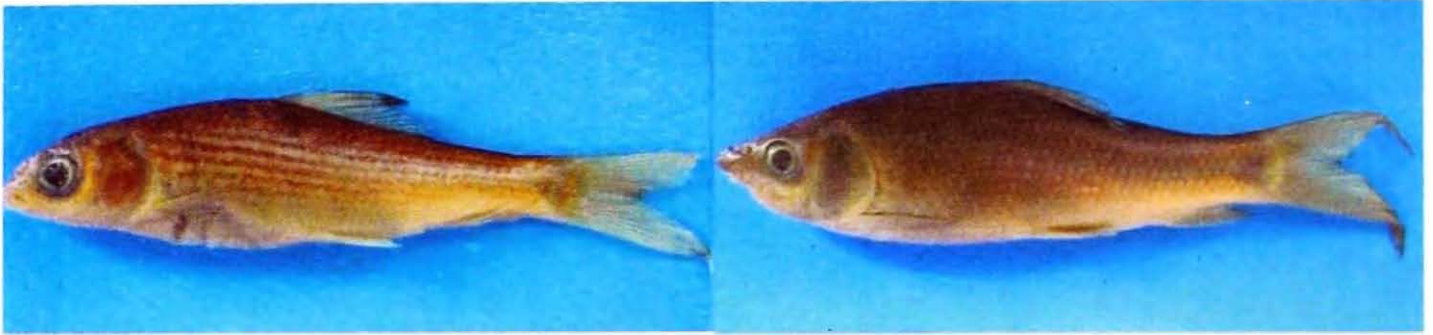
Puntius melanostigma (Day)



Puntius punctatus (Day)

Puntius sophore (Hamilton)

PLATE - VI



Cirrhinus cirrhosus (Bloch)

Labeo rohita (Hamilton)



Garra hughii Silar

Garra mcClellandi (Jerdon)



Garra mullya (Sykes)

Bhavania australis (Jerdon)

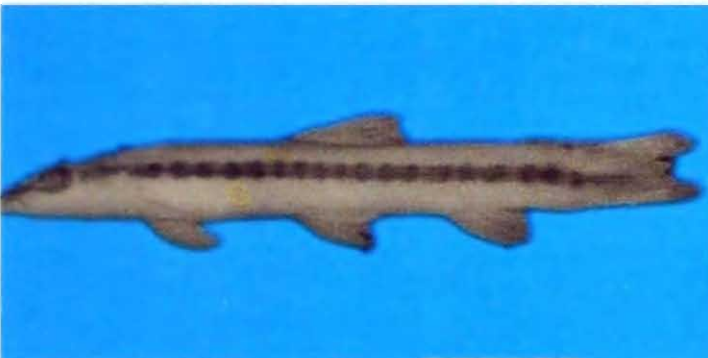
PLATE - VII



Schistura demisoni demisoni (Day)



Mesonemacheilus herrei (Nalbant & Banarescu)



Nemacheilus monilis Hora



Lepidocephalus thermalis (Valenciennes)



Mystus cavasius (Hamilton)



Mystus malabaricus (Hamilton)

PLATE - VIII



Mystus montanus (Jerdon)



Ompok bimaculatus (Bloch)



Ompok malabaricus (Valenciennes)



Glyptothorax anamalaiensis Silas



Heteropneustes fossilis (Bloch)



Heteropneustes longipectoralis
(Rema Devi & Raghunathan)

PLATE - IX



Rhinomugil corsula (Hamilton)



Xenentodon cancila (Hamilton)



Aplocheilus lineatus (Valenciennes)



Gambusia affinis (Baird & Girard)



Mastacembelus armatus (Lacepede)



Macrogathus malabaricus (Jerdon)

PLATE - X*Chanda nama* (Hamilton)*Pristolepis marginatus* (Jerdon)*Etroplus maculatus* (Bloch)*Oreochromis mossambica* (Peters)*Glossogobius giuris* (Hamilton)*Channa orientalis* (Schneider)

PLATE - XI



Aliyar Dam

Water body near Aliyar Dam

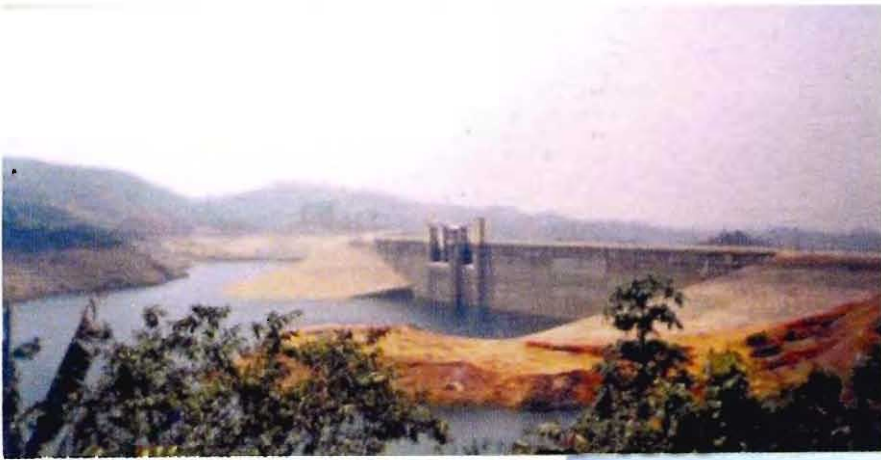


Upper Aliyar Dam

Valparai



PLATE - XII



Sholaiyar Dam

**Manthurai taragam near
Amaravathi**



Varahaiyar

Hill ranges in Varahaiyar



PLATE - XIII



Shola Forest near topslip

A sunlit path in topslip



Another view of topslip

Topslip



PLATE - XIV



Amaravathi Dam

Fish from Amaravathy Dam



Kadamparai Dam

**Collection site near Chinnar
checkpost**



PLATE - XV



Thirumoorthy Dam

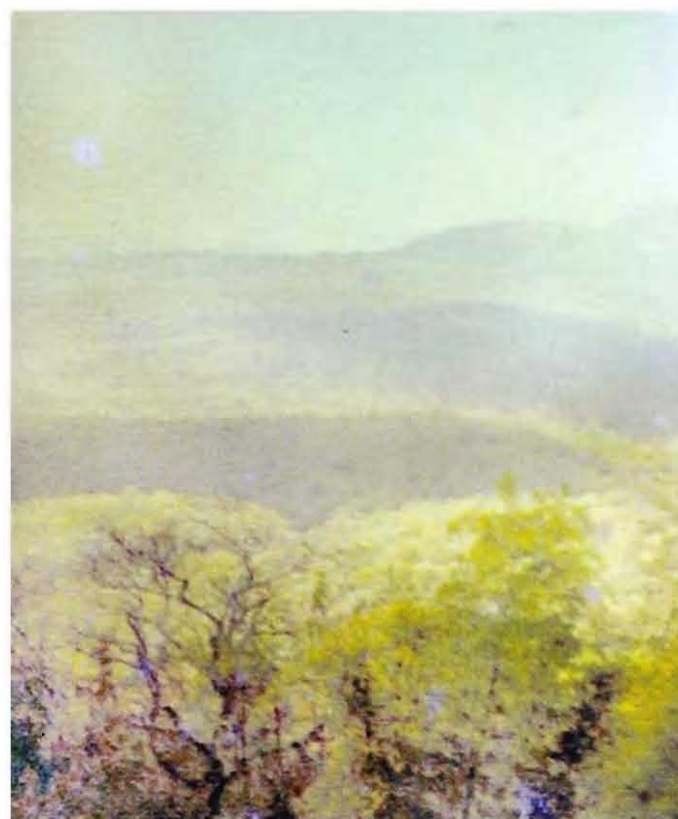


Kallapuram

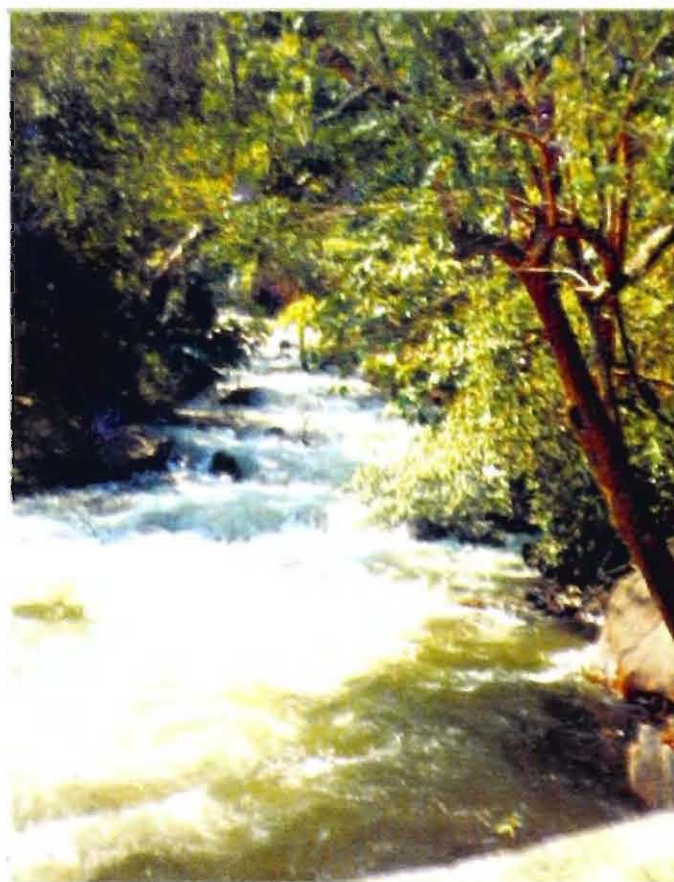
PLATE - XVI



Cannal near Sarkarpathy



Forest on way to Karianshola



Hill stream at Navamalai



Chinnar