A LIST OF FISHES OF THE MYSORE STATE AND OF THE NEIGHBOURING HILL RANGES OF THE NILGIRIS, WYNAAD AND COORG.

By SUNDER LAL HORA, *D.Sc., F.R.S.E., F.N.I., Assistant Superintendent, Zoological Survey of India, Calcutta.*

In a recent article entitled " The Fishes of Mysore State ", Bhimachar and Subba Rau[1] have given an account of the fishes of the Kadur District and have briefly referred to the earlier works on the ichthyology of this part of the Deccan plateau. A general account of the physical features of the State is given and remarks are offered on the zoogeographical significance of the occurrence in Mysore of certain Malayan species. The authors propose to make a detailed systematic study of the fishes found in different parts of the State and the results are to be published from time to time as and when the reports are ready.

The authors have published valuable observations on *Silurus cochinchinensis* Cuvier & Valenciennes ; it is a very variable, loach-like Silurid which lives at the bottom of shallow, rocky streams and is widely distributed from Cochin-China, Southern China, Siam, Malay Peninsula, Burma, Assam Hills, Eastern Himalayas, Mysore and the Wynaad Hills. In recording this species from Mysore for the first time, the authors have adduced evidence to show that *S. wynaadensis* Day, a species which was distinguished by the presence of 4 barbles, is the same as *S. cochinchinensis*, normally with two barbles in the adult state.

With a view to help in the survey of the fish-fauna of the State, I give below a systematic list of the species so far known from Mysore and the adjoining hill-ranges of the Nilgiris, Wynaad and Coorg, along with their respective areas of distribution.

LIST[2] OF THE FISHES OF MYSORE AND OF THE ADJOINING HILL RANGES.

The general classification of fishes adopted in the list is that proposed by Dr. C. Tate Regan, F.R.S., in his article on ' Fishes ' in the

---

[1] Bhimachar, B. S. and Subba Rau, A. *Journ. Mysore Univ.* (B) I, pp. 141-153, 1 map, 1 text-fig. and 2 pls. (1941).

[2] In drawing up this list, recent records of fishes from Mysore have been consulted as well as Day's *Fishes of India* and his two volumes on ' Fishes ' in the *Fauna of British India* series. The enumeration of species is, however, not based on actual examination of specimens.

In connection with the geographical distribution of the various species, the following works were consulted :—1. Suvatti, C., *Index to Fishes of Siam*, (Bangkok, 1936) ; 2. Fowler, H. W., ' A List of Fishes known from Malaya.' *Fisheries Bull. Singapore*, No. 1 (1938) ; 3. Weber, M. and Beaufort L. F. de, *The Fishes of the Indo-Australian Archipelago* (Leiden, 1913-1936) ; 4. Chu, Y. T., ' Index Piscium Sinensium.' *Biol. Bull. St. John's Univ.* No. 1 (1931) ; 5. Chabanaud, P., ' Inventaire de la faune ichtyologique de l'Indochine. Premiere Liste.' *Service Oceanographique des peches de l'Indochine*, Note 1 (1926) ; and 6. Chevey, P., ' Inventaire de la faune ichtyologique de l'Indochine Deuxieme Liste.' *Inst. Oceanographique de l'Indochine*, Note 19. (1932).

Fourteenth Edition of the Encyclopaedia Britannica (1929). The genera under their respective families and the species under each genus are alphabetically arranged.

Names of Species.	*Geographical Range.*
Order: ISOSPONDYLI.	
Family: NOTOPTERIDAE.	
1. *Notopterus notopterus* (Pallas)..	India, Burma and further east.
Family: CLUPEIDAE.	
2. *Hilsa ilisha* (Ham.)	Persian Gulf and coasts of India and Burma; it ascends principal rivers.
Order: OSTARIOPHYSI.	
Suborder: *CYPRINOIDEA.*	
Family: CYPRINIDAE.	
Subfamily: *ABRAMADINAE.*	
3. *Chela argentea* Day	Nilgiris, Coorg and Mysore. Also found at Calcutta.
4. *Chela baicala* Ham.	Throughout India (except Malabar), and Burma.
5. *Chela clupeoides* (Bloch) ..	Cutch, Peninsular India and Satpura Trend.
6. *Chela phulo* Ham.	Assam, Bengal, Orissa, Central Provinces and the Deccan as far as the Kistna.
7. *Laubuca atpar* (Ham.) ..	India and Burma.
Subfamily: *RASBORINAE.*	
8. *Barilius barila* Ham.	Northern India as far as the Kistna and Burma.
9. *Barilius barna* Ham.	Northern India as far as the Kistna and Burma.
10. *Barilius bendelisis* Ham. ..	Throughout India. Day's records from Ceylon requires confirmation.
11. *Barilius canarensis* (Jerd.) ..	Western Ghats of Malabar, Canara and Mysore.
12. *Barilius gatensis* (C. V.) ..	Western Ghats of Malabar, Nilgiris, Coorg, Mysore and Travancore.
13. *Barilius vagra* Ham.	Northern India as far as the Kistna. Day's record from Ceylon requires confirmation.
14. *Brachydanio rerio* (Ham.) ..	India and Burma.
15. *Danio aequipinnatus* (McClell.)[1]	Ceylon, India, Burma and Siam.
16. *Esomus barbatus* (Jerd.) ..	Peninsular India.
17. *Rasbora caverii* (Jerd.).. ..	Coorg and Mysore State.
18. *Rasbora daniconius* (Ham.) ..	Ceylon, India, Burma and further east.
19. *Rasbora rasbora* (Ham.)	India, Burma and further east.
Subfamily: *CYPRININAE.*	
20. *Amblypharyngodon melettina* (C. V.)	Ceylon and Peninsular India.
21. *Amblypharyngodon microlepis* (C. V.)	Peninsular India, through Orissa to Calcutta.
22. *Amblypharyngodon mola* (Ham.)	India, except Malabar, and Burma.
23. *Barbus (Puntius) amphibius* (C. V.)	Ceylon and Peninsular India.

[1] Hora and Nair have recently shown (*Rec. Ind. Mus.* XLIII, p. 371, 1941) that *Danio strigillifer* Myers and *D. malabaricus* (Jerdon) are synonymous with *D. aequipinnatus* (McClelland).

Names of Species.	*Geographical Range.*
24. *Barbus* (*Puntius*) *carnaticus* (Jerd.)	Nilgiris, Wynaad, Mysore and S. Canara.
25. *Barbus* (*Puntius*) *chola* Ham.	India, Burma and further east.
26. *Barbus* (*Puntius*) *dorsalis* (Jerd.)[1] ..	Peninsular India and Ceylon.
27. *Barbus* (*Puntius*) *dubius* Day ..	Nilgiris and Mysore.
28. *Barbus* (*Puntius*) *filamentosus* (C. V.)[2]	Ceylon and Peninsular India.
29. *Barbus* (*Puntius*) *jerdoni* Day[3]	Deccan and Canara below the Ghats; its record from Malaya needs confirmation.
30. *Barbus* (*Puntius*) *kolus* Sykes..	Deccan and Central Provinces.
31. *Barbus* (*Puntius*) *lithopidos* Day	Coorg, Mysore, S. Canara and Travancore.
32. *Barbus* (*Puntius*) *melanampyx* (Day) ..	Peninsular India.
33. *Barbus* (*Puntius*) *micropogon* C. V.	Nilgiris, Wynaad, Mysore, S. Canara and Travancore.
34. *Barbus* (*Puntius*) *narayani* Hora	Coorg and Mysore.
35. *Barbus* (*Puntius*) *neilli* Day ..	Mysore and Deccan. Its record from Malaya needs confirmation.
36. *Barbus* (*Puntius*) *parrah* (Day)	Peninsular India.
37. *Barbus* (*Puntius*) *pleurotaenia* Blkr. ..	Ceylon and Mysore.
38. *Barbus* (*Puntius*) *pulchellus* Day	Mysore.
39. *Barbus* (*Puntius*) *sarana* (Ham.)[5]	Ceylon, India and Burma. It has also been recorded from China.
40. *Barbus* (*Puntius*) *sophore* Ham.[6]	India, Burma and Yunnan.
41. *Barbus* (*Puntius*) *ticto* Ham.[7]	Ceylon, India, Burma and Siam.
42. *Barbus* (*Puntius*) *vittatus* (Day)	Cutch, Peninsular India and Ceylon.
43. *Barbus* (*Tor*) *khudree* Sykes[4] ..	Ceylon, Peninsular India, Deccan and Satpura Trend.
44. *Catla catla* (Ham.)	Northern India as far as the Kistna and Burma. Introduced into the Cauvery.
45. *Cirrhina cirrhosa* (Bloch) ..	Southern India generally.
46. *Cirrhina fulungee* (Sykes) ..	Deccan and Mysore.

[1] *Puntius puckelli* Day is a synonym of *Puntius dorsalis* (Jerdon); *vide* Hora, S. L., *Rec. Ind. Mus.* XXXVIII, p. 2 (1936).

[2] *Barbus* (*Puntius*) *mahecola* (C. V.) is the female of *B.* (*Puntius*) *filamentosus* (C. V.); *vide* Hora, S. L., *Rec. Ind. Mus.* XXXIX, pp. 22-24 (1937).

[3] *Barbus Dobsoni* Day (*Fish. India*, p. 568, 1878) is a synonym of *B. jerdoni* Day.

[4] For a description of *Barbus khudree* Sykes see Hora and Misra in *Journ. Bombay Nat. Hist. Soc.* XL, pp. 24-28 (1938). Taxonomy of this species will be discussed in my series of articles on the "Game Fishes of India".

[5] *Barbus chrysopoma* C.V. and *B. pinnauratus* (Day) are synonyms of *Barbus sarana* (Ham.).

[6] *Barbus* (*Puntius*) *stigma* (Cuv. & Val.) of authors is synonymous with *B.* (*Puntius*) *sophore* Ham.; *vide* Chaudhuri, *Mem. Ind. Mus.* V, p. 436 (1916).

[7] *Barbus punctatus* Day from Peninsular India and *B. stoliczkanus* Day from Burma characterised by the presence of a complete lateral line are synonymous with *B. ticto*; *vide* Hora, Misra and Malik, *Rec. Ind. Mus.* XLI, p. 263 (1939).

Names of Species.	*Geographical Range.*
47. *Cirrhina reba* (Ham.)	Throughout India. Its record from Indo-china requires confirmation.
48. *Garra bicornuta* Rao	Mysore.
49. *Garra jerdoni* Day ..	Nilgiris, Wynaad and Mysore.
50. *Garra mullya* (Sykes)	Kathiawar, Peninsular India and Satpura Trend.
51. *Garra stenorhynchus* (Jerd.)	Nilgiris, Coorg and Mysore.
52. *Labeo ariza* (Ham.) ..	Nilgiris, Wynaad and Mysore.
53. *Labeo boga* (Ham.)	India and Burma.
54. *Labeo boggut* (Sykes) ..	Central and south-west India. Its record from Malaya requires confirmation.
55. *Labeo calbasu* (Ham.)	India and Burma. It has been recorded from China also.
56. *Labeo dussumieri* (C. V.) ..	Ceylon, South Malabar and Mysore.
57. *Labeo fimbriatus* (Bloch) ..	Sind, Punjab, the Deccan and Southern India to Orissa. Not recorded from Malabar.
58. *Labeo kawrus* (Sykes)	Poona and the Deccan.
59. *Labeo kontius* (Jerd.)	Nilgiris and Mysore.
60. *Labeo potail* (Sykes) ..	Mysore, Deccan and Ceylon.
61. *Mystacoleucus ogilbii* (Sykes)	Mysore and Deccan.
62. *Oreichthys cosuatus* (Ham.) ..	India, Burma and Siam.
63. *Osteochilus* (*Kantaka*) *brevidorsalis* (Day)	Nilgiris and Mysore.
64. *Osteochilus* (*Osteochilichthys*) *nashii* (Day) ..	Coorg, Wynaad, S. Canara and Mysore.
65. *Osteochilus* (*Osteochilichthys*) *thomassi* (Day)	South Canara and Mysore.
66. *Rohtee cotio* var. *cunma* Day	Sind, Deccan, Orissa, Assam and Burma.
67. *Rohtee neilli* Day	Deccan, Mysore and Travancore.
68. *Schismatorhynchus* (*Nukta*) *nukta* (Sykes)	Mysore and Deccan.
Family : HOMALOPTERIDAE.	
69. *Bhavania australis* (Jerd.)[1] ..	Malabar, Wynaad, Nilgiris, Mysore and Travancore.
70. *Balitora brucei* var. *mysorensis* Hora	Mysore.
Family : COBITIDAE.	
71. *Botia striata* Rao	Mysore.
72. *Lepidocephalus thermalis* (C. V.)	Ceylon and Peninsular India.
73. *Nemachilichthys shimogensis* Rao	Mysore.
74. *Nemachilus anguilla* (Annan.)	Yenna River at Mehda, Satara Dist., and Thunga River at Shimoga, Mysore.
75. *Nemachilus bhimachari* Hora	Mysore.
76. *Nemachilus botia* (Ham.) ..	Ceylon, India and Burma.
77. *Nemachilus dayi* Hora ..	Deccan and the Satpura Trend.
78. *Nemachilus denisonii* Day ..	Deccan, Nilgiris, Coorg and Mysore.
79. *Nemachilus evezardi* Day ..	Deccan, Satpura Trend and Peninsular India.
80. *Nemachilus monilis* Hora ..	Nilgiris and Mysore.
81. *Nemachilus semiarmatus* Day ..	Nilgiris and Mysore.
82. *Nemachilus sinuatus* Day ..	Wynaad and Mysore.
83. *Nemachilus striatus* Day ..	Wynaad, Nilgiris and Mysore.

[1] *Bhavania annandalei* Hora is synonymous with *B. australis* (Jerdon); *vide* Hora, *Rec. Ind. Mus.* XLIII, p. 225 (1941).

Names of Species.	*Geographical Range.*
Suborder : ***SILUROIDEA.***	
Family : CLARIIDAE.	
84. *Clarias batrachus* (Linn.) ..	India, Burma and further east.
Family : HETEROPNEUSTIDAE.	
85. *Heteropneustes fossilis* (Bloch)	Ceylon, India, Burma and further east.
Family : SILURIDAE.	
86. *Callichrous bimaculatus* (Bloch)	Ceylon, India, Burma and further east.
87. *Silurus cochinchinensis* C. V. ..	Wynaad, Mysore, Eastern Himalayas, Assan Hills, Burma and further east.
88. *Wallagonia attu* (Bloch) ..	Ceylon, India, Burma and further east.
Family : SCHILBEIDAE.	
89. *Proeutropiichthys taakree* (Sykes)[1] ..	Peninsular India, except Malabar.
90. *Pseudeutropius atherinoides* (Bloch) ..	India and Burma.
91. *Silonopangasius childrenii* (Sykes)	Deccan Western Ghats near Poona to Mysore.
Family : BAGRIDAE.	
92. *Mystus aor* (Ham.)	India, Burma and China.
93. *Mystus cavasius* (Ham.) ..	India, Burma and further east.
94. *Mystus keletius* (C. V.) ..	Ceylon and Peninsular India.
95. *Mystus malabaricus* (Jerd.) ..	Wynaad, Mysore, Malabar and Travancore.
96. *Mystus montanus* (Jerd.)	Wynaad, Coorg, Mysore and Travancore.
97. *Mystus oculatus* (C. V.)	Nilgiris, Mysore, Malabar and Travancore.
98. *Mystus punctatus* (Jerd.) ..	Nilgiris and Mysore.
99. *Mystus vittatus* (Bloch) ..	Ceylon, India, Burma and Siam.
100. *Rita hastata* Val.	Deccan and Mysore.
Family : SISORIDAE.	
101. *Bagarius bagarius* (Ham.)	India, Burma and further east.
102. *Gagata itchkeea* (Sykes)	Northern parts of Western Ghats and Coorg.
103. *Glyptothorax lonah* (Sykes) ..	Deccan and the Satpura Trend.
104. *Glyptothorax madraspatanus* (Day)	Nilgiris, Mysore and Travancore.
Order : APODES.	
Family : ANGUILLIDAE.	
105. *Anguilla bengalensis* Gray	Ceylon, India, Burma and further east.
Order : SYNENTOGNATHI.	
Suborder : ***SCOMBRESOCOIDEA.***	
Family : XENENTODONTIDAE.	
106. *Xenentodon cancila* (Ham.) ..	Ceylon, India, Burma and further east.
Order : MICROCYPRINI.	
Family : CYPRINODONTIDAE.	
107. *Aplocheilus blockii* (Arnold)	Ceylon and Peninsular India.
108. *Aplocheilus lineatus* (C. V.) ..	Ceylon and Peninsular India.
109. *Oryzias melanostigma* (McClell.) ..	Peninsular India, Orissa, Lower Bengal and Burma.

[1] *Schilbe sykesii* Jerdon, *Eutropius microphthalmus* Blyth, *Pseudeutropius megalops* Günther and *P. longimanus* Günther are synonymous with *Proeutropiichthys taakree* Sykes; *vide* Hora, *Rec. Ind. Mus.* XLIII, p. 106 (1941).

Names of Species.	*Geographical Range.*
Order : PERCOMORPHI.	
Suborder : *PERCOIDEA.*	
Family : AMBASSIDAE.	
110. *Ambassis nama* (Ham.) ..	India and Burma.
111. *Ambassis ranga* (Ham.) ..	India, Burma and further east.
Family : CICHLIDAE.	
112. *Etroplus suratensis* (Bloch) ..	Ceylon and Peninsular India.
Suborder : *GOBIOIDEA.*	
Family : GOBIIDAE.	
113. *Glossogobius giuris* (Ham.) ..	Ceylon, India, Burma and further east.
Suborder : *ANABANTOIDEA.*	
Family : POLYCANTHIDAE.	
114. *Macropodus cupanus* C. V. ..	South India, Malay Peninsula and Sumatra.
Suborder : *OPHICEPHALOIDEA.*	
Family : OPHICEPHALIDAE.	
115. *Ophicephalus gachua* Ham. ..	Ceylon, India, Burma and further east.
116. *Ophicephalus leucopunctatus* Sykes	Peninsular India and Deccan.
117. *Ophicephalus marulius* Ham.	Ceylon, India, Burma and further east.
118. *Ophicephalus punctatus* Bloch	India, Burma and Malaya.
119. *Ophicephalus striatus* Bloch ..	Ceylon, India, Burma and further east.
Order : OPISTHOMI.	
Family : MASTACEMBELIDAE.	
120. *Mastacembelus armatus* (Lacép.)	Ceylon, India, Burma and further east.
121. *Mastacembelus pancalus* (Ham.)	Northern India generally : its records from south of Kistna are few.

It will be seen from the above that in the fish fauna of Mysore and the neighbouring tracts there is a great preponderance of the Ostariophysi. Of the 121 species listed above, as many as 102 belong to this order (81 to the Suborder Cyprinoidea and 21 to the Siluroidea). Out of the 81 Cyprinoid fishes, there are 15 species of loaches, 2 belonging to the family Homalopteridae and 13 to the Cobitidae, and 66 true Carp or Cyprinidae. Of the remaining 19 species, 1 belongs to the Apodes (Anguillidae), 1 to the Synentognathi (Xenentodontidae), 3 to the Microcyprini (Cyprinodontidae), 10 to the Percomorphi (Ambassidae 2, Cichlidae 1, Gobiidae 1, Polycanthidae 1 and Ophicephalidae 5) and 2 to the Opisthomi. The Percomorphi are rather poorly represented in the above list and it is surprising that even some of the widely distributed species do not appear to have been recorded from this region. It seems certain that when a detailed fish survey of the State is completed many more species will be added to its fauna.

ZOOGEOGRAPHICAL REMARKS ON THE FISH-FAUNA OF MYSORE.

As regards physical features, the Mysore State has been broadly divided into two areas, the Maidan and the Malnad. The former comprises the eastern part of the State ; it is a plain, cultivated country with a gentle slope towards the east. According to Blanford[1], the

[1] Blanford, W. T. *Phil. Trans. Roy. Soc. London* (B), CXCIV, p. 346 (1901).

Maidan area of Mysore is included in the Carnatic or Madras zoogeographical tract which is defined as follows :—

" The Peninsula south of the Kistna or of 16°N. lat.,[1] and east of the Western Ghats, comprising the Carnatic and Mysore. The plains of the Carnatic are much like those of the Deccan and are for the most part cleared, but there are scattered hill groups, generally covered with forest and with a much higher rainfall than the plains. The average temperature is slightly higher than that of the Deccan, but more equable, the average annual range of the thermometer being considerably smaller. The average rainfall is about 35 inches."

Blanford recorded the occurrence of the following genera of freshwater fishes from the Carnatic Tract :

Symbranchus.
Anguilla.
Clarias.
Saccobranchus (=*Heteropneustes*).
Wallago (=*Wallagonia*).
Callichrons.
Ailia.
Pseudeutropius.
Pangasius.
Silundia (=*Silonia*).
Macrones (=*Mystus*).
Rita.
Bagarius.
Glyptosternum (=*Glyptothorax*).
Chela.
Notopterus.
Ambassis.
Gobius.
Lepidocephalichthys (=*Lepidocephalus*).
Jerdonia.
Nemachilus.
Discognathus (=*Garra*).
Labeo.
Cirrhina.
Amblypharyngodon.
Barbus.
Nuria (=*Esomus*).
Rasbora.
Rohtee.
Barilius.
Danio.
Perilampus (=*Laubuca*).
Mastacembelus.
Ophicephalus.
Anabas.
Polyacanthus.
Etroplus.

Of the genera enumerated above, *Jerdonia* is endemic in this tract, *Polyacanthus* and *Etroplus* are found in Peninsular India and Ceylon, while the remaining 34 genera are common to the Indo-Gangetic plain, Indian Peninsula and Burma.

The Malnad is the western part of the State ; it is composed of hilly tracts with peaks ranging from 4,000 to 6,000 feet above sea level. Blanford included this area in his Malabar Tract—" Western Ghats and the western coastlands of the Peninsula from the Tapti River to Cape Comorin." The Nilgiris, the Wynaad and Coorg are definitely included in the Malabar tract. According to Blanford's lists, the following additional genera are found in the Malabar tract of the Mysore State :

Silurus
Homaloptera (in part=*Bhavania*)
Scaphiodon (in part=*Osteochilus*)
Sicydium (in part=*Sicyopterus*).

[1] In a foot-note, Blanford observed that " This boundary should perhaps be placed further south. Originally these tracts were arranged to mark the distribution of the Cyclophoridae. After going through all the evidence, I am inclined to think that a more important line might be drawn about 12°N. lat.".

These genera have a restricted and discontinuous distribution in India. According to Blanford's tables, *Silurus* is found in the Malabar tract, the Eastern Himalayan tract, the Assam tract, and the Tenasserim tract. Formerly two or three species of *Silurus* were recognised from within the limits of India, but, as indicated above, Bhimachar and Subba Rau have shown that it is the same species that is found from Cochin-China to the Eastern Himalayas and also in the Western Ghats. Similarly, the Homalopteridae, of which *Bhavania* is a highly specialised member, are found throughout south-eastern Asia up to the Eastern Himalayas and the hills of Assam, and also in the Western Ghats. These two genera, recorded by Bhimachar and Subba Rau from the Kadur District, represent the so-called Malayan element in the fauna of Mysore. I[1] have recently shown that Day's three species of *Scaphiodon* from Peninsular India are referable to *Osteochilus*, a genus widely distributed in south-eastern Asia. In the same place it has been shown that *Cyprinus nukta* Sykes belongs to the Malayan genus *Schismatorhynchus* which was hitherto known only from Sumatra and Borneo. *Sicydium* is recorded from the Malabar and the Northern Ceylon tracts and from the Malay Peninsula. It is a Gobioid genus, which seems to have invaded fresh waters from the sea and for this reason its distribution is not of much significance. Law and the present writer[2] have recently discussed the significance of the Malayan element in the fauna of Peninsular India and the route of dispersal of the above-noted forms from their original home in south-eastern Asia to the Western Ghats.

---

[1] Hora, S. L. *Rec. Ind. Mus.* XLIII, pp. 1-14 (1941).
[2] Hora, S. L. and Law, N. C. *Rec. Ind. Mus.* XLIII, pp. 233-256 (1941).