

FISHES FROM THE HIGH RANGE OF TRAVANCORE

BY

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(Communicated by Dr. S. L. Hora)

(With two text figures)

INTRODUCTION

Travancore has not remained a *terra incognita* to the fluvial ichthyologist. A perusal of the literature shows that, since the publication of Day's 'Fishes of Malabar' (1865) and 'Fishes of India' (1878-1888), a considerable amount of work has been carried out, especially during the past two decades. Situated at the extreme south of Peninsular India, Travancore has been noted for its richness in the number and variety of freshwater fishes, so much so that with every fresh collection new records, or species new to science, have been discovered. The freshwater fish fauna is also noted for its high endemicity. A marked Malayan element in its fauna, is yet another feature of considerable interest.

In recording 76 species as occurring in the freshwaters of Travancore, Hora and Law (1941) surmised that further research would bring to light more species of freshwater fishes from this interesting zoogeographical region. Since then the addition of nearly a dozen freshwater species have been reported from Travancore. Some of these are new to science. Raj (1941), described a new species *Barbus* (*Puntius*) *ophicephalus*, and a subspecies, *B. (Puntius) micropogon periyarensis*, from Kallar, a tributary of the Pambayar river and from the Periyar Lake respectively. Hora and Nair (1941) redescribed a rare gobioid fish, *Sicyopterus griseus* (Day), from Southern Travancore and a new species of Globe-fish of the monotypic genus *Monotretus* Bibron, viz. *Tetraodon (Monotretus) travancoricus*, from the Pambayar river in Northern Travancore. Chacko's list of indigenous fishes of the Periyar Lake (Chacko, 1948), includes the following species not previously listed from Travancore: *Barilius bendelisis* Ham.; *Silonopangasius childreni* (Sykes) (= *Silundia sykesi* Day); and *Anguilla bengalensis* (Gray). In 1949, the writer extended the distribution of *Barbus (Puntius) dorsalis* (Jerdon), to the fresh waters of Travancore. Recently Menon (1950) reported the discovery of a remarkable blind Cat-fish, *Horaglanis krishnai* from Kottayam. The present collections by the writer (Silas, 1951) from the hill ranges of Travancore show the extended distribution of two other species, viz. *Nemachilus denisonii* Day, in the Peerméd Hills in Northern Travancore and *Esomus barbatus* (Jerdon), in Southern Travancore.

This paper is a continuation of a previous contribution by the writer (Silas, 1951), and deals with the fishes of the High Range of Travancore.

core. The above list of new records shows that six species have been reported since 1941 (Hora and Law), as occurring in the hill-streams and rivers draining the High Range. They are :—

Barilius bendelisis Ham.

Barbus (Puntius) micropogon periyarensis Raj.

Barbus (Puntius) ophicephalus Raj.

Nemachilus denisonii Day.

Silonopangasius childreni (Sykes).

Anguilla bengalensis (Gray).

To add to these the occurrence of two other remarkable genera described from here recently, viz. a homalopterid, *Travancoria* Hora (1941), and a schizothoracin, *Lepidopygopsis* Raj (1941), show how rich a fauna this part of Travancore possesses. In May and June 1950, while on a visit to the Peermēd hills, the writer was able to make fish collections from certain places from this part of the High Range, and it is the object of this note to report on the material then collected.

TOPOGRAPHY

The High Range proper includes some of the highest peaks in the Western Ghats. In the south, especially towards the Peermēd section, the land spreads out into considerable width, with the hills rising upto about 5,000 feet. These ranges are topographically important because, due to their abrupt rise and closeness to the sea-board, they help in checking the South-West Monsoon clouds and give heavy rainfall to the narrow strip of land to their west. These hills also enjoy a maximum rainfall of about 200 inches. The efficient natural drainage system draining the western face of the High Range consisting of innumerable winding perennial streams and rivulets, harbour a very interesting fauna.

DRAINAGE SYSTEMS

The High Range is drained by streams which ultimately empty into four main rivers, viz. the Amaravati and the Vaigai on the east, and the Periyar and the Pambayar on the west. Chinnar, a tributary of the Amaravati river, takes its origin from the High Range proper and joins the Amaravati in the plains. The Amaravati in turn becomes confluent with the Cauvery further east. The Suruli, a tributary of the river Vaigai, and the Vaigai itself drains part of the eastern face of the High Range. The Periyar, which drains a greater part of the western face of these hills, ultimately empties into the sea near Cochin. The Pambayar river flows into the Vembanad lake and is not directly connected to the sea. As a result, it has been possible to divide the drainage system into four main watersheds. They are the Cauvery and the Vaigai watersheds on the east, and the Periyar and the Pambayar on the west. Collections have been made from the Periyar and the Pambayar watersheds. The nature of the watersheds, and the localities from where collections have been made, are indicated in the accompanying map.

DESCRIPTION OF LOCALITIES

To obviate repetition of describing the environment of each species separately, the following brief description of the places of collection is given below. The species are arranged under each locality in the table at the end, and by referring to these descriptions the characteristics of their respective habitats may be ascertained.

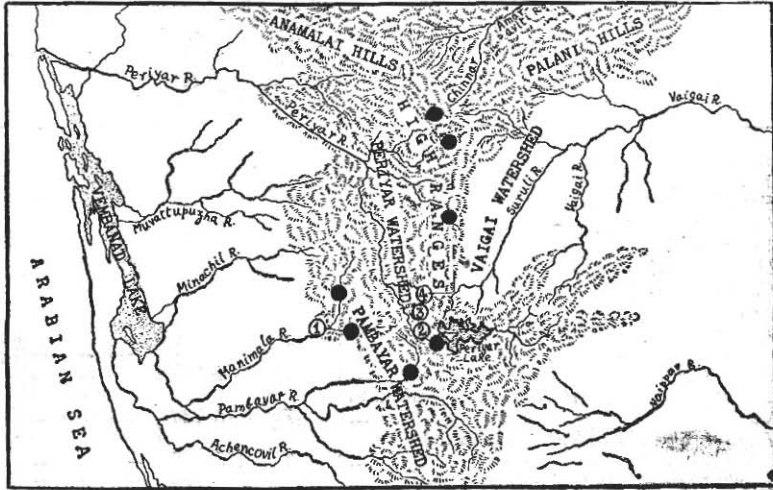


Fig. 1

Map showing the watersheds of the High Range and the localities from where fish collections have been made. (1) Manimala river, Mundakayam, (2) Vandiperiyar river close to Arnakal Estate, Peerméd Hills. (3) Stream in Garadygody Estate, Peerméd Hills. (4) Upper and Lower Pasupara streams, Peerméd Hills. The black circles indicate localities from where previous collections have been reported.

(i) Large stream at Mundakayam, (Manimala River): Typical large hill-stream at the base of the Peerméd Hills. At the time of collection, due to the then prevailing drought, the level of water had gone down considerably and consequently the flow in the stream was also moderate. The bottom is mostly rocky, strewn with stones and pebbles in some places, and muddy in others. A few large pools with generally sandy bottom are present along the course of the stream.

(ii) Vandiperiyar River close to Arnakal Estate, Peerméd Hills: Large river. Due to the then prevailing drought, the flow of water in the river was greatly restricted. In certain places, the water flows over a bed of rocks. The current was not very fast, except in the region of small falls and cascades. A few large and deep pools were present along the course of the river. Aquatic vegetation was found to be practically absent at the time of collection. But plenty of vegetation was present on either bank.

(iii) Stream at Garadygody Estate, Peerméd Hills: Small stream, portions of which were overgrown with plenty of vegetation. Pebbly and shingly bottom intermixed with sand.

Small pools were present along the course of the stream. The current was generally sluggish, except between pools where rapids are formed.

(iv) Upper Pasuparai Stream, Peerméd Hills: Typical large hill-stream, two miles beyond Pasuparai Estate, formed

TABLE

Name of Species	No. of specimens obtained	Standard length	1	2	3	4
Family CYPRINOIDEA						
Sub-family Abramidinae						
<i>Barilius bakeri</i> Day	6	45-93	x	x	-	x
<i>Barilius gatensis</i> (Cuv. and Val.)	14	47-97	-	x	x	x
Sub-family Rasborinae						
<i>Danio aequipinnatus</i> McClell	19	48-96	x	x	x	x
<i>Rasbora daniconius</i> (Ham.)	31	38-115	x	x	x	x
Sub-family Cyprininae						
<i>Barbus (Puntius) amphibius</i> (Cuv. and Val.)	1	97	-	-	-	x
<i>Barbus (Puntius) curmuca</i> (Ham.)	5	54-193	x	-	-	x
<i>Barbus (Puntius) filamentosus</i> (Cuv. and Val.)	7	78-189	x	x	-	-
<i>Barbus (Tor) khudree malabaricus</i> (Jerdon)	2	165-256	-	x	-	-
<i>Barbus (Puntius) melanampyx</i> Day	40	29-58	x	x	x	x
<i>Barbus (Puntius) micropogon periyarensis</i> Raj	1	76	-	x	-	-
<i>Barbus (Puntius) ophicephalus</i> Raj	1	128	x	-	-	-
<i>Garra jerdoni</i> Day	1	151	-	-	-	x
<i>Garra mullya</i> (Sykes)	27	52-149	x	x	x	x
Family HOMALOPTERIDAE						
<i>Bhavania australis</i> (Jerdon)	2	73-113	-	x	-	x
<i>Travancoria jonesi</i> Hora	1	90	-	-	-	x
Family COBITIDAE						
<i>Lepidocephalus thermalis</i> (Cuv. and Val.)	29	51-71	x	x	x	x
<i>Nemachilus denisonii</i> Day	11	41-64	-	x	-	x
<i>Nemachilus guntheri</i> Day	3	70-76	-	x	-	-
<i>Nemachilus triangularis</i> Day	4	85-89	-	x	-	-
Family HETEROPNEUSTIDAE						
<i>Heteropneustes fossilis</i> (Bloch)	1	182	x	-	-	-
Family SILURIDAE						
<i>Ompok bimaculatus</i> (Bloch)	1	76	-	x	-	-
Family BAGRIDAE						
<i>Mystus cavasius</i> (Ham.)	1	73	x	-	-	-
<i>Glyptothorax madraspatanus</i> Day	4	111-166	-	x	-	x
Family CYPRINODONTIDAE						
<i>Aplocheilus lineatus</i> (Cuv. and Val.)	17	36-69	x	x	x	x
Family GOBIIDAE						
<i>Glossogobius giuris</i> Ham.	2	71-74	x	-	-	-
Family OPHICEPHALIDAE						
<i>Ophicephalus gachua</i> Ham.	16	69-112	x	x	x	x
Family MASTACEMBELIDAE						
<i>Mastacembelus armatus</i> (Lacép)	9	123-304	-	x	-	x

of rapids and pools in succession. The stream flows along a wooded valley. Conditions are almost similar to those observed in (ii) above.

I have compared this interesting form with the type in the collection of the Zoological Survey of India, Indian Museum, and find that they agree in all essential features. In possessing 44 scales on the lateral line and 19-21 predorsal scales, this subspecies is sufficiently distinct from *Barbus (Puntius) micropogon* (Cuv. & Val.), which has only 38 to 39 scales along the lateral line and 12 predorsal scales.

***Barbus (Puntius) ophicephalus* Raj.**

1941 *Barbus (Puntius) ophicephalus* Raj. *Rec. Ind. Mus.*, XLIII, p. 376, fig. 1-2.

1 specimen. Large stream close to Mundakayam, at the foot of the Peermēd Hills.

Raj (1941) described this new species from Kallar, a tributary of the Pambayar river south of the Periyar Lake. Though this species shows a certain amount of similarity to *Barbus (Puntius) lithopidos* Day, it is distinguished from it in characters such as the lesser number of dorsal rays (3/7 versus 4/9), the greater number of lateral line scales (43-45 versus 37-39) and predorsal scales (15-17 versus 11-14). The colouration of the species is also very characteristic. In spirit, the lower half of the body is lighter than the upper half. A broad dark band runs along the lateral line from behind the head to middle of the base of the caudal fin.

***Nemachilus güntheri* Day.**

1941 *Nemachilus güntheri*. Hora & Law, *Rec. Ind. Mus.*, XLIII, p. 250, Pl. ix, figs. 2-6.

3 specimens. Stream in Pasuaparai Estate, Peermēd Hills.

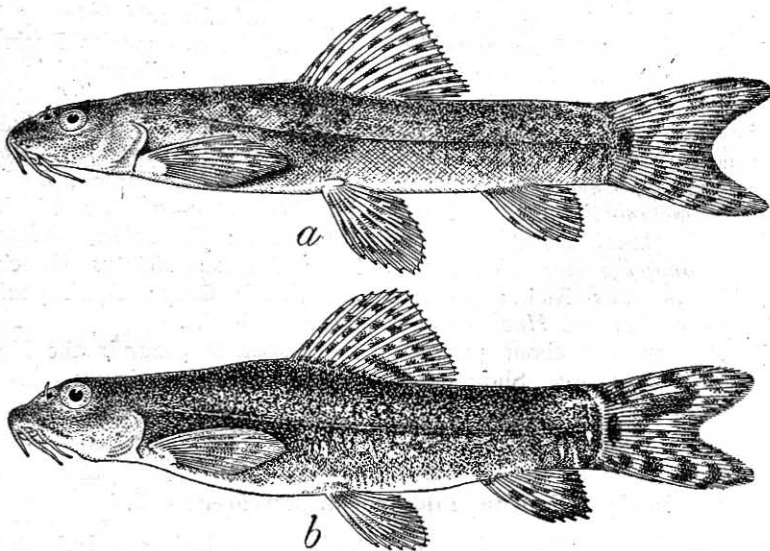


Fig. 2

Lateral view of *Nemachilus güntheri* Day (female specimens) showing colour variations.

from specimens collected at Pambadampara, 50 miles north and later recorded from the Anamalai Hills (Puthutotam-Estate, close to Valparai town).

Bhavana australis (Jerdon).

- 1941 *Bhavana australis* Hora, *Rec. Ind. Mus.*, XLIII, p. 225, Pl. viii, figs. 1-3.
 1 specimen. Stream in Pasuparai Estate, Peermēd Hills.
 1 specimen. Vandiperiyar river close to Arnakal Estate, Peermēd Hills.

Hora (op. cit.), has given a complete diagnosis of this species and discussed its affinities with other Homalopterid genera. *B. australis* seems to be fairly common in the southern portions of the Western Ghats. In the possession of greatly restricted gill-openings, *B. australis* is distinguished from the *Travancoria jonesi* Hora.

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REFERENCES

- Chacko, P. I. (1948): Development of Fisheries of the Periyar Lake. *Journ. Bombay Nat. Hist. Soc.*, 43 (1): 191-192.
 Hora, S. L. (1941): Homalopterid Fishes of Peninsular India. *Rec. Ind. Mus.*, xliii: 221-232.
 Hora, S. L., and Law, N. C. (1941): Freshwater Fishes from Travancore. *Rec. Ind. Mus.*, xliii: 233-257.
 Hora, S. L. and Nair, K. K. (1941): New Records of Freshwater Fishes from Travancore. *Rec. Ind. Mus.*, xliii: 387-393.
 John, C. C. (1936): Freshwater Fishes and Fisheries of Travancore. *Journ. Bombay Nat. Hist. Soc.*, 38: 702-733.
 Menon, A. G. K. (1950): On a Remarkable Blind Siluroid Fish of the family Clariidae from Kerala, (Travancore, South India). *Rec. Ind. Mus.*, xlvii.
 Pillay, R. S. N. (1929): A list of Fishes from Travancore. *Journ. Bombay Nat. Hist. Soc.*, 33: 347-379.
 Raj, S. B. (1941): On a New genus of Schizothoracine Fishes from Travancore, South India. *Rec. Ind. Mus.*, xliii: 209-214.
 Raj, S. B. (1941): Two New Cyprinid Fishes from Travancore, South India, with remarks on *Barbus (Puntius) micropogon* Cuv. and Val. *Rec. Ind. Mus.*, xliii: 375-386.
 Silas, E. G. (1950): On a Collection of Fish from Travancore. *Journ. Bombay Nat. Hist. Soc.*, 48: 792-797.
 Silas, E. G. (1951): On a Collection of Fish from the Anamalai and Neilliampathi Hills, Western Ghats, with a note on its Zoogeographical significance. *Journ. Bombay Nat. Hist. Soc.* 49 (4): 670-81.

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