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Fish Fauna of Subarnarekha River

A.K. KARMAKAR

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ZOOLOGICAL SURVEY OF INDIA

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Fish Fauna of Subarnarekha River

A.K. KARMAKAR, A. DAS AND P.K. BANERJEE

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INTRODUCTION

Rising some 15 kilometers southeast of Ranchi near Nagri village on the Chotanagpur plateau of Jharkhand state in Ranchi district, the Subarnarekha is a 450 kilometer long river of fascinating beauty, as it sweeps through a picturesque terrain of varied landscapes from the source to its mouth, into the Bay of Bengal

Initially the river flows to the northeast for about 60 kms, terminating its plateau course as the river roars down a cliff to a depth of 74 meters forming a picturesque water fall of Hundrughagh. The stream emerges again flowing eastwards and forming boundary with Hazaribag district till it meets the boundary of Puruliya district of W.B. At this point the river takes a sudden unusual rightangle turn to south. For a considerable distance further south, the Subarnarekha forms the common boundary between Ranchi and Puruliya districts till the river glides into Singbhum districts of Jharkhand. It then flows in a short stretch further down stream, the river forms a boundary between Singbhum and Mayurbhanj district (Orissa) till it enters West Bengal and passes through forest clad plains of Gopiballabhpur of West Medinipur district. Eventually, the Subarnarekha passes into Baleswar Dist. of Orissa as it finally meanders down to the Bay of Bengal. After its 450 kilometers long journey and having drained a catchment spread over 19296 sq. kms, the Subarnarekha meets its ultimate sink, Bay of Bengal.

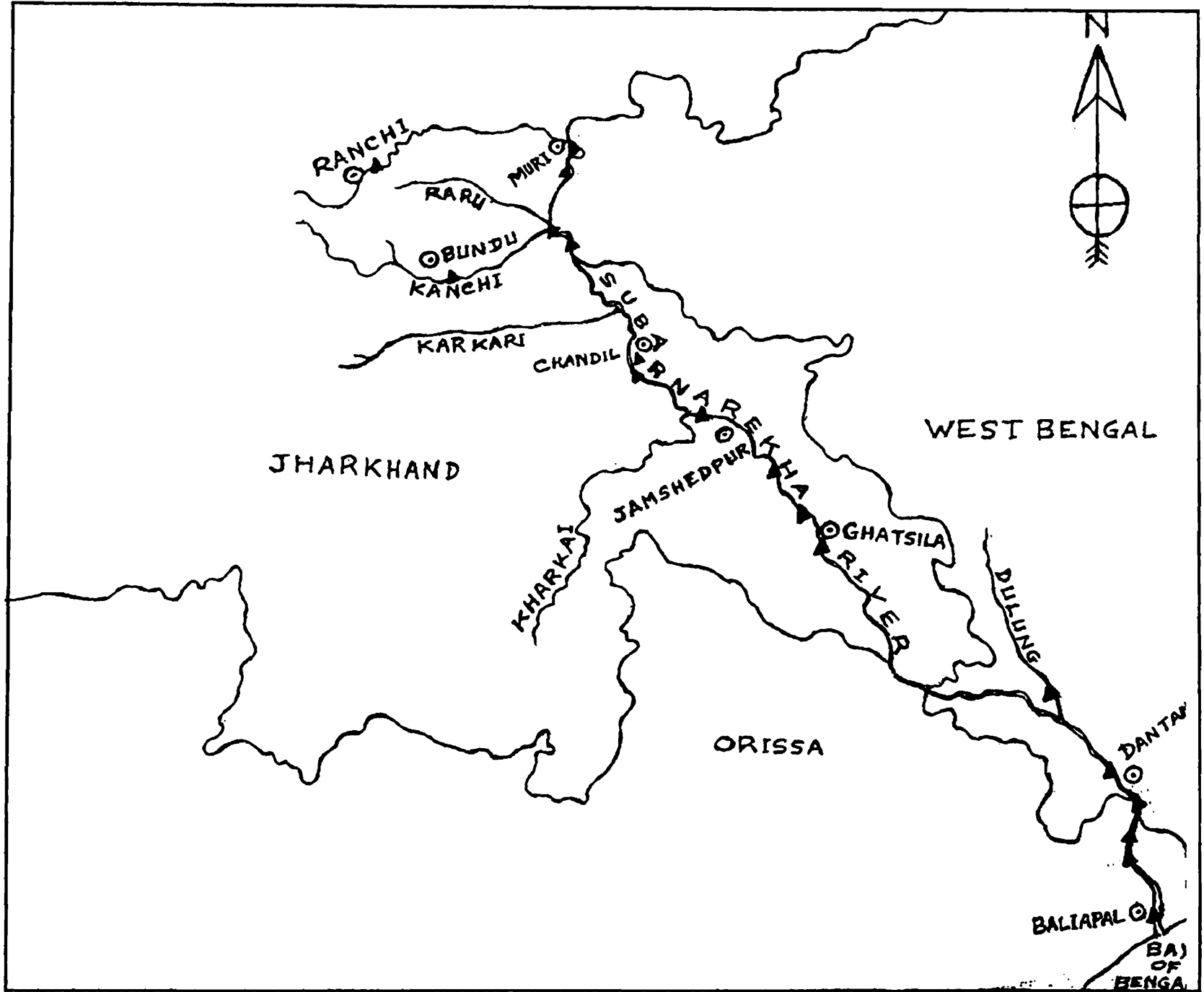
Subarnarekha is an interstate river draining sizeable portions of three states of Jharkhand, Orissa and West Bengal, covering parts of seven districts, namely : Singbhum, Ranchi and Hazaribag in Jharkhand, Mayurbhanj and Baleswar in Orissa; and Puruliya and Medinipur in West Bengal.

The percentage of the basin area lying in Jharkhand, Orissa and West Bengal comes to 68.4, 16.1 and 15.5 respectively. Only two districts of Jharkhand, namely, Singbhum and Ranchi together form a substantial part, covering 67.51 percent of the basin.

On the right bank of Subarnarekha has four major tributaries, the Raru, the Kanchi, the Karkari and the Kharkai draining nearly half of the Subarnarekha basin, covering about 9050 sq. kms of area, while on the left side there is only one large stream, namely Dulung, which drains an area of some 1173 sq. kms covering hardly 6 percent of the basin area (CPCB Report, 1986).

The river regime is highly fluctuating, with continuous flow only during monsoon season and rest of the year remaining either completely dry or with disconnected pools of water. The river rises suddenly after the monsoon downpour but, after few hours, quickly subside to formidable level. (Singh Ed. 1971)

Although the Subarnarekha basin is the smallest of the 14 major river basins of India covering hardly 0.6 percent of India's land surface, yet it is an important inter-state river



Map. Showing subarnarekha river and collecting stations

flowing through one of the most important industrial belts and mineral rich areas of India (CPCB Report 1986). The Subarnarekha basin has the highest density with 65-95 km of drainage per 250 km² in the greater part of the basin. The Subarnarekha valley extends from north-west to south east. It is also known as mica-chist plain. The valley has an average width of 10-16 km. There are residual hills spread all over the valley. The upper valley has good rice cultivation while in the lower reaches iron and steel, and Copper industries are located at Jamshedpur and Moubhandar. (Singh Ed. 1971)

No comprehensive work has so far been done on the Fish Fauna of Subarnarekha except a few scattered publications. Gauguly, Dutta and Sen (1972) described two species of catfishes, viz, *Glyptothorax nelsoni* and *G. coheni* from Subarnarekha River, 200 m downstream from Namkum Railway Station and 200 m below Getalsud Dam, Ranchi District, Bihar (now Jharkhand) respectively. Further, Ganguly and Datta (1973) described a cyprinid fish, *Garra satyendranathi* from Subarnarekha River, about a furlong downstream from the road bridge over Subarnarekha at Namkum, Jharkhand. But, later, Talwar and Jhingran (1991) treated it as of a synonym of *Garra annandalei* Hora. Ganguly and Datta (1975) again described the catfish, *Mystus mukherjii* from the vicinity of Hundru Falls, Jharkhand. Which was also accounted as a synonym of *Mystus cavasius* (Hamilton-Buchanan), by Talwar and Jhingran (1991).

The present documentation work is the outcome of a detailed study on the fish fauna of Subarnarekha River based on four faunistic survey collections made by the Zoological Survey of India (Dr. A.K. Sanyal & party, March & October' 1984; Dr. A.K. Karmakar Party February & December, 2001) covering 22 collecting Stations in the catchment of the river (16 in Jharkhand, 3 in West Bengal and 3 in Orissa) starting from Namkum in Jharkhand (about 20 km. from Origin) to Baliapal (about 20 km away from the sea) in Orissa, the Fish collection received from Dr. S.K. Chakraborty of Vidyasagar University, Medinipore, W.B. and Dr. P.P. Biswas of R.K. Mission Vivekananda Centenary college, Rahara, W.B., and also the earlier identified and registered fishes present in the National Zoological collection of the Zoological Survey of India., have also been made use in the present study.

In the preset document on the "Fish Fauna of Subarnarekha River", 66 species belonging to 42 genera, under 21 families and 7 orders, have been dealt with in detail and their conservation status discussed. Taxonomic work was carried out mainly based on Talwar & Jhingran (1991), Menon (1987, 1992, 1999) & Jayaram (1981, 1999, 2006).

STUDY AREA

1. Ranchi

Ranchi, The headquarters of Jharkhand state, is picturesquely situated in the valley of Chhotanagpur at an altitude of 2140 feet (654.5 metres) above sea level. On the centre of the city itself there is a lake named 'Ranchi lake.' About 8 kms away there is Namkum, a cantonment area, full of hillocks and forests, from where passes the Subarnarekha river. About 43 km north east of Ranchi, there is Hudru Falls where the Subarnarekha falls from

a height of 320 feet. About 35 km. from Ranchi and 9 kms. away from Ranchi-Tata Road, the Kranchi river (a tributary of the Subarnarekha river) falls from 144 feet height (Dasam Falls) and ultimately meets the Subarnarekha river.

2. Bundu

It is a small place on Jamshedpur Ranchi Road about 85 km. from Jamshedpur and 50 km. from Ranchi. Mainly encircled with undulating forests, scattered cultivable lands are also seen near the small town of Bundu. About 7 km. from Bundu on Jamshedpur Road, there is a small village, Kranchi situated on the bank of Kranchi river, a tributary of the Subarnarekha. Vegetations are mainly sal, teak, mahua with numerous Palas trees seen on both sides of the road and in the forest.

3. Muri

Muri is 67 km. away from Ranchi, situated almost on the bank of the Subarnarekha river where it meets a small river named Urangan. Though reported to be almost dry during winter, sometimes due to discharge from Gitalsud reservoir, the Subarnarekha at Muri becomes half filled with water. Near the confluence of two rivers, the marginal vegetation is mainly *Ipomia* sp. Bushes and few trees like banyan, peepal, sal, eucalyptus, etc. are seen in the surrounding. Fishermen use to catch fish with net when there is no discharge from the Gitalsud reservoir. The Subarnarekha river near Dandung and Harat village (40 kms and 45 kms downstream from Muri) is wide spread and travels almost in the plains.

4. Chandil

This place is situated near Jamshedpur Ranchi Highway with small hillocks surrounding the place. The Chandil Dam has been constructed on the Subarnarekha river, about 15 kms (via the Highway) from Chandil Railway Station. On the way to Chandil Dam from Chandil town, a small river, named Bumni, meets the Subarnarekha river. Chandil town is surrounded mainly with tribal villages.

5. Ghatsila

Surrounding of Ghatsila consists of jungles with sal, teak, mahua; the tilas, hills, hillocks; rivers and mines. It is 215 kms away from Kolkata on the bank of the Subarnarekha river with beautiful climatic condition. About 7 km. away from Ghatsila town, at Moubhandar, there is the Hindustan Copper complex just beside the Subarnarekha river and Kumarmangalam bridge. About 7 km away from Maubhandar, there is Copper Mines at Mosabani. About 10 kms from Ghatsila, there exists Gaaludi Hills, where a barage has been constructed on the Subarnarekha river.

6. Dantan

It is situated in the West Midnapore district of West Bengal, where the Subarnarekha travels almost in the plains. The Subarnarekha travels through Ballydingra village, the other side of the river belongs to Orissa (Makria village). The river is reported to become very wide in this place during rainy season, though in winter, it is about 200 feet wide. Here, fish catch takes place mainly with gill net.

On the way to Ballydingra village from Dantan, there exists Singari khal which ultimately connects with the Subarnarekha river. Mainly cast net is operated in the Singari khal.

The Subarnarekha river also travels through Jaleswar and Rajghat (both in Orissa) about 20 km and 28 km south of Dantan from where fish specimes were also collected.

7. Baliapal

It is in Orissa, situated about 25 kms east from Gandichawk and 65 km. south of Dantan. Collection was made from the Subarnarekha river near Parulia village, here, the river is very wide and river bed is mainly sandy. Special type of net is operated from fishing boat for catching only *Macrobrachium* species, which according to local fishermen, is more profitable than fish catch.

SUBARNAREKHA RIVER (Facts and Figures)

Origin	:	15 km south-east of Ranchi near Nagri villege on the Chotanagpur plateau of Jharkhand State at an sltitude of 660 metres (approx)
Length	:	450 km.
Catchment Area	:	19,296 sq. km.
States travelled	:	Jharkhand, West Bengal and Orissa.
Districts drained	:	Singbhum, Ranchi and Hazaribag in Jharkhand; Puruliya and Medinipur in West Bengal; Mayurbhanj and Baleswar in Orissa.
Percentage of Basin Area	:	68.4 in Jharkhand 16.1 in Orissa 15.5 in West Bengal
Major Tributaries	:	
1. Right Bank	:	Raru, Kanchi, karkari and Kharakoi (Draining between them nearly half of the Subarnarekha basin, covering 9050 sq. km area).
2. Left bank	:	Dulung (Drains an area of 1173 sq. km covering 6 percent of basin area).

LIST OF COLLECTING STATIONS**JHARKHAND**

1. Subarnarekha river at Namkum, 8 kms from Ranchi.
2. Subarnarekha river near Hundru Falls, 43 kms from Ranchi.
3. Kranchi river, a tributary of Subarnarekha river 7 kms from Bundu.
4. Confluence of Subarnarekha river with Urangan river, about 1.5 km from Muri Railway Station.
5. Subarnarekha river at Mando, 2 kms downstream from Muri.
6. Subarnarekha river near Dangdung village, 40 kms from Muri.
7. Subarnarekha river near Harat village, 45 kms from Muri.
8. Bumni river, a tributary of Subarnarekha river, 5 km. from Chandil Railway Station.
9. Subarnarekha river at downstream of Chandil Dam, 8 kms from Chandil Railway Station.
10. Subarnarekha river about 2 kms from Ghatsila Railway Station.
11. Subarnarekha river at Moubhandar, near Kumarmangalam bridge.
12. Subarnarekha river at Ratmohana, 5 kms from Moubhandar.
13. Subarnarekha river at Dahigura, 3 kms from Hindustan Copper Guest House, Moubhandar.
14. Subarnarekha river at Kedadi, 4 km. upstream from Moubhandar.
15. Subarnarekha river at Galudih, 11 kms from Moubhandar.
16. Subarnarekha river at Mangoo, 9 kms from Jamshedpur Railway Station.

WEST BENGAL

17. Sangri khal, on the way to Ballydingra village, 2 km from PWD Inspection Bungalow, Dantan.
18. Subarnarekha river near Ballydingra village, 5 km from PWD Inspection Bungalow, Dantan.
19. Bonaikhal, a tributary of Subarnarekha river at Dulung.

ORISSA

20. Subarnarekha river at Jaleswar, 20 kms from PWD Inspection Bungalow, Dantan.

21. Subarnarekha river at Rajghat, 28 kms from PWD Inspection Bungalow, Dantan.
22. Subarnarekha river near Parulia village, 5 kms from PWD Inspection Bungalow, Baliapal.

ABBREVIATIONS USED

- (i) A. K. S – A. K. Sanyal
- (ii) A. K. K. – A. K. Karmakar
- (iii) P. P. B – P. P. Biswas
- (iv) S. C. – S. Chakraborty.

SYSTEMATIC LIST OF FISHES

Class	PISCES
Sub-class	TELEOSTOMI
Order	OSTEOGLOSSIFORMES
Family	NOTOPTERIDAE

1. *Notopterus notopterus* (Pallas)

Order	ANGUILLIFORMES
Family	ANGUILLIDAE

2. *Anguilla bengalensis bengalensis* (Gray)

Order	CYPRINIFORMES
Family	CYPRINIDAE
Sub-family	DANIONINAE (= RASBORINAE)

3. *Chela cachius* (Hamilton-Buchanan)

4. *Salmostoma bacaila* (Hamilton-Buchanan)

5. *Amblypharyngodon mola* (Hamilton-Buchanan)

6. *Aspidoparia morar* (Hamilton-Buchanan)

7. *Barilius barila* (Hamilton-Buchanan)

8. *Barilius barna* (Hamilton-Buchanan)

9. *Barilius bendelisis* (Hamilton-Buchanan)

10. *Esomus danricus* (Hamilton-Buchanan)

**11. *Rasbora daniconius* (Hamilton-Buchanan)

Sub-family CYPRININAE

12. *Chagunius chagunio* (Hamilton-Buchanan)
13. *Cirrhinus reba* (Hamilton-Buchanan)
- +14. *Cirrhinus mrigala* (Hamilton-Buchanan)
15. *Cyprinus carpio* (Linnaeus)
16. *Labeo angra* (Hamilton-Buchanan)
17. *Labeo pangusia* (Hamilton-Buchanan)
- +18. *Labeo rohita* (Hamilton-Buchanan)
19. *Osteobrama cotio cotio* (Hamilton-Buchanan)
20. *Puntius chola* (Hamilton-Buchanan)
21. *Puntius conchonius* (Hamilton-Buchanan)
22. *Puntius sarana sarana* (Hamilton-Buchanan)
23. *Puntius sophore* (Hamilton-Buchanan)
24. *Puntius ticto* (Hamilton-Buchanan)

Sub-family GARRINAE

25. *Crossocheilus latius latius* (Hamilton-Buchanan)
26. *Garra annandalei* (Hora)
27. *Garra gotyla gotyla* (Gray)
28. *Garra lamta* (Hamilton-Buchanan)
29. *Garra mullya* (Sykes)
30. *Garra nasuta* (McClelland)

Family BALITORIDAE

Sub-family NOEMACHEILINAE

31. *Acanthocobitis botia* (Hamilton-Buchanan)
- **32. *Schistura savona* (Hamilton-Buchanan)

Family COBITIDAE

Sub-family COBITINAE

33. *Lepidocephalus guntea* (Hamilton-Buchanan)

Order SILURIFORMES
Family BAGRIDAE

34. *Sperata aor* (Hamilton-Buchanan)
35. *Sperata seenghala* (Sykes)
36. *Mystus bleekeri* (Day)
37. *Mystus cavasius* (Hamilton-Buchanan)
38. *Neotroplus atherinoides* (Bloch)

Family AMBLYCIPITIDAE

39. *Amblyceps mangois* (Hamilton-Buchanan)

Family SISORIDAE

40. *Bagarius bagarius* (Hamilton-Buchanan)
41. *Gagata cenia* (Hamilton-Buchanan)
*42. *Glyptothorax coheni* (Ganguly, Datta & Sen)
*43. *Glyptothorax nelsoni* (Ganguly, Datta & Sen)
*44. *Glyptothorax saisii* (Jenkins)
45. *Gogangra viridescens* (Hamilton-Buchanan)

Family ERETHISTIDAE

46. *Erithistes pussilus* (Muller & Troschel)
**47. *Laguvia ribeiroi* Hora

Family SCHILBEIDAE

48. *Ailichthys punctata* Day
49. *Clupisoma garua* (Hamilton-Buchanan)

Family PANGASIIDAE

50. *Pangasius pangasius* (Hamilton-Buchanan)

Family HETEROPNEUSTIDAE

51. *Heteropneustes fossilis* (Bloch)

Family CLARIIDAE

- **52. *Clarius batrachus* (Linnaeus)

Order BELONIFORMES
Family BELONIDAE

53. *Xenentodon cancila* (Hamilton-Buchanan)

Order CYPRINODONTIFORMES
Family APLOCHEILIDAE

54. *Aplocheilus panchax* (Hamilton-Buchanan)

Family POECILIIDAE

55. *Gambusia affinis* (Baird & Girard)

Order PERCIFORMES
Family CHANDIDAE

56. *Chanda nama* (Hamilton-Buchanan)

57. *Parambassis ranga* (Hamilton-Buchanan)

Family MUGILIDAE

58. *Rhinomugil corsula* (Hamilton-Buchanan)

Family GOBIIDAE

59. *Glossogobius giuris* (Hamilton-Buchanan)

Family ANABANTIDAE

60. *Anabas cobojus* (Hamilton-Buchanan)

Family BELONTIIDAE

61. *Colisa fasciatus* (Schneider)

Family CHANNIDAE

62. *Channa orientalis* Bloch & Schneider

63. *Channa punctatus* (Bloch)

Order SYNBRANCHIFORMES
Family MASTACEMBELIDAE

64. *Macrogathus aral* (Bloch & Schneider)

65. *M. pancalus* (Hamilton-Buchanan)

66. *Mastacembelus armatus* (Lacepede)

* Listed from literature.

** Listed from the Zoological Survey of India (H.Q.) Registered collection.

+ Observed in the field but not collected.

SYSTEMATIC ACCOUNT

Order OSTEOGLOSSIFORMES

Family NOTOPTERIDAE

Genus *Notopterus* Lacepede 18001800. *Notopterus* Lacepede, *Hist. nat. Poiss*, 2 : 189.(Type species : *Notopterus kapingat* Lacepede = *Gymnotus notopterus* Pallas)

Body broad, strongly compressed, caudal part tapering and long. Abdominal edge serrated with about 28 scutes. Head compressed, abruptly tapered on anterior side. Opercular flap large and membranous. Opening of mouth wide; presence of small teeth on jaws, also on palate and tongue. Dorsal fin short, almost in the middle of back with 7 to 10 rays. Anal fin very long, confluent with caudal fin, with 100 to 135 rays. Pelvic fin rudimentary.

1. *Notopterus notopterus* (Pallas)1769. *Gymnotus notopterus* Pallas *specil. zool.*, 7 : 40, pl. 6, fig 2. (Type locality : Indian Ocean)1991. *Notopterus notopterus* : Talwar and Jhingran, *Inland fishes of India and adjacent countries* 1 : 64, fig. 25.

Material examined : (i) 3 exs., 40-95 mm, Bumni river, 5 kms from Chandil Railway Station, Jharkhand, coll. A. K. K. & party, 24. xii. 2001 (ii) 1 ex., 78 mm, Bonaikhal, Dulung, West Medinipur district, W. B., coll. S. C. & party, 2000.

Distribution : India : Throughout; Pakistan; Nepal; Bangladesh; Myanmar; Thailand; Malaya and Indonesia.

Fishery Information : It attains a length of about 450 mm. This fish can be cultured in wild water or in fattening ponds, because of its carnivorous nature. Commercially important, consumed both in fresh and dried condition.

Order ANGUILLIFORMES

Family ANGUILLIDAE

Genus *Anguilla* Schrank 17981798. *Anguilla* Schrank, *Fauna Boica*, 1 : 76(Type species : *Muraena anguilla* Linnaeus; Ege, 1939, *Dana Rep.*, (16) : 1-256 (Revision)).

Body robust; tail compressed. Scales are embedded and small, not developed in juveniles. Pectoral fins present. Dorsal fin inserted almost midway between pectoral fin base and anus. Median fins continuous around tail. Lateral line complete.

2. *Anguilla bengalensis bengalensis* (Gray)

1831. *Muraena bengalensis* Gray, *Illust indian Zool*, pl. 95, fig. 5.

(Type locality : Ganges river).

1991. *Anguilla bengalensis bengalensis* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries* : 74.

Material examined : 1 ex., 407 mm, Subarnarekha river beside pumphouse, near Mangoo bridge, Jamshedpur, coll. A. K. S. & party, 17. x. 1984.

Distribution : India : Pakistan; Sri Lanka, Myanmar; and East Indies.

Fishery Information : It attains a length of about 120 cm. This fish is the most common eel in Indian inland waters with considerable commercial value. It is much prized as a food fish in Maharashtra and is supposed to have special nutritional value.

Order CYPRINIFORMES

Family CYPRINIDAE

Sub-family DANIONINAE (=RASBORINAE)

Genus *Chela* Hamilton-Buchanan 1822

1822. *Chela* Hamilton-Buchanan, *Fishes of Ganges* : 258, 383.

(Type species : *Cyprinus* (*Chela*) *cachius* Hamilton-Buchanan)

Body elongate and strongly compressed laterally. Abdominal edge cutting. Mouth directed upward, cleft extending to below anterior margin of eye. No sympysial knob on the lower jaw. Dorsal fin with 9 to 11 and anal fin with 17 to 25 rays. Outer ray of pelvic fin elongated. Lateral line curved downwards, with 34 to 68 scales.

3. *Chela cachius* (Hamilton-Buchanan)

1822. *Cyprinus* (*Chela*), *cachius* Hamilton-Buchanan, *Fishes of Ganges* : 259, 384.

(Type locality : Ganga river about commencement of delta).

1991. *Chela cachius* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries* 1 : 313, fig. III.

Material examined : (i) 7 exs., 40-80 mm, Subarnarekha river, Maubhandar, Jharkhand, coll A.K.K. & party, 17.ii.2001 (ii) 2 exs., 80-85 mm, Subarnarekha river at Gaaludih, Jharkhand, coll A.K.K. & party, 16.ii.2001. (iii) 2 exs., 53-62 mm, Subarnarekha river, West Medinipore, coll P.P.B. & party, 2003.

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

Fishery Information : It attains a length of about 85 mm. Due to its beautiful colouration, it is used as an ornamental fish in the aquaria.

Genus *Salmostoma* Swainson 1839

1839. *Salmostoma* Swainson, *The natural history of fishes*, 2 : 184.

(*Type species* : *Cyprinus bacaila* Hamilton-Buchanan).

Body elongate and strongly compressed laterally. Abdominal edge keeled below pectoral fin to vent. Mouth oblique, cleft extending to anterior margin of eye or slightly beyond. Symphyseal knob often present on the lower jaw. Dorsal fin with 9 to 10 and anal fin with 14 to 20 rays. Outer ray of pelvic fin usually not elongated. Lateral line gently curved downwards, with 38 to 112 scales.

4. *Salmostoma bacaila* (Hamilton-Buchanan)

1822. *Cyprinus bacaila*, Hamilton-Buchanan, *Fishes of Ganges* : 265, 384, pl. 8, fig. 76.

(*Type locality* : freshwater rivers of Gangetic Provinces).

1991. *Salmostoma bacaila* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries* 1 : 321, fig. 115.

Material examined : (i) 4 exs., 76-110 mm, Subarnarekha river near Ballydingra village, Dantan, W. B; coll. A.K.K. & party, 27. xii. 2001. (ii) 2 exs; 100-114 mm, Subarnarekha river at Jaleswar, Orissa, coll. A.K.K. & party, 29.xii.2001.

Distribution : India : Northern India (Ganga – Brahmaputra drainages) to Mahanadi drainage.

Fishery Information : It attains a length of about 180 mm and is of little interest to fisheries. It is surface feeder and useful larvivorous fish.

Genus *Amblypharyngodon* Bleeker, 1860

1860. *Amblypharyngodon* Bleeker, *Natuurk. Tijdschr Ned. India*, 20 : 433.

(*Type species* : *Cyprinus mola* Hamilton-Buchanan).

Body somewhat elongate and compressed. Abdomen rounded, Mouth more or less superior; upper lip and barbel absent. Dorsal fin with 7 branched rays, inserted slightly behind pelvic fin base. Anal fin with 5 to 6 branched rays. Lateral line incomplete, 55-75 scales in lateral series.

5. *Amblypharyngodon mola* (Hamilton-Buchanan)

1822. *Cyprinus mola*, Hamilton-Buchanan, *Fishes of Ganges* : 334, 392, pl. 38, fig. 92.

(*Type locality* : Ponds and rivers of Gangetic provinces).

1991. *Amblypharyngodon mola* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries* 1 : 338.

Material examined : (i) 11 exs., 25-34 mm, Bumni river, 5 kms from Chandil Railway Station, Jharkhand, coll. A.K.K. & party, 24.xii.2001 (ii) 1 ex., 43 mm, Bonikhal, at Dulung, Dist West Medinipore, W.B., coll. S.C. & party, 2000. (iii) 3 exs., 60-80 mm, Subarnarekha river, West Medinipore, W. B., coll. P.P.B. & party, 2003.

Fishery Information : It attains a length of about 100 mm and used as a food fish specially in Eastern India with good market value.

Distribution : India : Throughout; Pakistan, Bangladesh and Myanmar.

Genus *Aspidoparia* Heckel, 1843

1843. *Aspidoparia* Heckel, *Abbild. Fenzl. Thiere Pill Syriens Fische* : 186.

(*Type species* : *Aspidoparia sardina* Heckel = *Cyprinus morar* Hamilton-Buchanan)

Body elongate and sub-cylindrical; abdomen rounded. Mouth small and inferior, Lower jaw without a lip but with a sharp crescentic bony edge. Barbels absent. Dorsal fin inserted posterior to pelvic fin, with 9 to 10 rays. Anal fin with 9 to 12 rays. Lateral line greatly curved downwards, running in the lower half of caudal peduncle with 38 to 60 scales.

6. *Aspidoparia morar* (Hamilton-Buchanan)

1822. *Cyprinus morar*, Hamilton-Buchanan, *Fishes of Ganges* : 364, 384, pl. 31, fig. 75.

(*Type locality* : Yamuna river and Tista river).

1991. *Aspidoparia morar* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries 1* : 340, fig. 119.

Material examined : (i) 1 ex., 78 mm, Subarnarekha river at Jaleswar, Orissa, coll. A. K. K. & party, 29.xii.2001.

Distribution : India : Throughout northern part, Tripura, Manipur, Nagaland; Iran; Pakistan; Nepal; Bangladesh; Myanmar and Thailand.

Fishery Information : It attains a length of about 175 mm and of no interest to fisheries.

Genus *Barilius* Hamilton-Buchanan, 1822

1822. *Barilius* Hamilton-Buchanan, *Fishes of Ganges* : 266, 384.

(*Type species* : *Cyprinus barila* Hamilton-Buchanan)

Body elongate, laterally compressed, abdomen rounded. Mouth terminal; maxilla extends to below or slightly beyond anterior margin of eye. Barbels 1 or 2 pairs or absent. Dorsal fin inserted opposite to interspace between pelvic and anal fin, often extended over anal fin. Dorsalfin with 9 to 13 and anal fin with 9 to 17 rays. Lateral line concave and complete with 38 to 75 scales. Usually dark spots or bands present on body.

Key to the species of Genus *Barilius*

1. Barbels absent (rarely rudimentary). Lateral line scales 39 to 42, 7 to 11 dark vertical bars *B. barna*
2. Barbels present 3
- 3 (a) Barbels 2, Lateral line scales 43 to 46. 14 or 15 vertical blue bands *B. barila*
- (b) Barbels 4, Lateral line scales 40 to 44. Each scale with a black spot
..... *B. bendelisis*

7. *Barilius barila* (Hamilton-Buchanan)

1822. *Cyprinus (Barilius) barila* Hamilton-Buchanan, *Fishes of Ganges* : 267, 384.

(*Type locality* : Rivers of northern Bengal).

1991. *Barilius barila* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries 1* : 243, fig. 120.

Material examined : (i) 1 ex., 74 mm, Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.K. & party, 17.ii.2001.

Distribution : India : Jammu & Kashmir, Delhi, Uttar Pradesh, Madhya Pradesh, Bihar, Jharkhand, West Bengal, Assam, Manipur, Orissa; Nepal; Bangladesh and Myanmar.

Fishery Information : It attains a length of about 100 mm. Fishermen usually use it as a bait on hooks for other larger and commercially important fishes.

8. *Barilius barna* (Hamilton-Buchanan)

1822. *Cyprinus (Barilius) barna* Hamilton-Buchanan, *Fishes of Ganges* : 268, 384.

(*Type locality* : Yamuna river and Brahmaputra river).

1991. *Barilius barna* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries 1* : 344.

Material examined : (i) 1 ex., 47 mm, Bonaikhal, at Dulung, West Medinipore, coll. S. C. & party, 2000. (ii) 2 exs., 74-76 mm, Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.K. & party, 17 xii. 2001.

Distribution : India : Ganga and Brahmaputra river systems, and also Mahanadi (Orissa); Nepal; Bangladesh and Myanmar.

Fishery Information : It attains a length of about 80 mm. A voracious little fish, of no interest to fisheries.

9. *Barilius bendelisis* (Hamilton-Buchanan)

1807. *Cyprinus bendelisis* Hamilton-Buchanan, *Journey in Mysore*, 3 : 345, pl. 32

(Type locality : Vedawati stream, headwaters of Krishna river near Hariuru, Mysore).

1991. *Barilius bendelisis* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries 1* : 346-347.

Material examined : (i) 7 exs., 115-125 mm, Subarnarekha river, downstream from Chandil Dam, Jharkhand, coll. A.K.K & party, 24.xii.2001. (ii) 1 ex., 90 mm, Bumni river, 5 kms. from Chandil Railway Station, Jharkhand, coll. A.K.K. & party, 24.xii.2001. (iii) 2 exs., 67-82 mm, confluence of Subarnarekha river with Urangan river, Muri, coll. A.K.K. & party, 21.xii.2001. (iv) 36 exs., 64-88 mm, Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.K. & party, 17.ii.2001. (v) 3 exs., 70-80 mm, Subarnarekha river at Gaaludih, Jharkhand, coll. A.K.K. & party, 16.ii.2001. (vi) 96 exs., 35-50 mm, Subarnarekha river near Harat village, coll. A.K.K. & party, 22.xii.2001. (vii) 12 exs., 52-100 mm, Subarnarekha river at Kedadi, Jharkhand, coll. A.K.S. & party, 3.iii.1984.

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

Fishery Information : It attains a length of about 160 mm and is one of the principal commercial hillstream fishes.

10. *Esomus danricus* (Hamilton-Buchanan)

1822. *Cyprinus danricus* Hamilton-Buchanan, *Fishes of Ganges*, : 325, 390, pl. 16, fig. 88

(Type locality : Ponds and ditches of Bengal).

1991. *Esomus danricus* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries 1* : 377, fig. 139.

Material examined : (i) 12 exs., 36-47 mm, Subarnarekha river, downstream from Chandil Dam, Jharkhand, coll. A.K.K & party, 23.xii.2001. (ii) 1 ex., 47 mm, Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.K. & party, 17.ii.2001. (iii) 4 exs., 34-40 mm, Bonaikhal, at Dulung, Dist West Medinipore, W.B., coll S.C. & party, 2000. (iv) 1 ex., 51 mm, Subarnarekha river, Dist. West Medinipore, W.B., coll P.P.B & party, 2003. (v) 1 ex., 45 mm, Subarnarekha river near Ghatsila, Jharkhand, coll. A.K.S & party, 7.iii.1984.

Distribution : India : Throughout; Pakistan; Nepal and probably also Sri Lanka and Myanmar.

Fishery Information : It attains a length of about 120 mm; is very active, surface feeder, equipped with exceptionally wide pectoral fin for jumping.

Genus *Rasbora* Bleeker, 1860

1860. *Rasbora* Bleeker, *Acta Soc. Sci. Indo nearl.*, 7 : 435

(Type-species : *Cyprinus rasbora* Hamiltan-Buchanan)

Body elongate, moderately deep and laterally compressed. Mouth moderate, upwardly directed, with a projecting lowerjaw with symphysial knob. Barbels usually absent. Dorsal

fin inserted opposite interspace between pelvic and anal fin, with 9 to 10 soft rays, no spine. Anal fin with 7 to 8 rays. Lateral line concave, complete, 25 to 27 scales in longitudinal series.

Key to the species of Genus *Rasbora*

- 1.(a) Lateral line with 32 to 34 scales. A black lateral stripe along centre of body
 *R. daniconius*
- (b) Lateral line with 28 to 31 scales. Caudal fin with well defined blackish hind-border

R. rasbora

11. *Rasbora daniconius* (Hamilton-Buchanan)

1822. *Cyprinus daniconius* Hamilton Buchanan, *Fishes of Ganges*, : 327, 391, pl. 15, fig. 89

(Type locality : rivers of southern Bengal).

1999. *Rasbora daniconius* : Jayaram, *The Freshwater fishes of the Indian Region* : 82, fig. 51.

Material examined : Nil.

Distribution : India : Throughout; Pakistan, Sri Lanka, Bangladesh, Myanmar and Mekong.

Fishery Information : It attains a length of about 100mm and is hardy and active; not important from fisheries point

Sub family CYPRININAE

Genus *Chagunius* Smith, 1938

1938. *Chagunius* Smith, *Proc. Biol. Soc. Wash.* 51 : 157

(Type species : *Cyprinus chagunio* Hamilton-Buchanan)

Body elongate and more or less compressed. Mouth narrow and sub-terminal, lips fleshy with tiny papillae, post labial groove incomplete. Eyes on upper half of head. Two pairs of long barbels present. Dorsal fin with 13 rays, its last simple ray osseous and serrated. Anal fin with 8 or 9 and pelvic fin with 9 rays. Lateral line scales 44 to 48. Pronounced sexual dimorphism found in fin shape and tuberculation.

12. *Chagunius chagunio* (Hamilton-Buchanan)

1822. *Cyprinus chagunio*, Hamilton-Buchanan, *Fishes of Ganges* : 295, 387

(Type locality : Yamuna river and northern rivers of Bihar and Bengal).

1991. *Chagunius chagunio* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries* 1 : 167, fig. 63.

Material examined : (i) 4 exs., 195-245 mm, Subarnarekha river at Mangoo, coll. A.K.S. & party, 16.x.1984. (ii) 1 ex., 112 mm, Subarnarekha river, Dist. West Medinipore, W.B., coll P.P.B. & party, 2003. (iii) 2 exs., 180-200 mm, Subarnarekha river, downstream from Chandil Dam, Jharkhand, coll. A.K.K. & party, 24.xii. 2001. (iv) 1 ex., 205 mm, Ratmohana, Jharkhand, coll. A.K.K. & party, 16.ii.2001.

Distribution : India : Brahmaputra and Ganga drainages along the Himalaya foot hills, Tripura, Meghalaya, Nagaland.

Fishery Information : It attains a length of about 50 cm; is generally found in large rivers characterised by rocky bottom, clear and fast flowing water. Unlike *Tor* spp. its movements are fairly restricted. It offers a good sport on small hook.

Genus *Cirrhinus* Cuvier, 1817

1817. *Cirrhinus* Oken, *Isis* : 1833 (On *Les Cirrhinus* Cuvier) *Regne Animale*, 2 : 193)

(Type species : *Cyprinus cirrhosus* Bloch).

Body elongate, abdomen rounded, snout depressed, often with pores. Mouth wide; lower jaw with a small symphyseal knob. Upper lip not continuous with lower lip around corners of mouth. Barbels one or two pairs, or absent. Dorsal fin inserted interior to pelvic fins, with 10 to 19 rays, the last simple ray non-osseous and non-serrated. Anal fin with 7 to 8 rays. Lateral line complete with 35 to 45 scales.

Key to the species of Genus *Cirrhinus*

- 1.(a) Dorsal fin with 8 branched rays. Lateral line scales 35-38 *C. reba*
 (b) Dorsal fin with 12-13 branched rays. Lateral line scales 40-45 *C. mrigala*

13. *Cirrhinus reba* (Hamilton-Buchanan)

1822. *Cyprinus reba*, Hamilton-Buchanan, *Fishes of Ganges* : 280, 386

(Type locality : rivers and ponds of Bengal and Bihar).

1991. *Cirrhinus reba* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries* 1 : 173.

Material examined : (i) 19 exs., 80-110 mm, Subarnarekha river near Ballydingra village, Dantan, W.B. coll. A.K.K. & party, 27.xii.2001. (ii) 1 ex., 110 mm, Subarnarekha river at Jaleswar (Orissa), coll. A.K.K. & party, 29.xii.2001. (iii) 2 exs., 95-122 mm, Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.K. & party, 17.ii.2001 (iv) 1 ex., 155 mm, Subarnarekha river at Ratmohana. Jharkhand, coll. A.K.K. & party, 16.ii.2001.

Distribution : India : throughout; Pakistan; Nepal; Bangladesh.

Fishery Information : It attains a length of about 30 cm in natural waters. Also cultivated

in ponds in India. A plankton and detritus feeder and breeds during June-September in flooded shallows.

14. *Cirrhinus mrigala* (Hamilton-Buchanan)

1822. *Cyprinus mrigala* Hamilton-Buchanan, *Fishes of Ganges*, : 279, 386, pl. 6, fig. 79

(Type-locality : ponds and freshwater rivers of Gangetic provinces).

1999. *Cirrhinus mrigala* : Jayaram, *The Freshwater Fishes of the Indian Region* : 130-131.

Material examined : Nil.

Distribution : India : northern India from Punjab to West Bengal and Assam. Also successfully transplanted into water of peninsular India and other states for aquaculture; Pakistan; and Bangladesh.

Fishery Information : It attains a length of about one meter and a weight of 13 kg and is an important major carp in India. A large number of intergeneric hybrids has been produced at the Central Inland Fisheries Research Institute, Barrackpore.

Genus *Cyprinus* Linnaeus, 1758

1758. *Cyprinus* Linnaeus, *Systema Naturae*, ed. 10, 1 : 320

(Type species : *Cyprinus carpio* Linnaeus); Kirpichnikov, 1967, *FAO Fish Rep*, (44) : 179-194 (Review); Halcik and Mihalik, 1970, *Freshwater Fishes* : 94-100 (Review).

Body robust and compressed. A continuous curve found in dorsal profile. Head relatively small with a bluntly rounded snout. Eyes placed relatively high on head. Mouth small, protrusible, directed forwards. Lips thick and fleshy. Two pairs of barbels. Dorsal fin very long, inserted opposite to pelvic fins, with 21 to 23 rays. Anal fin very short with 8 rays. Scales large, lateral line with 30 to 40 scales.

15. *Cyprinus carpio* Linnaeus

1758. *Cyprinus carpio*, Linnaeus, *Systema Naturae*, ed. 10, 1 : 320

(Type locality : Europe).

1991. *Cyprinus carpio* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries* 1 : 184-186.

Material examined : (i) 1 ex., 58 mm, Subarnarekha river at Gaaludih, Jharkhand, coll A.K.K. & party, 16.ii.2001.

Distribution : Central Asia.

Fishery Information : This carp is thermophilic, gregarious, dwelling mostly at the bottom of ponds. Growth is very rapid. Its rapid growth, tasty flesh, good reproductive

ability have led to the carp's becoming a stable fish in warm water habitat. The eggs are adhesive and suitable floating substances are required for the attachment of the eggs. Common carp dig and burrow into pond embankments and sides in search of organic matter. It is omnivorous, mostly bottom feeder, breeds in confined water. Average growth is 1 kg in one year.

Genus *Labeo* Cuvier 1817

1817. *Labeo* Cuvier, *Ragne. Animale*. 2 (ed 1) : 194

(Type species : *Cyprinus niloticus* Forsskal = *Cyprinus rufescens* Hasselguist).

Body elongate, cylindrical. Abdomen rounded. Mouth generally overhanging, inferior, transverse and semicircular. Snout broadly rounded or obtusely pointed. Lips thick, continuous at the angle of mouth. Barbels one or two pairs, or absent. Dorsal fin inserted anterior to pelvic fins, with 11 to 26 rays, devoid of spines. Anal fin short with 7 to 8 rays. Lateral line complete, with 36 to 86 scales.

Key to the species of Genus *Labeo*

- 1 Lower lip separated from isthmus by a deep post labial groove.
 - (a) Branched dorsal rays 10 *L. angra*
 - (b) Branched dorsal rays 12 to 13 *L. rohita*
2. Lower lip usually joined to isthmus by a narrow or broad bridge. Eyes small, its diameter 4.5 to 5.5 times in head *L. pangusia*

16. *Labeo angra* (Hamilton-Buchanan)

1822. *Cyprinus angra*, Hamilton-Buchanan, *Fishes of Ganges*, : 331, 391

(Type locality : Brahmaputra river).

1991. *Labeo angra* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries 1* : 198.

Material examined : (i) 14 exs., 86-102 mm, Subarnarekha river beside pumphouse, near Mangoo bridge, Jamshedpur, Jharkhand, coll. A.K.S. & party, 17.x.1984.

Distribution : India : Assam, West Bengal, Bihar, Jharkhand, Uttar Pradesh, Punjab, Orissa, Manipur, Nagaland.

Fishery Information : It attains a length of about 220 mm. This species is fairly common in Mahanadi river where it breeds during monsoon.

17. *Labeo pangusia* (Hamilton-Buchanan)

1822. *Cyprinus pangusia*, Hamilton-Buchanan, *Fishes of Ganges*, : 285, 386

(Type locality : Kosi river, Uttar Pradesh).

1991. *Labeo pangusia* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries 1* : 216, fig. 77.

Material examined : (i) 1 ex., 295 mm, Subarnarekha river, Ghatsila, Jharkand, coll. A.K.K. & party, 17.ii.2001. (ii) 1ex., 310 mm, Subarnarekha river at Ratmohana, Jharkhand, coll. A.K.K. & party, 16.ii.2001.

Distribution : India : Ganga and Brahmaputra drainage systems of the Himalaya; Pakistan and Bangladesh.

Fishery Information : It attains a length of about 60 cm. An excellent food fish, contributes a minor fishery in North Bengal and Assam.

18. *Labeo rohita* (Hamilton-Buchanan)

1822. *Cyprinus rohita* Hamilton-Buchanan, *Fishes of Ganges* 301, 388, pl. 36, fig. 85

(Type-locality : Freshwater rivers of Gangetic Provinces).

1991. *Labeo rohita* : Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries* : 219-220, fig. 78.

Material examined : Nil.

Distribution : India : North and Central provinces, also successfully transplanted into water of other states; Pakistan; Bangladesh; Nepal and Myanmar.

Fishery Information : It is one of the major carps in India and attains a length of about 1 metre. Rohu is a bottom feeder and prefers plant matter including decaying vegetation. It attains maturity towards end of second year and spawning takes place in flooded rivers. Rohu of river is more active and stronger than that of tank.

Genus *Osteobrama* Heckel 1842

1842. *Osteobrama* Heckel in : *Russeger's Reisen in Europa, Asien und Africa, etc.* 1 (1) : 1033 (type-species : *Cyprinus cotio* Hamilton - Buchanan).

Body deep and strongly compressed. Abdominal edge sharp and trenchant entirely or only from pelvic fin base to vent. Mouth small, somewhat directed upwards. Upper jaw slightly longer. Barbels 2 pairs, 1 pair or entirely absent. Dorsal fin inserted considerably behind pelvic fin, with 11 or 12 soft rays and a strong serrated spine. Anal fin with 14 to 36 rays. Lateral line complete, with 42 to 80 scales.

19. *Osteobrama cotio cotio* (Hamilton-Buchanan)

1822. *Cyprinus cotio* Hamilton-Buchanan, *Fishes of Ganges*, : 339, 393, pl. 39 fig. 93

(Type locality : Ponds and ditches of Bengal).

1991. *Osteobrama cotio cotio* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries* : 238-239.

Material examined : (i) 1 ex., 55 mm, Subarnarekha river near Ballydingra village, Dantan, W.B. coll. A.K.K. & party, 27 xii 2001 (ii) 1 ex., 50 mm, Bumni river, 5 kms from Chandil Railway Station, Jharkhand, coll. A.K.K. & party, 24.xii.2001. (iii) 1 ex., 51 mm, Subarnarekha river, down stream of Chandil Dam, Jharkhand, coll. A.K.K. & party, 23.xii.2001. (iv) 1 ex., 50 mm, Subarnarekha river at Nankum, Jharkhand, coll. A.K.K. & party, 21.ii.2001 (v) 2 exs., 45-48 mm, Bonikhal, at Dulung, Dist-West Medinipore, W.B., coll. S.C. & party, 2000. (vi) 2 exs., 65-85 mm, Subarnarekha river Dist-West Medinipore, coll. P.P.B, 2003 (vii) 3 exs., 54-112 mm Subarnarekha river at Kedadi, Jharkhand, coll. A.K.S. & party, 3.iii.1984.

Distribution : India : Assam, West Bengal, Jharkhand, Bihar, Madhya Pradesh, Uttar Pradesh, Punjab, Meghalaya, Manipur, Mizoram and Nagaland; Pakistan and Bangladesh.

Fishery Information : It attains a length of about 15 cm and is of little interest to fisheries.

Genus *Puntius* Hamilton-Buchanan, 1822

1822. *Puntius* Hamilton-Buchanan, *Fishes of Ganges*. 310, 388

(Type species : *Cyprinus sophore* Hamilton-Buchanan).

Body short or moderately elongate, often deep and slightly compressed, with rounded abdomen. Mouth terminal to inferior; lips thin, devoid of horny covering. Symphyseal knob absent. Barbels 2 pairs, 1 pair or absent. Dorsal fin inserted nearly opposite to pelvic fins, with 9 to 13 rays and with or without spine. Anal fin with 7 to 9 rays. Lateral line complete or incomplete, with 20 to 47 scales in longitudinal series.

Key to the species of Genus *Puntius*

- 1 Barbels present 2
- Barbels absent 5
2. Two pairs of barbel 3
- One pair of barbel 4
3. Lateral line scales 30-33. Predorsal scales 11 or 12 *P. sarana sarana*
4. Predorsal scales 10-12. A dark blotch from 23-25 scales of the lateral line. A dark spot along base of first to fourth anterior dorsal ray *P. chola*
5. Dorsal spine serrated. Branched dorsal ray 8 6.

Dorsal spine smooth. Body depth 3.5 to 3.75 in total length. A round black blotch at the root of caudal fin *P. sophore*

6. Body depth 2.4 in total length. Predorsal scales 9. Lateral line incomplete. One black spot. *P. conchoni*

Body depth 3.0 to 3.3 in total length. Predorsal scales 11. Lateral line incomplete. Two black spots *P. ticto ticto*.

20. *Puntius chola* (Hamilton-Buchanan)

1822. *Cyprinus chola* Hamilton-Buchanan, *Fishes of Ganges*, : 312, 289

(Type locality : North eastern parts of Bengal).

1991. *Puntius chola* : Jayaram, Revision of the Genus *Puntius* Hamilton from the Indian Region, *Rec. zool. Surv. India, Occ. Paper No. 135* : 52-56.

Material examined : (i) 7 exs., 59-75 mm, Subarnarekha river, near Ballydingra village, Dantan, W.B. coll. A.K.K. & party, 27 xii 2001 (ii) 5 exs., 48-80 mm, Bumni river, 5 kms from Chandil Railway Station, Jharkhand, coll. A.K.K. & party, 24.xii.2001.

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

Fishery Information : It attains a length of about 12 cm and is of minor interest to fisheries.

21. *Puntius conchoni* (Hamilton-Buchanan)

1822. *Cyprinus conchoni* Hamilton-Buchanan, *Fishes of Ganges*, pp. 317, 389

(Type locality : Pond of north east Bengal; Kosi river and Ami river).

1991. *Puntius conchoni* : Jayaram, Revision of the Genus *Puntius* Hamilton from the Indian Region, *Rec. zool. Surv. India, Occ. Paper No. 135* : 27-29.

Material examined : (i) 8 exs., 45-60 mm, upstream of Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.S. & party, 16.x.1984. (ii) 44 exs., 32-65 mm, Moubhandar market (Subarnarekha collection), Jharkhand, coll. A. K. S. & party, 7.iii.1984. (iii) 1 ex., 64 mm, Subarnarekha river, downstream from Chandil Dam, Jharkhand, coll. A.K.K. & party, 24.xii.2001 (iv) 15 exs., 40-80 mm, Subarnarekha, Moubhandar, Jharkhand, coll. A.K.K. & party, 17.ii.2001 (v) 2 exs., 60-65 mm, Subarnarekha river at Gaaludih, Jharkhand, coll. A.K.K. & party, 16.ii.2001. (vi) 23 exs., 38-80 mm, Subarnarekha river at Namkum, Jharkhand, coll. A.K.K. & party, 21.ii.2001.

Distribution : India : Ganga, Brahmaputra, Mahanadi, Cauveri river systems; Pakistan; Nepal and Bangladesh.

Fishery Information : It attains a length of about 10 cm. This is one of the most important ornamental *Puntius* species and very beautiful aquarium fish.

22. *Puntius sarana sarana* (Hamilton-Buchanan)

1822. *Cyprinus sarana* Hamilton-Buchanan, *Fishes of Ganges*, 307, 388

(Type locality : Ponds and rivers of Bengal).

1991. *Puntius sarana sarana* : Jayaram, Revision of the Genus *Puntius* Hamilton from the Indian Region, *Rec. zool. Surv. India, Occ. Paper No. 135* : 113-118.

Material examined : (i) 3 exs., 112-151 mm, Subranarekha river, at Dahigura, Moubhandar, Jharkhand, coll. A.K.S. & party, 5.iii.1984. (ii) 2 exs., 150-167 mm, Subarnarekha river at Kedadi, Jharkhand, coll. A.K.S. & party, 3.iii.1984 (iii) 1 ex., 155 mm, Subarnarekha river at Mangoo, Jharkhand, coll. A.K.S. & party, 4.iii.1984 (iv) 4 exs. 96-135 mm, Subranarekha river, downstream from Chandil Dam, Jharkhand, Coll. A.K.K. & party, 24.xii.2001. (v) 1 ex, 133 mm, Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.K. & party, 17.ii.2001 (vi) 1 ex., 170 mm, Ratmohana, 5 kms from Moubhandar, Jharkhand, coll. A.K.K. & party, 16.ii.2001.

Geographical Distribution : India : Throughout except peninsular India south of Krishna river; Pakistan; Nepal; Bangladesh and Bhutan.

Fishery Information : It attains a length of about 300 mm. Widely distributed. A barb with significant fisheries importance.

23. *Puntius sophore* (Hamilton-Buchanan)

1822. *Cyprinus sophore* Hamilton-Buchanan, *Fishes of Ganges*, 310, 389 pl. 19, fig 86

(Type locality : Ponds and rivers of Gangetic provinces).

1991. *Puntius sophore* : Jayaram, Revision of the Genus *Puntius* Hamilton from the Indian Region, *Rec. zool. Surv. India, Occ. Paper No. 135* : 15-20.

Material examined : (i) 1 ex., 78 mm, Subranarekha river, at Kedadi, Jharkhand, coll. A.K.S. & party, 3.iii.1984. (ii) 8 exs., 48-70 mm, Subarnarekha river, Moubhandar, coll. A.K.S. & party. 16.x.1984. (iii) 1 ex., 58 mm, Subarnarekha river beside pumphouse, near Mangoo bridge, Jamshedpur, coll. A.K.S. & party, 17.x.1984. (iv) 2 exs., 66-75 mm, Moubhandar market (Subarnarekha collection), Jharkhand, coll. A.K.S. & party, 7.iii.1984. (v) 1 ex., 75 mm, Singari Khal near Baldingri village, Dantan, W.B., coll. A.K.K. & party, 26.xii.2001. (vi) 7 exs., 55-82 mm, Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.K. & party, 17.ii.2001. (vii) 3 exs., 57-92 mm, Subarnarekha river at Gaaludih, Jharkhand, coll. A.K.K. & party, 16.ii.2001. (viii) 1 ex., 65 mm, Subarnarekha river at Namkum, Jharkhand, coll. A.K.K. & party, 21.ii.2001. (ix) 2 exs., 46-48 mm, Subarnarekha river near Harat village, Jharkhand, coll. A.K.K. & party, 22.xii.2001. (x) 2 exs., 48-52 mm, Bonaikhal, Dulung, West Medinipore, W.B., coll. S.C., 2000. (xi) 2 exs., 55-60 mm, Subarnarekha river, West Medinipore, W.B., coll. P.P.B. 2003.

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

Fishery Information : It attains a length of about 13 cm and is of minor fishery value. This barb is considered as medically important in Tamil Nadu.

24. *Puntius ticto* (Hamilton-Buchanan)

1822. *Cyprinus ticto* Hamilton-Buchanan, *Fishes of Ganges*, 314, 398, pl. 8., fig. 87

(Type locality : South eastern parts of Bengal).

1991. *Puntius ticto* : Jayaram, Revision of the Genus *Puntius* Hamilton from the Indian Region, *Rec. zool. Surv. India, Occ. Paper No. 135* : 22-26

Material examined : (i) 3 exs., 50-68 mm, Subarnarekha river, at Kedadi, Jharkhand, coll. A.K.S. & party, 3.iii.1984. (ii) 5 exs., 50-55 mm, Subarnarekha river, near Ballydingra village, Dantan, W.B., coll. A.K.K. & party, 27.xii.2001. (iii) 5 exs., 38-56 mm, Singari Khal near Baldingri village, Dantan, coll. A.K.K. & party, 26.xii.2001. (iv) 1 ex., 45 mm, Subarnarekha river at Jaleswar (Orissa), coll. A.K.K. & party, 29.xii.2001. (v) 19 exs., 55-66 mm, Bumni river, 5 kms. from Chandil Railway Station Jharkhand, coll. A.K.K. party, 24.xii.2001 (vi) 1 ex., 53 mm, Subarnarekha river, downstream from Chandil Dam, Jharkhand, coll. A.K.K. & party, 23.xii.2001. (vii) 9 exs., 51-63 mm, Subarnarekha river, at Rajghat, Orissa coll. A.K.K. & party, 27.xii.2001.

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

Fishery Information : It attains a length of about 10 cm, a popular barb in the aquarium.

Sub family GARRINAE

Genus *Crossocheilus* Kul et van Hasselt 1823

1823. *Crossocheilus* Kuhl et van Hasselt. *Algemeine konst. et. Letter Bode*, 2 (35) : 132

(Type species : *Crossocheilus oblongus* Kuhl et van Hasselt)

Body elongate with rounded abdomen. Head small, snout obtusely rounded. Mouth inferior; upper lip well developed, lower lip fleshy. Usually one pair of rostral barbel. Dorsal fin inserted in advance of pelvic fins, with 10 to 11 soft rays and without spine. Anal fin with 7 rays. Lateral line complete, with 33 to 46 scales.

25. *Crossocheilus latius latius* (Hamilton-Buchanan)

1822. *Cyprinus latius*, Hamilton-Buchanan, *Fishes of Ganges* : 345, 393

(Type locality : Teesta river at the base of Darjeeling Himalaya).

1991. *Crossocheilus latius latius* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries 1* :

416, fig. 147.

Material examined : (i) 2 exs., 109-120 mm, Subarnarekha river at Mangoo, Jharkhand, coll. A.K.S. & party, 4.iii.1984. (ii) 4 exs., 87-94 mm, Subarnarekha river at Kedadi, Jharkhand, coll. A.K.S. & party, 3.iii.1984. (iii) 2 exs., 79-87 mm, Subarnarekha river at Dahiguda, Moubhandar, Jharkhand, coll. A.K.S. & party, 5.iii.1984. (iv) 1 ex., 96 mm, Subarnarekha river, Ghatsila, Jharkhand, coll. A.K.K. & party, 17.ii.2001. (v) 6 exs., 90-97 mm, Subarnarekha river near Moubhandar, Jharkhand, coll. A.K.K. & party, 17.ii.2001. (vi) 1 ex., 100 mm, Subarnarekha river at Gaaludih, Jharkhand, coll. A.K.K. & party, 16.ii.2001.

Distribution : India : The Ganga and Brahmaputra in northern India; Mahanadi in Orissa; Western Ghats, head waters of Krishna river.

Fishery Information : This species attains a length of about 12.5 cm; of little interest to fisheries.

Genus *Garra* Hamilton-Buchanan, 1822

1822. *Garra* Hamilton-Buchanan. *Fishes of Ganges* : 343, 393

(*Type species* : *Cyprinus lamta* Hamilton-Buchanan).

Body elongate and subcylindrical. Undersurface of the head and body flattened. Mouth inferior, transverse and semicircular; a suctorial disc present on the chin. A proboscis may be present. Barbels 1 to 2 pairs or entirely absent. Dorsal fin inserted in advance of pelvic fins, with 9 to 12 rays and no spine. Paired fins horizontally placed. Anal fin with 6 to 8 rays. Lateral line complete, with 32 to 40 scales.

Key to the species of Genus *Garra*

- 1 Proboscis present 2
 - Proboscis absent 3
2. Proboscis trilobed, 2 pairs of barbels present *G. nasuta*
 - Proboscis single projection; well developed with well defined lateral tubercular area *G. gotyla gotyla*
3. Tip of the snout not marked off by deep transverse groove. Dorsal and caudal fins without any marking *G. annandalei*
 - Tip of the snout marked off by a deep transverse groove 4
4. Distance of vent from anal fin base more than 4 times in that between pelvic fin origin and anal fin base *G. lamta*.
 - Distance of vent from base of anal fin less than 4 times in that between anterior origins of anal and pelvic fins. Interorbital width about 2 times in head length

..... *G mullya*

26. *Garra annandalei* Hora

1877. *Discognathus lamta*, (nec. Hamilton-Buchanan) Day (partim) *Fishes of India* : 527.

1921. *Garra annandalei* Hora *Rec. Indian Mus.* 22 (5) : 657

(Type-locality : Mahananda river, below Darjeeling).

1991. *Garra annandalei* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries* 1 : 419.

Material examined : (i) 1 ex., 77 mm, Subarnarekha river at Gaaludih, Jharkhand, coll. A.K.K. & party, 16.ii.2001.

Distribution : India : The North Bengal, Bihar, Assam, Meghalaya, Mizoram, Nagaland; eastern Nepal; and Bangladesh.

Fishery Information : It attains a length of about 23 cm and is of no interest to fisheries.

27. *Garra gotyla gotyla* (Gray)

1832. *Cyprinus gotyla* Gray, *Illustrations of Indian Zoology*, 1, pl. 88, fig. 3, 3a

(Type-locality : Northern India).

1991. *Garra gotyla gotyla* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries* 1 : 421-422.

Material examined : (i) 7 exs., 43-73 mm, Subarnarekha river beside Pung House, near Mango bridge, Jamshedpur, Jharkhand, coll. A.K.S. & party, 17.x.1984.

Distribution : India : all along Himalaya; Assam, Tripura, Meghalaya, Manipur, Mizoram, Nagaland; Chotanagpur Plateau and Vindhya - Satpura mountains of Peninsular India; Bangladesh, Upper Myanmar.

Fishery Information : It attains a length of about 14 cm, of minor interest to fisheries.

28. *Garra lamta* (Hamilton-Buchanan)

1832. *Cyprinus gotyla* Hamilton-Buchanan, (partim) *Fishes of Ganges* : 343, 393

(Type-locality : Rapti river, Gorakhpur, U.P.).

1991. *Garra lamta* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries* 1 : 426.

Material examined : (i) 3 exs., 60-75 mm, Upstream of Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.S. & party, 16.x.1984.

Distribution : India : Darjeeling and Kumaon Himalaya, Assam, Sikkim; and eastern

Nepal.

Fishery Information : It attains a length of about 15 cm and is highly valued as a food-fish owing to its high fat content.

29. *Garra mullya* (Sykes)

1841. *Chondrostoma mullya* Trans. Zool. Soc. Lond., 2 : 359, pl. 62 fig. 3

(*Type-locality* : Becma river at Daunde, nr. Poona).

1991. *Garra mullya* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries* 1 : 429.

Material examined : (i) 5 exs., 78-110 mm, Subarnarekha river, at Dahigura, Moubhandar, Jharkhand, coll. A.K.S. & party, 5.iii.1984. (ii) 9 exs., 90-111mm, Subarnarekha river at Mango, Jharkhand, coll. A.K.S. & party, 4.iii.1984. (iii) 2 exs., 82-83 mm, Subarnarekha river at Kedadi, Jharkhand, coll. A.K.S. & party, 3.iii.1984 (iv) 15 exs., 60-85 mm, Bumni river, 5 kms from Chandil Railway Station, Jharkhand, coll. A.K.K. & party, 24.xii.2001.

Distribution : India : Throught except Assam and the Himalaya.

Fishery Information : It attains a length of about 17 cm and of no interest to fisheries.

30. *Garra nasuta* (McClelland)

1839. *Platy cara nasuta* McClelland, *J. Asit. Soc. Beng.* 7 (2) : 947. pl. 55. fig.2, 2a, 2b.

(*Type-locality* : Khasi Hills, Meghalaya).

1991. *Garra nasuta* : Talwar and Jhingran, *Inland fishes of India and Adjacent countries* 1 : 430.

Material examined : (i) 2 exs., 85-86 mm, Subarnarekha river, at Kedadi, Jharkhand, coll. A.K.S. & party, 3.iii.1984. (ii) 2 exs., 72-78 mm, Subarnarekha river at Dahiguda, Jharkhand, coll. A.K.S. & party, 5.iii.1984. (iii) 4 exs., 72-90 mm, Subarnarekha river, Ghatsila, Jharkhand, coll. A.K.K. & party, 17.ii.2001. (iv) 1 ex., 145 mm, Ratmohana, Jharkhand, coll. A.K.K. & party, 16.ii.2001.

Distribution : India : Assam, Meghalaya, Arunachal Pradesh, Mizoram; Myanmar; South China and Vietnam.

Fishery Information : It attains a length of about 15 cm and is of no interest to fisheries.

Family BALITORIAE

Sub family NOEMACHEILINAE

Genus *Acanthocobitis* Peters 1861

1861. *Acantocobitis* Peters, *Monats. Akad. wiss.* Berlin, p. 712

(Type species : *Acanthocobitis longipinnis* Peters = *Cobitis pavonaceous* McClelland, by monotypy).

Body elongate, more or less cylindrical and somewhat depressed. Mouth small and inferior. Lower lip broad on both sides, interrupted in the middle. Eye minute to small. Pre-orbital spine on head absent. Barbels 2 to 4 pairs. Dorsal fin inserted opposite to pelvic fins, with 10 to 18 soft rays and no spine. Anal fin with 6 to 8 soft rays. Caudal fin emerginate, truncate, or lunate. Scales minute. Lateral line complete or incomplete.

31. *Acanthocobitis botia* (Hamilton-Buchanan)

1822. *Cobitis botia*, Hamilton-Buchanan, *Fishes of Ganges* : 350, 394

(Type locality : rivers of north eastern Bengal).

1987. *Noemacheilus botia* : Menon, *The Fauna of India*, Pisces (Teleostei : cobitoidea : Homalopteridae) 4 (part 1) : 141, pl. 5, fig. 5.

1999. *Acanthocobitis botia* : Jayaram, *The Freshwater Fishes of the Indian Region* : 173-174.

Material examined : (i) 1 ex., 49 mm, Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.K. & party, 17.ii.2001. (ii) 5 exs., 58-65 mm, Subarnarekha river at Gaaludih, Jharkhand, coll. A.K.K. & party, 16.ii.2001.

Distribution : India : Northern India, Brahmaputra and Ganga basin; Pakistan; Nepal; Myanmar; Bangladesh; and Sri Lanka.

Fishery Information : It attains a length of about 9 cm and is of no interest to fisheries.

Genus *Schistura* McClelland 1939

1839. *Schistura* McClelland *Asiat Res.*, 19 p. 306, 439

(Type species, *Cobitis (Schistura) rupecula* McClelland by subsequent designation).

Body elongate, compressed posteriorly. Head depressed or compressed. Snout usually blunt. Upper lip slightly furrowed; lower lip interrupted in the middle, moderately furrowed. Dorsal fin short, inserted in advance or opposite pelvic fin with seven to eight, rarely ten, branched rays. Caudal fin slightly emarginate, forked or truncate. Lateral line complete or incomplete. Scales usually present over body, in some cases may be naked. Dark cross bars of variable form and number present.

32. *Schistura savona* (Hamilton-Buchanan)

1822. *Cobitis savona* Hamilton-Buchanan, *Fishes of Ganges* : 357, 394

(Type locality : Kosi river at Nathpur, Uttar Pradesh).

1987. *Noemacheilus savona* : Menon, *Fauna of India*, Pisces, 4 : 91, pl. 13, fig. 10.

1999. *Schistura savona* : Jayaram, *The Freshwater Fishes of the Indian Region* : 183.

Material examined : Nil.

Distribution : India : Eastern Himalaya : Tista drainage at Darjeeling through Nepal, to Karnali and Kali drainages in Uttar Pradesh.

Fishery Information : It attains a length of about 2.5 cm in standard length; is of no interest to fisheries.

Family COBITIDAE

Sub family COBITINAE

Genus *Lepidocephalus* Blecker, 1858

1858. *Lepidocephalus* Blecker, *Natüürk, tijdschr Nederl. Ind.*, 16 : 303

(*Type species* : *Cobitis microchir* Blecker).

Body elongate, slightly compressed. Back not arched. Mouth inferior, with 6 barbels. A small erectile, bifid, suborbital spine. Dorsal fin inserted opposite to ventral and placed almost on middle of body. Caudal fin rounded, truncate or emerginate. Scales small, but visible. Sides of head covered with small scales in patches. Lateral line absent.

33. *Lepidocephalus guntea* (Hamilton-Buchanan)

1822. *Cobitis guntea*, Hamilton-Buchanan, *Fishes of Ganges* : 353, 394

(*Type locality* : Bengal).

1991. *Lepidocephalus guntea* : Menon, *The Fauna of India*, (Pisces : cobitoidea : cobitidae) 4 (Part 2) : 54-60, Text figs. 2.

Material examined : (i) 3 exs., 55-74 mm, Bumni river, 5 kms. from Chandil Railway Station, Jharkhand, coll. A.K.K. & party, 24.xii.2001. (ii) 4 exs., 50-65 mm, Subarnarekha river, downstream from Chandil Dam, Jharkhand, coll. A.K.K. & party, 23.xii.2001. (iii) 18 exs., 45-71 mm Subarnarekha river at Mando, Jharkhand, coll. A.K.K. & party, 21.xii.2001. (iv) 15 exs., 46-70 mm, Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.K. & party, 17.02.2001 (v) 1 ex., 61 mm, Subarnarekha river at Gaaludih, Jharkhand, coll. A.K.K. & party, 16.ii.2001. (vi) 2 exs., 56-60 mm, Subarnarekha river at Namkum, Jharkhand, coll. A.K.K. & party, 21.ii.2001 (vii) 1 ex., 48 mm, Subarnarekha river near Harat village, Jharkhand, coll. A.K.K. & party, 22.xii.2001. (viii) 2exs., 56-85 mm, Subarnarekha river, West Medinipore, W.B., coll. P.P.B., 2003.

Distribution : India : Throughout except Karnataka, Kerala and south of Krishna; Pakistan; Bangladesh; Nepal; Myanmar; and Thailand.

Fishery Information : It attains a length of about 15 cm and of very little interest to fisheries. But it is widely used as an aquarium fish.

Order SILURIFORMES

Family BAGRIDAE

Genus *Sperata* Holly, 19391939. *Sperata* Holly, *Zool. Anz.* 125(5/6) : 143.(Type species : *Bagrus lamarii* Valenciennes = *Platystoma seenghala* Sykes).

Body elongate, posteriorly compressed. Head fairly large and depressed anteriorly. A distinct interneural shield present. Eyes large, not visible from underside of head. Mouth terminal and moderately wide. Barbels four pairs, maxillary pair extend to pelvic fins and even beyond caudal fin. Dorsal fin with one weak spine and seven soft rays, adipose dorsal long and low. Each of the pectoral fin with one strong serrated spine and nine to ten soft rays; pelvic fin rays six in number. caudal fin forked.

Key to the Species of Genus *Sperata*

- 1a. Snout rounded; maxillary barbels extend to base of caudal fin or beyond; width of mouth less than half of head length; caudal fin rays 17 in number *S. aor*
- 1b. Snout spatulate; maxillary barbels extend no further than pelvic fins; width of mouth one third of head length; caudal fin rays 19 to 21 in number *S. seenghala*

34. *Sperata aor* (Hamilton-Buchanan)

1822. *Pimelodus aor* Hamilton-Buchanan, *Fishes of Ganges* : 205, 379, pl. 20. fig. 68

(Type locality : rivers of Bengal and upper parts of Gangetic estuary).

1991. *Aorichthys aor* : Talwar and Jhingran, *Inland. Fishes of India and Adjacent countries 2* : 547. fig. 178.2006. *Sperata aor* : Jayaram, *Catfishes of India* : 27-29.

Material examined : (i) 1 ex., 210 mm, Subarnarekha river, downstream from Chandil Dam, Jharkhand, coll. A.K.K. & party, 24.xii.2001. (ii) 1 ex., 165 mm, Subarnarekha river near Ballydingra village, Dantan, coll. A.K.K. & party, 27.xii.2001. (iii) 1 ex., 310 mm, Subarnarekha river, Ghatsila coll. A.K.K. & party, 17.ii.2001. (iv) 1 ex., 55 mm, Subarnarekha river, West Medinipore, coll. P.P.B., 2003.

Distribution : India : Northern India, upto the Krishna River System in South; Pakistan; Nepal; Bangladesh; and Myanmar.

Fishery Information : It attains a length of about 1.8 m; common size is 1 m. This is a common giant catfish in the Indian region with considerable fishery importance; mostly riverine in nature. This fish breeds before onset of monsoons in the Ganga.

35. *Sperata seenghala* (Sykes)

1841. *Platystoma seenghala* Sykes, *Trans. Zool. Soc. Lond.* 2 : 317, pl. 65, fig.2

(Type locality : Mulla Motha river at Poona).

1991. *Aorichthys seenghala* : Talwar and Jhingran, *Inland. Fishes of India and adjacent countries* 2 : 548, 1. pl.

2006. *Sperata seenghala* : Jayaram, *Catfishes of India* : 31-34.

Material examined : (i) 2 exs., 250-280 mm, Subarnarekha river at Dahigura, Moubhandar, Jharkhand, coll. A.K.S. & party, 3.iii.1984.

Distribution : India : Ganga, Yamuna, Krishna, Godavari and Cauvery river systems; Pakistan; Afghanistan; Nepal; and Bangladesh.

Fishery Information : It attains a length of about 1.5 m; common size being 40 cm. An important giant catfish in India being extensively caught in larger rivers. Breed before commencement of monsoons.

Genus *Mystus* Scopoli, 1777

1777. *Mystus* Scopoli, *Introductio ad historium naturalem* : 451

(Type species : *Bagrus haplepenis* Valenciennes = *Silurus pelusius* Solunder).

Body moderately elongate, posteriorly compressed. Head rather depressed and short. Eyes moderately large, not visible from underside of head. Mouth terminal and moderately wide. 4 pairs of barbels, maxillary barbels extend beyond dorsal fin. Rayed dorsal fin with one serrated spine and 7 soft rays, adipose dorsal low. Anal fin short, with 9 to 16 soft rays. Lateral line complete.

Key to the Species of Genus *Mystus*

- 1a. Maxillary barbels reach anal fin. Inter-orbital width less than 3.0 (2.0 to 3.0) in head length. No dark spot at the base of dorsal fin *M. bleekeri*
- 1b. Maxillary barbels reach caudal fin base or beyond. Interorbital width more than 3.0 (3.0 to 4.0) in head length. A dark spot at the base of dorsal fin *M. cavasius*

36. *Mystus bleekeri* (Day)

1877. *Macrones bleekeri* Day, *Fishes of India* : 451, pl. 101, fig. 1 (Replacement name for *Bagrus keletius* Blecker 1846) : Day, 1889 *Fauna of India, Fishes*, 1 : 162.

1991. *Mystus bleekeri* : Talwar and Jhingran, *Inland. Fishes of India and Adjacent countries* 2 : 558.

2006. *Mystus bleekeri* : Jayaram, *Catfishes of India* : 38-40.

Material examined : (i) 1 ex., 72 mm, Singari khal near Baldingri village, Dantan, W.B., coll. A.K.K. & party, 26.xii.2001. (ii) 2 exs., 75-90 mm, Subarnarekha, West Medinipore, coll. P.P.B. & party, 2003.

Distribution : India : Generally confined to northern India, the Southernmost limit being the Mahanadi head waters; Pakistan; Bangladesh; Nepal; Myanmar and Sumatra.

Fishery Information : It attains a length of about 160 mm. No major fishery exist for this catfish.

37. *Mystus cavasius* (Hamilton-Buchanan)

1822. *Pimelodus cavasius* Hamilton-Buchanan, *Fishes of Ganges* : 203, 379, pl. 11, fig. 67

(Type locality : Gangetic provinces).

2006. *Myatus cavasius* : Jayaram, *Catfishes of India* : 40-42.

Material examined : (i) 6 exs., 123-170 mm, Subarnarekha river at Mangoo, Jamshedpur, Jharkhand, coll. A.K.S. & party, 4.iii. 1984. (ii) 1 ex., 140 mm, Subarnarekha river at Kedadi, Jharkhand, coll. A.K.S. & party, 3.iii.1984. (iii) 3 exs., 116-123 mm, upstream of Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.S. & party, 16.x.1984. (iv) 1 ex., 75 mm, Bonaikhal, Dulung, West Medinipore, W.B., coll. S.C. & party, 2000. (v) 6 exs., 100-130 mm, Subarnarekha river, downstream from Chandil Dam, Jharkhand, coll. A.K.K. & party, 24.xii.2001. (vi) 5 exs., 95-105 mm, Subarnarekha river near Ballydingra village, Danton, W.B., coll. A.K.K. & party, 27.xii.2001. (vii) 1 ex., 96 mm, Subarnarekha river near Harat village, Jharkhand, coll. A.K.K. & party, 22.xii.2001.

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

Fishery Information : It attains a length of about 40 cm. This catfish is a very common foodfish in the Indian region.

Genus *Neotropius* Kulkarni 1952

1952. *Neotropius* Kulkarni, *Rec. Indian Mus.* 49(3&4), p. 231

(Type-species, *Neotropius klavalchor*)

Body elongate and compressed. Eyes large, ventro-lateral in position, visible from underside of head. Mouth wide, its cleft not extending to anterior border of eye. Four well-developed pairs of barbels. Dorsal fin short, with strong spine serrated on both edges. Adipose dorsal small. Anal fin long, with 30 to 46 rays. Pectoral fin with a strong serrated spine. Pelvic fin with 6 rays. Caudal fin forked.

38. *Neotropius atherinoides* (Bloch)

1794. *Silurus atherinoides* Bloch, *Naturges ausland Fische*, 8 : 48, pl. 371, fig. 1

(Type locality : Tranquebar, Tamil Nadu).

1991. *Pseudeutropius atherinoides* : Talwar and Jhingran, *Inland Fishes of India and Adjacent countries* : 606, fig. 200.

2006. *Neotrpius atherinoides* : Jayaram, *Catfishes of India* : 74-75.

Material examined : (i) 1 ex., 71 mm, Subarnarekha river, West Medinipore, coll. P.P.B. & party, 2003.

Distribution : India : Penisular India (not below cauvery system) and eastern Himalaya; Bangladesh; Nepal and Myanmar.

Fishery Information : It is considered of an inferior kind of fish and is of minor fishery value in Indian region.

Family AMBLYCIPTIDAE

Genus *Amblyceps* Blyth, 1858

1858. *Amblyceps* Blyth, *Proc. Asiat. Soc. Beng.*, 27 : 282.

(Type species : *Amblyceps caecutiens*. Blyth = *Pimelodus mangois* Hamilton-Buchanan).

Development of a prominent fold of skin (cup-like) in front of pectoral fin in which the gill membrane rests when the gill openings are closed. Nostrils are closed together and separated by nasal barbel. Eyes small, dorsolaterally placed. Monotypic.

39. *Amblyceps mangois* (Hamilton-Buchanan)

1822. *Pimelodus mangois* Hamilton-Buchanan, *Fishes of Ganges* : 199, 379

(Type locality : Northern Bihar).

1991. *Amblyceps mangois* : Talwar and Jhingran, *Inland. Fishes of India and Adjacent countries* : 615.

2006. *Amblyceps mangois* : Jayaram, *Catfishes of India* : 156-158.

Material examined : (i) 1 ex., 60 mm, Subarnarekha river near Harat village, Jharkhand, coll. A.K.K. & party, 22.xii.2001.

Distribution : India : Along the foot-hills of the Himalayas from Kangra valley (Himachal Pradesh) to Assam, Tripura, Meghalaya, Manipur, Nagaland; Pakistan; Bangladesh; Northern Myanmar and Thailand.

Fishery Information : It attains a length of about 12.5 cm; and is of no interest to fisheries.

Family SISORIDAE

Genus *Bagarius* Bleeker 1853

1853. *Bagarius* Bleeker, *Verh. batav. Genoot Kunst. Wet.*, 25 : 121

(Type species : *Bagarius buchanani* Bleeker = *Pimelodus bagarius* Hamilton-Buchanan).

Broad, moderately or strongly depressed head. Head and body almost entirely covered by heavily keratinised skin. Eyes small, not visible from underside of head. Mouth broad, slightly inferior. Four pairs of barbels, maxillary barbels large. Wide gill opening present, continued far forward ventrally, gill membranes free. Dorsal fin with non-serrated spine and 7 soft rays; anal fin with 13 to 17 soft rays, pectoral with a spine (finely serrated posteriorly) and 9 to 14 soft rays, pelvic fin rays 6. Dorsal and pectoral fins, and both caudal finlobes often with filamentous extensions.

40. *Bagarius bagarius* (Hamilton-Buchanan)

1822. *Pimelodus bagarius* Hamilton-Buchanan, *Fishes of Ganges* : 186, 378, pl. 7, fig. 62

(Type locality : Ganga river and its tributaries).

1991. *Bagarius bagarius* : Talwar and Jhingran, *Inland Fishes of India and Adjacent countries* : 622.

2006. *Bagarius bagarius* : Jayaram, *Cafishes of India* : 202-204.

Material examined : (i) 2 exs., 180-190 mm, Upstream of Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.S. & party, 16.x.1984. (ii) 1 ex., 140 mm, Subarnarekha river, West Medinipore, W.B., coll. P.P.B. & party, 2003. (iii) 1 ex., 75 mm, Bonaikhal, Dulung, West Medinipore, W.B., coll. S.C. & party, 2003.

Distribution : India : Ganga river and its tributaries, Brahmaputra river, Subarnarekha river; Chao Phrya and Mekong basins (Laos); and possibly also the Pattani river (Malay Peninsula).

Fishery Information : It attains a length of about 19 cm in standand length, mainly inhabits rapids and rocky pools. Flesh of this fish is not much relished as food.

Genus *Gagata* Bleeker 1858

1858. *Gagata* Bleeker, *Ichthyol. Archipel. Ind. Prodromus*, 1 : 204

(Type species : *Gagata typus* Bleeker = *Pimelodus gagata* Hamilton-Buchanan).

Body and head compressed. A distinct median groove on head present. Occipital process not reaching basal bone of dorsal fin. Eyes large, dorsolateral in position. Mouth small and ventral, no teeth on palate. Barbels 4 pairs, maxillary barbels with osseus bases and lying in a groove. Gill membranes confluent with isthmus. Dorsal fin with 1 strong spine and 6 rays, anal fin short with 11 to 16 rays.

41. *Gagata cenia* (Hamilton-Buchanan)

1822. *Pimelodus cenia* Hamilton-Buchanan, *Fishes of Ganges* : 174, 376, pl. 31, fig. 57

(Type locality : rivers of North Bengal).

1991. *Gagata cenia* : Talwar and Jhingran, *Inland Fishes of India and Adjacent countries* : 637.

Material examined : (i) 1 ex., 63 mm, Subarnarekha river at Kedadi; Jharkhand, coll. A.K.S. & party, 3.iii.1984. (ii) 2 exs., 55-58 mm, Subarnarekha river at Jaleswar, Orissa, coll. A.K.K. & party, 29.xii.2001. (iii) 7 exs., 50-58 mm, Subarnarekha river near Harat village, Jharkhand, coll. A.K.K. & party, 22.xii.2001.

Genus *Glyptothorax* Blyth, 1861

1861. *Glyptothorax* Blyth, *J. Asiat. Soc. Beng.*, 29 : 154

(Type species : *Glyptothorax trilineatus* Blyth)

Body laterally depressed or cylindrical. Head depressed; eyes small, dorsal in position. A prominent thoracic sucking disc present often with a central pit. Mouth inferior, transverse and narrow; lips thick and fleshy. Barbels 4 pairs, maxillary barbels with broad bases. Gill membranes confluent with skin of isthmus. Rayed dorsal fin with 1 spine and 5 to 7 soft rays. A short adipose dorsal present. Pectoral fin with a strong spine denticulated internally. Anal fin with 7 to 14 soft rays. Lateral line complete.

Key to the species of Genus *Glyptothorax*

- 1 Adhesive thoracic apparatus longer than broad. Dorsal fin distinctly higher than depth of body *G. coheni*
- Adhesive thoracic apparatus longer than broad. Dorsal fin lower or as high as depth of body 2
2. Anal fin inserted slightly behind vertical from origin of adipose fin *G. nelsoni*
- Anal fin inserted opposite or anterior to vertical from origin of adipose fin. Body devoid of colour bands *G. saisii*

42. *Glyptothorax coheni* Ganguly, & Sen

1972. *Glyptothorax coheni* Ganguly, Datta & Sen, *Copeia*, (2) : 432, fig 3,4

(Type-locality : Subarnarekha River, Chotanagpur Plateau, Bihar)

1991. *Glyptothorax coheni* : Talwar and Jhingran, *Inland Fishes of India and Adjacent countries* : 650-651.

Material examined : Nil.

Distribution : India : Subarnarekha river, chotanagpur plateau, Jharkhand.

Fishery Information : It attains a length of about 9 cm in standard length; and of no interest to fisheries.

43. *Glyptothorax nelsoni* Ganguly, Datta & Sen

1972. *Glyptothorax nelsoni* Ganguly, Datta & Sen, *Copeia* (2) : 341, figs 1, 2

(Type-locality : Subarnarekha river, Chotanagpur plateau, Bihar).

1991. *Glyptothorax nelsoni* : Talwar and Jhingran, *Inland Fishes of India and Adjacent countries* : 657-658.

Material examined : Nil

Distribution : India : Subarnarekha river, Chotanagpur Plateau, Jharkhand.

Fishery Information : It attains a length of about 8 cm in standard length; and is of no interest to fisheries.

44. *Glyptothorax saisii* (Jenkins)

1910. *Glyptosternum saisii* Jenkins, *Rec. Indian Mus.*, 5(2) : 128, text fig. and pl. 6, fig.6

(Type-locality : Paresnath Hills, Bihar)

1976. *Glyptothorax saisii* Misra, *Fauna of India, Pisces* (2nd ed.); 3 : 276, pl. 12, fig.1.

1991. *Glyptothorax saisii* : Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries* : 660-661.

Material examined : Nil.

Distribution : India : Jharkhand : Paresnath hills; Uttaranchal : Pauri Garhwal; and Maharashtra : Yenna river.

Fishery Information : It attains a length of about 7 cm; and is of no interest to fisheries.

Genus *Gogangra* Roberts, 2001

2001. *Gogangra* Roberts, *Nat. Hist. Bull. Siam Soc.*, 49 : 81-87.

(Type species : *Pimelodus viridescens* Hamilton-Buchanan).

Short and compressed body. Head short. Eyes large, not visible from underside of head. Skin smooth. Mouth narrow and ventral; lips thick and fimbriated. Four pairs of barbels. Mandibular pairs of barbels are set wide apart and placed on a transverse row at different levels. A pair of finger-like processes in between inner mandibular barbels often present. Gill-opening wide; gill membranes not confluent with each other nor with isthmus. Dorsal fin inserted above posterior quarter of pectoral fin. Adipose dorsal fin short and prominent. Caudal fin deeply forked.

45. *Gogangra viridescens* (Hamilton-Bucanan)

1822. *Pimelodus viridescens* Hamilton-Buchanan, *Fishes of Ganges* : 173, 376, pl. 10, fig. 56

(Type locality : rivers of North Bengal).

1991. *Nangra viridescens* : Talwar and Jhingran, *Inland Fishes of India and Adjacent countries* : 677, fig. 216.

2006. *Gogangra viridescens* : Jayaram, *Catfishes of India* : 174-175.

Material examined : (i) 1 ex., 45 mm, Bonaikhal, Dulung, West Medinipore, W.B., coll. S.C. & party, 2000.

Distribution : India : Yamuna river at Delhi, rivers of northern parts of West Bengal, Bihar, Assam, Punjab and Uttar Pradesh; and Bangladesh.

Fishery information : It attains a length of about 8.5 cm. A good fishery of this fish exists in the Sone river and minor fisheries in northern Bengal.

Family EREHISTIDAE

Genus *Erethistes* Muller & Troschel 1845

1845. *Erethistes* Muller and Troschel, *Horae Ichthyol*, 3 : 12

(Type species : *Erethistes pussilus*, Muller & Troschel).

Small sized fish, flattened ventrally up to pelvic fin base. Body granulated dorsally and laterally. Head large and broad; granulated. Eyes very small, subcutaneous and dorsolateral. Mouth small and ventral. Teeth minute, present on both the jaws. Four pairs of barbels, annulated with black rings. Gill-membrane confluent with isthmus. Dorsal fin with a strong spine and 6 rays; adipose dorsal of moderate size. pectoral fins horizontally placed, pectoral spine serrated on both edges. Pelvic fin rays 6 in number. Caudal fin emarginate. Lateral line complete.

Key to the Species of Genus *Erethistes*

- 1 Dorsal spine smooth; pelvic fin extends to anal fin *E. maesotensis*
 Dorsal spine distinctly serrated; pelvic fin shorter, not extending to anal fin
 *E. pussilus*

46. *Erethistes pussilus* Muller & Troschel

1845. *Erethistes pussilus* Muller & Troschel, *Horae Ichthyol.*, 3 : 12, pl. 1, fig. 3

(Type locality : Assam).

1991. *Erethistes pussilus* : Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries* : 628, fig. 204.

2006. *Erethistes pusilus* : Jayaram. *Catfishes of India* : 282-283.

Material examined : (i) 1 ex., 43 mm, Subarnarekha river, West Medinipore, W.B., coll. P.P.B & party, 2003.

Distribution : India : Ganga and Brahmaputra drainage, Subarnarekha river; Nagaland; Bangladesh and Myanmar.

Fishery Information : It attains a length of about 5 cm and of no interest to fisheries. Primarily it is a hill stream fish.

47. *Laguvia ribeiroi* Hora

1921. *Laguvia ribeiroi* Hora, *Rec. Indian. Mus.*, 22(5) : 740, pl. 29 fig. 2

(Type-locality-Mahananda and Sivoke Rivers, Darjeeling Himalaya).

1999. *Laguvia ribeiroi* : Jayaram, *The Freshwater Fishes of the Indian Region* : 286.

Material examined : Nil

Distribution : India : Hoshangabad dist., M.P., U.P., Riland river Bihar, Jharkhand, Tista river system, North Bengal; Bangladesh; Nepal.

Fishery Information : It attains a length of about 10 cm; and is of no interest to fisheries.

Family SCHILBEIDAE

Genus *Ailichthys* Day, 1871

1871. *Ailichthys* Day, *Proc. Zool. Soc. Lond.* : 712.

(Type species : *Ailichthys punctata* Day).

Body elongate, strongly compressed. Mouth subterminal and fairly wide. Barbels 4 pairs, well developed. Eyes small, visible from underside of the head. Rayed dorsal fin absent, adipose dorsal fin small. Anal fin very long, with 58-90 rays. Pectoral fin with I spine and 13-16 rays. Lateral line complete.

48. *Ailichthys punctata* Day

1871. *Ailichthys punctata* Day, *Proc. Zool. Soc. Lond.* : 713.

(Type locality : Jamuna river below Delhi).

1991. *Ailia punctata* : Talwar and Jhingran, *Inland Fishes of India and Adjacent countries* : 594.

2006. *Ailichthys punctata* : Jayaram, *Catfishes of India* : 119-120.

Material examined : (i) 3 exs., 105-140 mm, Subarnarekha river at Jaleswar, Orissa, coll. A.K.K. & party, 29.xii.2001.

Distribution : India : Ganga, Jamuna and Indus river Systems, Manipur, Mizoram; Also Bangladesh and Pakistan.

Fishery information : It attains a length of 160 mm and is of no interest to fisheries.

Genus *Clupisoma* Swainson 1839

1839. *Clupisoma* Swainson, *Natural History Animals, Fisches*, 2 : 306.

(*Type species* : *Pimelodus argentata* Swainson = *Silurus garua* Hamilton-Buchanan).

Body elongate and compressed. Abdominal edge either rounded or keeled (entirely or partly). Eyes moderate, visible from underside of head. Nostrils prominent and closely placed. Mouth moderate, subterminal; its gape not extending to eye. Barbels 4 pairs, all placed at same level. Gill membrane free from isthmus. Dorsal fin inserted considerably in advance of pelvic fins, with 1 spine and 6 to 9 soft rays. A small adipose dorsal usually present. Anal fin long, with 29 to 54 soft rays.

49. *Clupisoma garua* (Hamilton-Buchanan)

1822. *Silurus garua* Hamilton-Buchanan, *Fishes of Ganges* : 156, 375, pl. 21, fig. 50

(*Type locality* : freshwater rivers of Gangetic provinces).

1991. *Clupisoma garua* : Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries* : 596, fig. 198A.

Material examined : (i) 4 exs., 145-236 mm, Upstream of Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.S. & party, 16.x.1984. (ii) 1 ex., 90 mm, Subarnarekha river, West Medinipore, coll. P.P.B. & party, 2003. (iii) 5 exs., 106-138 mm, Subarnarekha river at Jaleswar, Orissa, coll. A.K.K. & party, 29.xii.2001.

Distribution : India : Large rivers of northern India, Assam, West Bengal and Bihar; Pakistan; Bangladesh and Nepal.

Fishery Information : It grows upto a metre in length, common in freshwater rivers of gangetic plains. It is considered as a good food fish, found in abundance during monsoons. It is bottom feeder and feeds mainly on insects, shrimps, other crustaceans and small fishes. As it is carnivorous, it is very destructive in tanks and not advisable to rear it there.

Family PANGASIIDAE

Genus *Pangasius* Valenciennes 1840

1840. *Pangasius* Valenciennes, *Hist. nat. Poiss.*, 15 : 45

(Type species : *Pangasius buchanani* Valenciennes = *Pimelodus pangasius* Hamilton-Buchanan).

Body elongate and moderately compressed. Skin smooth. Mouth subterminal and moderately wide. Barbels two pairs, maxillary and single pair of mental barbels. Nostrils widely separated. Gill openings wide; gill membranes united with each other but free from isthmus. Dorsal and pectoral spines well developed, with serrated internal margins. Dorsal fin with 7 soft rays, adipose dorsal well developed, but with a narrow base. Elongated anal fin with 28 to 34 rays. Caudal fin deeply forked. Two vomarine and two palatine toothplates.

50. *Pangasius pangasius* (Hamilton-Buchanan)

1822. *Pimelodus pangasius* Hamilton-Buchanan, *Fishes of Ganges* : 163, 376, pl. 33, fig. 52

(Type locality : estuaries of Bengal).

1991. *Pangasius pangasius* : Talwar and Jhingran, *Inland Fishes of India and Adjacent countries* : 613.

Material examined : (i) 1 ex., 265 mm, Subarnarekha river at Kedadi, Jharkhand, coll. A.K.S. & party, 3.iii.1984.

Distribution : India : Pakistan; Bangladesh, Myanmar, Thailand, Malay Peninsula and Java.

Fishery Information : It grows upto 1.5 metre in length, inhabits lower portion of large rivers and estuaries. It is a food fish, but not graded among good varieties. A good fishery exists in Gangetic estuaries. It feeds on foul and decaying animals and vegetable matter.

Family HETEROPNEUSTIDAE

Genus *Heteropneustes* Muller 1840

1840. *Heteropneustes* Muller, *Arch. Anat. Physiol* : 115

(Type species : *Silurus fossilis* Bloch).

Body elongate, compressed, almost torpedo-shaped. Head greatly depressed. Mouth small, lips fleshy and papillated. Barbels 4 pairs, well developed. Dorsal fin very short, inserted above tip of pectoral fins and without any spine. Pectoral fin with 1 strong serrated spine and 7 to 8 soft rays. Anal fin base very long with 60 to 79 rays. Caudal fin almost rounded. Lateral line complete.

51. *Heteropneustes fossilis* (Bloch)

1794. *Silurus fossilis* Bloch, *Naturgesch ausland 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* : 689, fig. 219.

Material examined : (i) 1 ex., 110 mm, Subarnarekha river, West Medinipore, W.B., coll. P.P.B. & party, 2003.

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

Fishery Information : A fish with high economic importance. It attains a length of about 300 mm and is well known because of its nourishing properties and for quick recovery from illness.

Family CLARIIDAE

Genus *Clarias* Scopoli, 1777

1777. *Clarias* Scopoli, *Introduction ad Historiam Naturalem* : 455

(*Type species* : *Silurus anguillaris* Linnaeus).

Body elongate and compressed. Head depressed, covered with osseous plates dorsally and laterally forming a cask. Eyes small, not visible from underside of head. Gill membranes free from inthmus. Barbels 4 pairs, well developed. Dorsal fin bases very long with 62 to 77 soft rays and no spine pectoral fin with a strong spine and 7 to 11 soft rays. Anal fin base long with 45 to 63 rays. Candal fin rounded. Lateral line complete.

52. *Clarias batrachus* (Linnaeus)

1758. *Silurus batrachus* Linnaeus. *Systema Naturae*, 1, ed. 10 : 305

(*Type locality* : Asia and Africa).

1991. *Clarias batrachus* Talwar and Jhingran, *Inland Fishes of India and Adjacent countries* : 684-685.

Material examined : Nil.

Distribution : India : throughout; Pakistan; Nepal; Sri Lanka; Bangladesh; Myanmar; Indonesia; Singapore; Barneo and Philippines.

Fishery Information : It attains a length of about 45 cm and found in all types of water but more so in derelict and swampy waters. This is a hardy fish and can live out of water for quite sometime and move short distance on land and has a accessory respiratory organ. A fish of ligh economic importance. It is highly esteemed for its nourishing properties and quick recovery from prolonged illness.

Order BELONIFORMES

Family BELONIDAE

Genus *Xenentodon* Regan 1911

1911. *Xenentodon* Regan., *Ann. Mag. Nat. Hist.*, (8)7 : 322

(*Type species* : *Esox cancila* Hamilton-Buchanan).

Body very elongate and cylindrical; jaws with large canine teeth and much more numerous conical teeth. Gill rakers absent. Dorsal and anal fin almost equal and nearly opposite to each other. Caudal fin truncate or rounded. Scales extremely small. Lateral line placed very low on the body.

53. *Xenentodon cancila* (Hamilton-Buchanan)

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* : 743.

1999. *Xenentodon cancila* : Jayaram, *The Freshwater Fishes of the Indian Region* : 336.

Material examined : (i) 1 ex., 220 mm, Subarnarekha river at Ratmohana, Jharkhand, coll. A.K.K. & party, 16.ii.2001.

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

Fishery Information : It attains a length of about 40 cm, common size being 30 cm. It is an elegant surface living fish, fairly common in Ganga-Brahmaputra River System, with little commercial importance.

Order CYPRINODONTIFORMES

Family APLOCHEILIDAE

Genus *Aplocheilus* McClelland, 1839

1839. *Aplocheilus* McClelland, *Asiat. Res.*, 19(2) : 301

(*Type species* : *Esox panclax* Hamilton-Buchanan).

Body moderately elongate, compressed. Head and nape broad and flattened above. Mouth terminal, upper jaw protractile, lower jaw greatly attenuated. Barbels absent. Dorsal fin originates above posterior end of anal fin, with 7 to 9 rays and no spine. Anal fin longer with 15 to 18 rays. Caudal fin rounded. Lateral line absent. Scales on longitudinal series 25 to 31.

54. *Aplocheilus panchax* (Hamilton-Buchanan)

1822. *Esox panchax* Hamilton-Buchanan, *Fishes of Ganges*, : 211, 380, pl. 3, fig. 69

(*Type locality* : Bengal).

1991. *Aplocheilus panchax* : Talwar and Jhingran, *Inland Fishes of India and Adjacent countries* : 752.

1999. *Aplocheilus panchax* : Jayaram, *The Fresh water Fishes of the Indian Region* : 343-344.

Material examined : (i) 1 ex., 30 mm, Subarnarekha river at Mando, Jharkhand, coll. A.K.K. & party, 21.xii. 2001.

Distribution : India : mainly north; Pakistan; Bangladesh; Myanmar and Indo-Malayan Archipelago.

Fishery Information : It attains a length of about 80 mm, and is a larvivorous fish. Its utility in mosquito control has been established.

Family POECILIDAE

Genus *Gambusia* Poey, 1854

1854. *Gambusia* Poey, *Memorias sobre la historia natural de la Isla de Cuba*, 1 : 376, 384

(*Type species* : *Gambusia punctata* Poey).

Body moderately elongate. Eyes large. Scales fairly large. Projecting lower jaw. Dorsal fin inserted behind anal fin origin. A distal and sub-distal zone of melanophores on dorsal and caudal fins.

55. *Gambusia affinis* (Baird & Girard)

1853. *Heterandria affinis* Baird and Girard, *Proc. Acad. nat. Sci. Philad.*, 6 : 390

(*Type locality* : San Antonio river drainage, Texas).

1991. *Gambusia affinis* : Talwar and Jhingran, *Inland Fishes of India and Adjacent countries* : 756, fig. 242.

1999. *Gambusia affinis* : Jayaram, *The Fresh water Fishes of the Indian Region* : 345.

Material examined : (i) 1 ex., 37 mm, Subarnarekha river at Namkum, Jharkhand, coll. A.K.K. & party, 21.ii.2001.

Distribution : South eastern United States of America; introduced into India in several states.

Fishery Information : This fish was introduced into India in 1928 from Italy for antimalarial work. Today it is found in various hatcheries and small water bodies in different parts of the country. This fish predaceous and active, has a great appetite for its own young. It is hardy and can withstand all types of foul water conditions. Reported to consume mosquitoes equal to its own wt/day. Today, this species has widest distribution of any freshwater fish in the world, as a result of mosquito control programmes.

Order PERCIFORMES

Family CHANDIDAE

Genus *Chanda* Hamilton-Buchanan, 1822

1822. *Chanda* Hamilton-Buchanan, *Fishes of Ganges* : 103, 270

(Type species : *Chanda nama* Hamilton-Buchanan).

Body ovate and fairly transparent, with the vertebral column and its adjoining elements visible extremely. Lower limit of preopercle provided with double serrated edge; operculum devoid of a prominent spine. Mouth particularly large, with a conspicuous lower jaw. First dorsal fin with 7 spines and second one with 1 spine and 9 to 17 soft-rays. Anal fin with 3 spines and 9 to 17 rays. Lateral line complete, incomplete, interrupted or absent.

56. *Chanda nama* Hamilton-Buchanan

1822. *Chanda nama* Hamilton-Buchanan, *Fishes of Ganges* : 109, 371, pl. 39, fig. 37

(Type locality : Ponds throughout Bengal).

1999. *Chanda nama* : Jayaram, *The Freshwater Fishes of the Indian Region* : 369.

Material examined : (i) 2 exs., 55-63 mm, Moubhandar Fish Market, Jharkhand, coll. A.K.S. & party, 7.iii.1984. (ii) 1 ex., 58 mm, Subarnarekha river at Kedadi, Jharkhand, coll. A.K.S. & party, 3.iii.1984. (iii) 9 exs., 42-54 mm, Upstream of Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.S. & party, 16.x.1984. (iv) 11 exs., 51-73 mm, Bumni river, Chandil, Jharkhand, coll. A.K.K. & party, 24.xii.2001. (v) 1 ex., 50 mm, Subarnarekha river, downstream from Chandil dam, Jharkhand, coll. A.K.K. & party, 23.xii.2001. (vi) 3 exs., 25-32 mm, Subarnarekha river near Chandil dam, Jharkhand, coll. A.K.K. & party, 23.xii.2001. (vii) 19 exs., 45-77 mm, Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.K. & party, 17.ii.2001. (viii) 3 exs., 62-70 mm, Subarnarekha river at Gaaludih, Jharkhand, coll. A.K.K. & party, 16.ii.2001. (ix) 5 exs., 37-46 mm, Subarnarekha river near Harat village, Jharkhand, coll. A.K.K. & party, 22.xii.2001.

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

Fishery Information : It attains a length of 90 mm and are sold in heaps along with other small fishes as low priced item.

Genus *Parambassis* Blecker 1874

1874. *Parambassis* Blecker, *Nat. Verh. Halland. Maatsch Wetensch.*, 2(2), p 86, 102

(Type species : *Ambassis apogonoides* Blecker by original designation).

Body elongate and compressed. Head short, snout pointed Abdomen rounded. Mouth large, extending to anterior border of orbit. Eyes large, superior, not visible from ventral

surface. Lips thin. Supraorbital ridge with one or two spines posteriorly. Preorbital serrated on both ridge and edge. In I teroperculum smooth. Dorsal fins with six or seven spines and eleven to fourteen rays; fins closely placed with a notch in between. Anal fin with three spines and eleven to sixteen rays. Caudal fin forked Lateral line complete with 30 to 100 scales.

57. *Parambassis ranga* (Hamilton-Buchanan)

1822. *Chanda ranga* Hamilton-Buchanan, *Fishes of Ganges* : 113, 371, pl. 16, fig. 38

(Type locality : freshwaters of all parts of Gangetic provinces.)

1999. *Parambassis ranga* : Jayaram, *The Fresh water Fishes of the Indian Region* : 370-371.

Material examined : (i) 3 exs., 30-33 mm, Singrikhal near Baldingri village, Dantan W.B., coll. A.K.K. & party, 26.xii.2001. (ii) 1 ex., 25 mm, Subarnarekha river at Jaleswar, Orissa, coll. A.K.K. & party, 29.xii.2001. (iii) 8 exs., 17-26 mm, Bumni river, Chandil, Jharkhand, coll. A.K.K. & party, 24.xii.2001. (iv) 1 ex., 30 mm, Subarnarekha river, downstream from Chandil Dam, Jharkhand, coll. A.K.K. & party, 23.xii.2001.

Distribution : India : Throughout; Pakistan; Nepal; Bangladesh; Myanmar; Thailand and Malaysia.

Fishery Information : It attains a length of about 75 mm and are sold in the market alongwith other small fishes. It does fairly well in the aquarium.

Family MUGILIDAE

Genus *Rhinomugil* Gill 1863

1863. *Rhinomugil* Gill, *Proc. Acad. nat. Sci. Philad.*, 15 : 169

(Type species : *Mugil corsula* Hamilton-Buchanan).

Body elongated & stout. Thoracic and abdominal region more or less cylindrical. Head concave between eyes; eyes on the top of head. Spine absent on operculum. Adipose eyelid absent. Mouth conspicuously ventral; lips thin, directed downward. Teeth on jaw indistinct. Caudal fin emarginate. Scales ctenoid in adult, cycloid in young.

58. *Rhinomugil corsula* (Hamilton-Buchanan)

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* : 897, fig. 269.

Material examined : (i) 1 ex., 60 mm, Kumarmangalam Bridge, Moubhandar, coll. A.K.S. & party, 16.x.1984.

Distribution : India; Bangladesh; Nepal and Myanmar.

Fishery Information : It is fished in small quantities in the Ganga river, the Hooghly-Matla estuary, the Mahanadi estuary and the Chilka lake. It is also more or less common in the Cauvery river system.

Family GOBIIDAE

Genus *Glossogobius* Gill, 1862

1862. *Glossogobius* Gill, *Ann. Lye. Nat. Hist.* New York, 7 : 46.

(Type species : *Gobius platycephalus* Peters = *Gobius giuris* Hamilton-Buchanan).

Body elongate, anteriorly cylindrical, posteriorly compressed. Head depressed, pointed. Gill openings from below rear of preopercle to below eyes. Isthmus narrow. Mouth slightly oblique; lower jaw prominent. First dorsal with 6 spines; second one with 1 spine and 6 to 10 soft rays. Pelvic fin united forming a disc. Caudal fin oblong to rounded. Lateral line scales 28 to 36.

59. *Glossogobius giuris* (Hamilton-Buchanan)

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* : 936, Fig. 274.

Material examined : (i) 3 exs., 112-145 mm, Subarnarekha river at Mangoo, Jharkhand, coll. A.K.S. & party, 4.iii.1984. (ii) 3 exs. 88-117 mm, Subarnarekha river at Kedadi, 4 km upstream from Maubhandar, Jharkhand, coll. A.K.S. & party, 3.iii.1984. (iii) 2 exs., 70-78 mm, Subarnarekha river at Dahigura, Maubhandar, Jharkhand, coll. A.K.S. & party, 3.iii.1984. (iv) 1 ex., Upstream of Subarnarekha river, Moubhandar, Jharkhand, coll. A.K.S. & party, 16.x.1984. (v) 1 ex. 96 mm, Subarnarekha river, West Medinipore, W.B., coll. P.P.B & party, 2003. (vi) 1 ex., 90 mm, Singari Khal near Baldingri village, Dantan, W.B., coll. A.K.K. & party, 26.xii.2001. (vii) 11 exs., 40-95 mm, Bumni River, Chandil, Jharkhand, coll. A.K.K. & party, 24.xii.2001. (viii) 32 exs., 28-100 mm, Subarnarekha river near Chandil Dam, Jharkhand, coll. A.K.K. & Party, 23.xii.2001. (ix) 1 ex., 95 mm, Subarnarekha river near Kumarmangalam Bridge, Moubhandar, Jharkhand, coll. A.K.K. & party, 17.ii.2001. (x) 4 exs., 60-110 mm, Subarnarekha river at Gaaludih, Jharkhand, coll. A.K.K. & party 16.ii.2001. (xi) 4 exs., 42-55 mm, Subarnarekha river near Harat village, Jharkhand, coll. A.K.K. & party, 22.xii.2001.

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

Fishery Information : It attains a length of 30 cm and forms a minor fishery specially in the Hooghly Estuary, West Bengal.

Family ANABANTIDAE

Genus *Anabas* Cuvier & Cloquet, 1816

1816. *Anabas* Cuvier and Cloquet, *Dictionnaire des sciences naturelles* (ed 2), 2 Suppl. : 35

(Type species : *Perca scandens* Daldott = *Anabas testudineus* Blyth).

Body oblong and compressed. Head and anterior part of body broad, posterior portion compressed. Mouth small, terminal; upper jaw slightly protrusible. Dorsal inserted above pectoral fin base, with 16 to 18 spines and 8 to 10 soft rays. Anal with 8 to 10 spines and 9 to 11 soft rays. Caudal fin rounded. Lateral line interrupted with 21 to 29 ctenoid scales.

Key to the Species of Genus *Anabas*

- 1a. Depth of body 3.0 to 3.5 times and length of snout 13.0 to 17.5 times in standard length *A. testudineus*
- 2b. Depth of body 2.2 to 2.8 times and length of snout 10.5 to 12.5 times in standard length *A. cobojius*

60. *Anabas cobojius* (Hamilton-Buchanan)

1822. *Coius cobojius* Hamilton-Buchanan, *Fishes of Ganges* : 98, 370, pl. 13, fig. 33

(Type locality : Gangetic Provinces).

1991. *Anabas cobojius* : Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries* : 996.

Material examined : (i) 1 ex., 82 mm, Subarnarekha river, West Medinipore, coll. P.P.B & party, 2003.

Distribution : India : West Bengal, Orissa, Andhra Pradesh, Nagaland; Bangladesh and Borneo.

Fishery Information : It is a valuable food fish in West Bengal, Orissa and Andhra Pradesh; considered as an important diet for sick and convalescent. It contributes a minor fishery in Lake Kolleru, Andhra Pradesh.

Family BELONTIIDAE

Genus *Colisa* Cuvier, 1831

1831. *Colisa* Cuvier, *Hist. nat. Poiss.*, 7 : 359

(Type species : *Trichopodus colisa* Hamilton-Buchanan = *Trichogaster fasciatus* Schneider).

Body oblong and compressed. Mouth small, terminal, upwardly directed and protrusible. Ventral border of preopercle serrated. Dorsal fin long, with 15 to 18 spines and 6 to 14 soft rays. Anal fin with 15 to 22 spines and 11 to 20 soft rays. Pelvic fin in the form of a single elongated filiform ray. Caudal fin slightly emergent or truncate. Lateral line, when present, interrupted with 27 to 31 scales.

Key to the Species of Genus *Colisa*

- 1 Body with a single black longitudinal band from eye to lower half of tail.....
..... *C. sota*
- Body with many oblique bands from back to belly 2
2. Bands on body 8 to 10. Caudal fin wedge-shaped *C. labiosus*
- Bands on body 14 or more. Caudal fin cut square or slightly notched.....
..... *C. fasciatus*

61. *Colisa fasciatus* (Schneider)

1801. *Trichogaster fasciatus* Schneider, *Syst. Ichth.* 164, pl. 36

(Type locality : Tranquebar).

1991. *Colisa fasciatus* : Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries* : 1006.

Material examined : (i) 3 exs., 39-42 mm, Bonaikhal, coll. S.C. & party, 2000.

Distribution : India : Throughout; Pakistan, Nepal, Bangladesh and Upper Myanmar.

Fishery Information : It attains a length of about 12 cm and is traditionally liked in West Bengal for its good taste. It is also a beautiful aquarium fish and easily bred and adapts well to life in community aquarium.

Family CHANNIDAE

Genus *Channa* Scopoli, 1777

1777. *Channa* Scopoli, *Introd Hist. Nat.*, : 459

(Type species : *Channa orientalis* Bloch & Schneider).

Body elongate, almost cylindrical anteriorly and somewhat compressed posteriorly. Head large, with plate like scales. Cephalic pits present. Mouth fairly large, lower jaw protruding beyond upper jaw. Dorsal and anal fins long based, both spineless and free from caudal fin. Dorsal fin inserted almost above pectoral fin, with 29 to 55 rays. Anal fin with 21-36 rays. Caudal fin rounded.

Key to the Species of Genus *Channa*

- 1 4 to 5 scales between orbit and angle of preopercle 2
- 2a. Pelvic fin more than half length of pectoral fin. Pectoral fin plain *C. punctatus*
- 2b. Pelvic fin less than half length of pectoral fin. Pectoral fin spotted in zones, darker and lighter patches. Anal fin with 21 to 23 rays *C. orientalis*

62. *Channa orientalis* Bloch & Schneider

1801. *Channa orientalis* Bloch & Schneider, *Syst. Ichth.* : 496, pl. 90, fig. 2

(Type locality : India).

1991. *Channa orientalis* : Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries* : 1019, fig. 289.

Material examined : (i) 1 ex., 138 mm, Subarnarekha river near source of effluent discharge of Moubhandar Copper Factory, Jharkhand, coll. A.K.S. & party, 3.iii.1984. (ii) 1 ex. 83 mm, Subarnarekha river, downstream from Chandil Dam, Jharkhand, coll. A.K.K. & party, 23.xii.2001. (iii) 11 exs., 52-78 mm, Subarnarekha river at Mando, Jharkhand, coll. A.K.K. & party, 21.xii.2001. (iv) 6 exs., 23-120 mm, Subarnarekha river at Namkum, Jharkhand, coll. A.K.K. & party, 21.ii.2001.

Distribution : India : Throughout; Afghanistan; Iran; Pakistan; Nepal; Sri Lanka; Bangladesh; Myanmar and East Indies.

Fishery Information : It attains a length of about 20 cm and is of minor interest to fisheries in Indian region.

63. *Channa punctatus* (Bloch)

1793. *Ophicephalus punctatus* Bloch, *Naturges ausland Fische* (7) : 139, pl. 358

(Type locality : rivers and lakes of Coromandel coast).

1991. *Channa punctatus* : Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries* : 1020, fig. 290.

Material examined : (i) 2 exs., 55-60 mm, Subarnarekha river, West Medinipore, coll. P.P.B. & party, 2003. (ii) 2 exs. 78-87 mm, Subarnarekha river, downstream from Chandil

Dam, Jharkhand, coll. A.K.K. & party, 23.xii.2001. (iii) 3 exs., 48-60 mm, Subarnarekha river at Mando, Jharkhand, coll. A.K.K. & party, 21.xii.2001. (iv) 1 ex., 90 mm, Subarnarekha river at Namkum, Jharkhand, coll. A.K.K. & party, 21.ii.2001.

***Distribution* :** India : throughout; Afghanistan, PAKistan, Sri Lanka, Nepal, Bangladesh, Myanmar and China.

***Fishery Information* :** It attains a length of about 30 cm; very common throughout the plains of India and is of moderate interest to fisheries in Indian region (Can be cultured also in derelict water)

Order SYNBRANCHIFORMES

Family MASTACEMBELIDAE

Genus *Macrogathus* Lacepede, 1800

1800. *Macrogathus* Lacepede, *Hist, nat. Poiss*, 2 : 283

(*Type species* : *Ophidium aculeatum* Bloch).

Body elongate, eel-like, with slender neural and haemal spines. Preorbital and preopercular spines absent. Rim of anterior nostril with six slender, finger-like projections or fimbriae. Dorsal fin spines 13 to 32. Spiny dorsal fin originating posterior to 6th vertebra.

Key to the Species of Genus *Macrogathus*

- 1a. Rostrum with concave ventral surface lined with paired tooth plates. Pre-opercular spines absent. caudal fin with 15 rays *M. aral*
- 1b. Rostrum rounded in cross section, without tooth plates. Pre-opercular spines present. caudal fin with 11-13 rays *M. pancalus*

64. *Macrogathus aral* (Bloch & Schneider)

1801. *Rhynchobdella aral* Bloch & Schneider, *Syst. Ichth.* : 479, pl. 89

(*Type locality* : Tranquebar, Tamil Nadu).

1991. *Macrogathus aral* : Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries* : 1026.

1999. *Macrogathus aral* : Jayaram, *The Freshwater Fishes of the Indian Region* : 358.

***Material examined* :** (i) 1 ex., 135 mm, Subarnarekha river near Kumarmangalam Bridge, Maubhandar, Jharkhand, coll. A.K.K. & party, 17.ii.2001.

***Distribution* :** India : Pakistan; Sri Lanka; Bangladesh; Nepal and Myanmar.

Fishery Information : It attains a length of about 38 cm and is considered as a wholesome food-fish. This fish occurs in lowland habitats and at moderate elevations in all the river systems of Indian subcontinent.

65. *Macrogathus pancalus* Hamilton-Buchanan

1822. *Macrogathus pancalus*, *Fishes of Ganges*; 30, 364, pl. 22, fig.7

(Type locality : tanks of Gangetic provinces).

1991. *Macrogathus pancalus* : Talwar and Jhingran, *Inland Fishes of India and Adjacent Countries* : 1027, fig. 292.

1999. *Macrogathus pancalus* : Jayaram, *The Freshwater Fishes of the Indian Region* : 358.

Material examined : (i) 1 ex., 150 mm, Subarnarekha river at Ratmohana, 5 km from Moubhandar, Jharkhand, coll. A.K.K. & party, 16.ii.2001.

Distribution : India; Pakistan and Bangladesh.

Fishery Information : It attains a length of about 18 cm and is of little commercial importance. This fish has often been placed into aquaria and kept by hobbyists. It inhabits the floor.

Genus *Mastacembelus* Scopali, 1777

1777. *Mastacembelus Scopali*, *Introduction Histarium Naturalem* : 458

(Type species : *Ophidium mastacembelus* Solander).

Body elongate, eel-like, and compressed. Mouth inferior, cleft narrow. The long fleshy appendage of snout not transversely striated below. Pre-orbital spine present. Dorsal fin inserted above middle of pectoral fin, with 24 to 39 detached spines and 50 to 90 soft rays. Anal fin with 3 spines and 31 to 98 soft rays. Dorsal and anal fins may or may not be confluent with caudal fin, which is rounded. Lateral line present.

66. *Mastacembelus armatus* (Lacepede)

1800. *Macrogathus armatus* Lacepede, *Hist. nat. Poiss*, 2 : 286

(Type locality : Not known).

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

1999. *Mastacembelus armatus* : Jayaram, *The Freshwater Fishes of the Indian Region* : 359.

Material examined : (i) 3 exs., 190-235 mm, Subarnarekha river at Mango, Jharkhand, coll. A.K.S. & party, 4.iii.1984. (ii) 2 exs., 98-102 mm, Bumni river, Chandil Jharkhand, coll. A.K.K. & party, 24.xii.2001. (iii) 1 ex., 290 mm, Subarnarekha river at Ratmohana, Jharkhand, coll. A.K.K. & party, 16.ii.2001.

Distribution : India : Throughout; Pakistan; Sri Lanka; Nepal, Myanmar; through Thailand and Malaya, to Southern China.

Fishery Information : It attains a length of 65 cm and is the largest spiny eel. It is good food fish specially when freshly caught.

DISSCUSSION

The ichthyofaunal diversity of the Subarnarekha River System contains 66 species belonging to 43 genera, under 21 families and 7 orders. Apart from three new species described (Ganguly, Datta & Sen, 1972; Ganguly & Datta, 1973 & 1975), no earlier reports on the fishes of Subarnarekha river could be traced by the present authors.

Among the fishes recorded from Subarnarekha River the group Cypriniformes dominated with 31 species, accounting for 47%, followed by Siluriformes with 19 species having a share of 29%, Perciformes with 8 species having a share of 12%, Synbranchiformes with 3 species, Cyprinodontiformes with 2 species and Beloniformes with a single species respectively.

Further, in the order Cypriniformes, the family Cyprinidae dominated with 28 species; whereas the family Balitoridae is represented with only 3 species.

Along the upper stretch of the Subarnarekha river (mainly mountain streams) in the Ranchi District of Jharkhand State we have recorded 21 species of fish. Whereas in the middle stretch, mainly in the Singhbhum district of Jharkhand state with undulating plateau 44 species of fish were collected. In the lower stretch, where the river is almost in plains, in Medinipur district of West Bengal 33 species of fish were recorded, where as in Baleswar district of Orissa state, We could collect only 10 species.

The composition of fishes in the Subarnarekha Drainage system within the area limits of the states shows that Jharkhand state is dominated with 56 species (with 68.4% of basin area) followed by West Bengal with 33 species (with 16.1% of basin area) and Orissa with 10 species (with 15.5% of basin area). However, as the rivers are continuous fluvial systems, a distinct separation in the distribution of fish diversity exclusive to river stretches confined to the states' geographic limits, cannot be perceived.

CONSERVATION STATUS

1. Total No. of species of fishes – 66
2. Species assessed for Conservation Status – 44
(CAMP WORKSHOP REPORT 1998)
3. Critically Endangered – 1
4. Endangered – 4

CONSERVATION STATUS OF FISHES FROM SUBERNAREKHA RIVER

Name of the species	Critically Endangered	Endangered	Vulnerable	Lower risk near threatened	Lower risk Least concern
Family NOTOPTERIDAE					
<i>Notopterus notopterus</i> (Palles)				+	
Family ANGUILLIDAE					
<i>Anguilla bengalensis bengalensis</i> (Gray)		+			
Family CYPRINIDAE					
Sub-family DANIONINAE (=RASBORINAE)					
<i>Salmostoma bacaila</i> (Hamilton-Buchanan)					+
Sub-family RASBORINAE					
<i>Amblypharyngodon mola</i> (Hamilton-Buchanan)					+
<i>Aspidoparia morar</i> (Hamilton-Buchanan)				+	
<i>Barilius barila</i> (Hamilton-Buchanan)			+		
<i>Barilius barna</i> (Hamilton-Buchanan)				+	
<i>Barilius bendelisis</i> (Hamilton-Buchanan)				+	
<i>Esomus danricus</i> (Hamilton-Buchanan)					+
<i>Rasbora daniconius</i> (Hamilton-Buchanan)				+	
Sub-family CYPRININAE					
<i>Cirrhinus reba</i> (Hamilton-Buchanan)			+		
<i>Labeo angra</i> (Hamilton-Buchanan)				+	
<i>Labeo pangusia</i> (Hamilton-Buchanan)				+	
<i>Osteobrama cotio cotio</i> (Hamilton-Buchanan)				+	
<i>Puntius chola</i> (Hamilton-Buchanan)			+		
<i>Puntius conchonius</i> (Hamilton-Buchanan)			+		
<i>Puntius sarana sarana</i> (Hamilton-Buchanan)			+		
<i>Puntius sophore</i> (Hamilton-Buchanan)				+	
<i>Purtius ticto</i> (Hamilton-Buchanan)				+	
Sub-family GARRINAE					
<i>Garra gotyla gotyla</i> (Gray)			+		
Family BALITORIDAE					
Sub-family NOEMACHEILINAE					
<i>Acanthocobitis botia</i> (Hamilton-Buchanan)				+	

Name of the species	Critically Endangered	Endangered	Vulnerable	Lower risk near threatened	Lower risk Least concern
Family BAGRIDAE					
<i>Mystus bleekeri</i> (Day)			+		
<i>Mystus cavasius</i> (Hamilton-Buchanan)				+	
<i>Neotropius atherinoides</i> (Bloch)		+			
Family AMBLYCIPITIDAE					
				+	
<i>Amblyceps mangois</i> (Hamilton-Buchanan)					
Family SISORIDAE			+		
<i>Bagarius bagarius</i> (Hamilton-Buchanan)		+			
<i>Glyptothorax nelsoni</i> (Ganguly, Datta & Sen)		+			
<i>Glyptothorax saisii</i> (Jenkins)				+	
<i>Laguvia ribeiroi</i> (Hora)				+	
<i>Gogangra viridescens</i> (Ham-Buch)					
Family SCHILBEIDAE			+		
<i>Clupisoma garua</i> (Hamilton-Buchanan)					
Family PANGASIIDAE	+				
<i>Pangasius pangasius</i> (Hamilton-Buchanan)					
Family HETEROPNEUSTIDAE			+		
<i>Heteropneustes fossilis</i> (Bloch)					
Family CLARIIDAE			+		
<i>Clarius batrachus</i> (Linnaeus)					
Family BELONIDAE				+	
<i>Xenentodon cancila</i> (Hamilton-Buchanan)					
Family MUGILIDAE			+		
<i>Rhinomugil corsula</i> (Hamilton-Buchanan)					
Family GOBIIDAE				+	
<i>Glossogobius giuris</i> (Hamilton-Buchanan)					
Family ANABANTIDAE			+		
<i>Anabas cobojus</i> (Hamilton-Buchanan)					
Family BELONTIDAE				+	
<i>Colisa fasciatus</i> (Schneider)					
Family CHANNIDAE			+		
<i>Channa orientalis</i> Bloch & Schneider				+	
<i>Channa punctatus</i> (Bloch)					
Family MASTACEMBELIDAE				+	

M. pancalus (Hamilton-Buchanan)

5. Vulnerable – 14
6. Lower Risk Near Threatened – 20
7. Lower Risk Least Concern – 3
8. Data Deficient – 2

FISHES ENDEMIC TO INDIA (Karmakar and Das 2005)

1. *Chagunius chagunio* (Hamilton-Buchanan)
2. *Crossocheilus latius latius* (Hamilton-Buchanan)
3. *Garra mullya* (Sykes)
4. *Glyptothorax coheni* Ganguly, Datta & Sen
5. *Glyptothorax nelsoni* Datta & Sen
6. *Glyptothorax saisii* (Jenkins)

SUMMARY

In the present contribution, an attempt has been made to provide an upto date classification, nomenclature, details of material studied, size ranges, distributional record, fishery information along with diagnostic characters of each genus and also identification keys. In all 66 species belonging to 7 orders, 21 families and 43 Genera have been dealt with in detail and their conservation status has been discussed.

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