

Research Article

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Distribution and Conservation Status Of Ichthyo species in River Gomati in Tripura: Recent Detailed Taxonomic Report



Devashish Kar*

Micro-Centre for Water and Human Studies, Silchar, formerly Assam University, Department of Life Science, Silchar, Assam, India

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Corresponding author: Devashish KAR, Department of Life Science, Silchar, Assam, India

Abstract

Ichthyofaunal surveys in the river Gomati at different locations from the headwaters to the downstream region in the province of Tripura revealed the occurrence of 41 species of fishes under 40 genera, 9 Sub-families, 19 families and 7 Orders. These include 22 species under Cypriniformes, 6 species under Siluriformes, 1 species under Mugiliformes, and Beloniformes; and 7 species under Anabantiformes. Exploration depicted the highest number of species among the Cypriniformes and lowest among the Beloniformes, Mugiliformes and Synbranchiformes. Conservation status and Distribution of each species have been dealt with in the present paper.

Keywords: Fish Taxonomy; River Gomati; Tripura; North-East India Himalayan Biodiversity Hotspot; Conservation

Abbreviations: NE: North-East ; CUSAT: Cochin University of Science and Technology; FCRI: Fisheries College and Research Institute; TNFUE: Tamil Nadu Fisheries University; ENFOSE: Environmental Sustainability for Food Security; LC: Least Concern

Introduction

The aquatic biodiversity is subjected to much pressure due to human-induced impacts, including effects on fish and their habitats [1-5]. As such, studies regarding fish fauna is a dire necessity. Fish constitute almost half of the total vertebrate population on the earth. They live almost in all conceivable aquatic habitats. c 21,723 living species of fish have been explored and recorded out of a total of c 39,900 species of vertebrates in the globe [6-8]. Of these, c 8411 are freshwater species and c11,650 are marine [7]. India is one of the Mega biodiversity countries in the World [8]. In India, there have been reports of c 2500 species of fishes; of which, c 930 live in freshwater (FW) and c 1570 are marine [9-15]. This bewildering ichthyo diversity of this region has been attracting many ichthyologists both from India and abroad. Concomitantly, NE region of India has been identified as a 'Hotspot' of Biodiversity in the Eastern Himalayan stretch by the World Conservation Monitoring Centre [16]. This bewildering diversity of this region could be assigned to certain causes, notably, the geomorphology and the tectonics of this zone. The hills and the undulating terrains of this region give rise to numerous torrential rheophilic streams, which lead to big rivers;

and, finally, become part and parcel of the Ganga-Brahmaputra-Barak-Chindwin-Kolodyne-Gomati-Meghna system [17-25].

There are innumerable stagnant (lentic) and flowing (lotic) water bodies in India. And, the State of Tripura, located in the North-Eastern Himalayan zone, is a hotspot of diversity contained in many wetlands and rivers of various kinds including rheophilic hill streams and plain water rivers and streams. However, the life of the aquatic denizens has been influenced by human interventions. A little perusal of review of literature on Fish systematics works revealed that, [26] had worked on an appraisal of Sapura Hypothesis of Distribution of the Malayan Fauna and Flora to Peninsular India.

Notwithstanding the above [27-46] have been carrying out a big number of studies in North-East (NE) India on different parameters of fish and their habitats. Further [47] had done a very detailed study on fish' biodiversity in North-East India with particular reference to Barak drainage, Mizoram, and Tripura. Of late, [48-59] did extensive works on the fish systematic and diversity and other related parameters in large number of water bodies in NE India.

Concomitant to above, some of the other significant works on the fishes and water bodies in India in general and NE India, in particular; are those of [60-71] worked on the Golden Mahseer in Barak drainage in North-East India. Incidentally, [72] worked on the water bodies in Romania.

Notwithstanding the above, [73] reported the Fish Fauna of Barak Drainage in Assam, of Mizoram and of Tripura with a note on their Conservation. Further, [74]. made a detailed study of the Wetlands, Rivers, Fish diversity, Fish disease and Aquaculture in North-East India. Further worked on the Fish Biodiversity and Habitat Parameters of rivers in Barak drainage (Assam), in Mizoram and in Tripura. Further, Kar, D. presented his findings on the Fish Diversity in the Major Rivers in Southern Assam, Mizoram and Tripura at the 2nd International Symposium on GIS and Spatial Analyses in Fisheries and Aquatic Sciences, from 2-6 Sep 2002, held at the University of Sussex at Brighton in the UK. In addition, Kar, D. deliberated upon the Sustainability issues of Inland Fish Biodiversity and Fisheries in Barak drainage (Assam), in Mizoram and Tripura at the International Symposium on 'Improved sustainability of Fish Production Systems and Appropriate Technologies for Utilization' ('Sustain Fish'), held at the Cochin University of Science and Technology(CUSAT) at Cochin from 16-18 March, 2005 [75-81].

Further, Kar D reported his further works on the Fish diversity, fish habitats, fish disease and aquaculture in North-East India Hotspot as a synopsis. Further, Kar D deliberated upon an overview of the Wetlands, Rivers, Fish Resources and Fish Disease in North-East India at the International Symposium on Aquaculture and Fisheries (as part of the International Conference on Environmental Sustainability for Food Security (ENFOSE, 2016), held at Fisheries College and Research Institute (FCRI), Tamil Nadu Fisheries University (TNFU) [81-93]. In addition, Kar, D deliberated upon the Wetlands, Rivers, Fish, Plankton resources and Fish disease and Aquaculture in North-East India as an Overview at the International Symposium, entitled, 'Lake 2016' organized by the Indian Institute of Science, Bengaluru, and the Alva's Education Foundation, Bangalore (India). Notably, all his deliberations, as mentioned above, had a component on the Fish and fisheries of Tripura. Very recently, Kar, D. published a Research Article on the Distribution and Conservation Status of Ichthyo species of River Monu in Tripura as a pioneering work containing detailed Taxonomic Report on the fishes of the River Monu [94].

In addition to above, Kar, D. and Das, B.K. reported on the Sustainability of Freshwater Fishes in North-East India which contained information on the fishes of Tripura. Barbhuiya et.al preliminarily reported on the Fish Biodiversity in certain rivers of Tripura. Further, Kar, D and Barbhuiya, A.H. reported on the Mahseer Fishes of Barak Drainage, Mizoram and Tripura at the National Symposium on Coldwater Fisheries Management: New Strategies and Approaches during 2-4 Oct 09 being organized by the Directorate of Coldwater Fisheries Research (ICAR), Bhimtal,

Uttarakhand, India [95].

Not with stand the above, of late, many works on different aspects of the fishes of North-East (NE) India in general and in Tripura in particular have been done. For instance, Length-Weight Relationship and Condition Factor in *Channa punctata* of River Manu in Tripura done by Das, S. et.al., Diel and seasonal variation of zooplankton from the freshwater pond of North Tripura District, India done by Das Uma and Kar Devashish ; A preliminary study on Fish Diversity of Karki and Deo rivers around Dharma Nagar in Tripura done by Nath, M. et.al. ; Limnological Studies of some of the Wetlands of Assam, Mizoram, Tripura and Arunachal Pradesh related to their status of Eutrophication done by Kar, D.; et.al. [97-100].

Species composition and distribution of Riverine fishes of Mizoram and Tripura with emphasis on Habitat parameters and Health of Fishes done by Kar, D ; On a collection of Fishes from River Gomati and River Howrah in Tripura done by Kar, D ; Species composition and distribution of Fishes in the rivers in Barak valley region of Assam and the Principal rivers in Mizoram and in Tripura in relation to their Habitat parameters done by Kar, D ; Further Studies on the Ichthyo species composition and Distribution of Freshwater fishes in Barak drainage, and in principal rivers in Mizoram and in Tripura with a note on their Feeding and Breeding biology done by Kar, D ; Fish Genetic Resources and Habitat Diversity of the Barak Drainage, Mizoram and Tripura with a note on Conservation of Endangered Species. by Kar, D at the International Symposium, 'Lake 2002', Indian Institute of Science, Bangalore; Ichthyo resources of Tripura: Assessment, Management and Conservation done by Kar, D. A Glimpse into the Fish Bioresources of North-East India with a note on their management, Conservation and Biotechnological potential by Kar, D. [101-109].

A critical Overview of the Water Bodies in Barak valley region of Assam, in Mizoram and in Tripura with a note on the present status of Fish Biodiversity and their Conservation. by Kar, D. Wetlands, Rivers and Fish Diversity in North-East India by Kar, D. et.al. Fish Diversity and Habitat parameters of rivers in North-East India by Kar, D., et.al. Wetland panorama of North-East India by Kar, D., et.al.; Fish Diversity and Habitat parameters of rivers in North-East India by Kar et.al. Fishes and water bodies of North-East India: their Conservation by Kar et.al. Hill stream Fishes of North-East India by Kar, D. and Barbhuiya, A.H. Status and Conservation of Freshwater Fishes of India by Kar, D., and Barbhuiya, A.H Present status of Fish Diversity and water bodies in North-east India with a note on their Conservation by Kar D [110-124].

Fish diversity, fish habitats, fish disease and aquaculture in North-East India Hotspot: A synopsis by Kar, D Wetlands, Rivers and Fishes of North-East India with a note on the Health of Fishes by Kar D An account of Ichthyo species of North-East India with a note on their conservation by Kar, D. Fish Genetic Resources and

Habitat Diversity of the Barak Drainage, Mizoram and Tripura with a note on Conservation of Endangered Species by Kar, D Fish Biodiversity of North-East India by Kar, D Present status of Fish Diversity and water bodies in North-East India with a note on their Conservation by Kar, D Wetlands, Rivers and Fishes of North-East India with a note on the Health of Fishes by Kar, D [124].

Notwithstanding the above, Bailey, R.G. had worked on the fishes of River Nile in the Republic of Congo. Further, Bailey had also worked on the changes in the Fish and Fisheries Ecology of a large man-made lake in Tanzania. Bailey and Hickley had reported on a recent collection of *Nothobranchius virgatus* Chambers, a new killifish from southern Sudan. Didem et.al had published a New Record of occurrence of *Symphodus bailloni* (Osteichthyes: Perciformes: Labridae) in the Western Black Sea Coast of Turkey. Further, Kullander, Sven O and Ralf Britz had published record of a new species of cyprinid fish from Myanmar. In addition, Kevin W. Conway and Maurice Kottelat had reported a new species of *Psilorhynchus* from the Ataran River Basin in Myanmar, with comments on the generic name *Psilorhynchoides*. Moreover, Wikramanayake, and Moyle had worked on the ecological structure of Tropical Fish Assemblages in wet-zone streams of Sri

Lanka.

The River Gomati originates from the Mandir hat range of South Tripura hills as two streams, viz., Raima and Saima, which unite within a short distance to form the River Gomati at Lat-Long Co-ordinates of 23° 30' 59.4" N and 91° 39' 48.2" E, Altitude 88.5 m MSL (as GPS data recorded by the Author on the spot during the field study) vice Lat-Long Coordinates data obtained from Internet 23° 25' 31.1779" N and 91° 49' 31.77". Having upstream rheophilic characteristics of microhabitat (mainly riffle-pool with occasional cascade) and substratum (mostly cobbles and gravels with occasional boulders and bedrocks), the River Gomati flows downstream through Jatanbari (Nutanbazar) (N 23° 25' 42.8" - E 91° 45' 29.8" , 16.15 m MSL); Amarpur (N 23° 31' 47" - E 91° 39' 49.7" , 12.5 m MSL); Udaipur (N 23° 32' 15.8" - E 91° 28' 44" , 14.45 m MSL); and enters Bangladesh at a Lat-Long point of 23° 27' 40.1864" N and 91° 15' 26.4305" E. Finally, in Bangladesh, the Gomati joins a Meghna River branch at Lat-Long point of 23° 32' 41.6872" N, 90° 42' 34.7562" E. The River Gomati is one of the principal rivers in Tripura. Fishes were collected from River Gomati from the following sites (Table 1)

Table 1: Fish specimen collection sites in River Gomati in Tripura.

Site River Gomati at :	Date of Collection	Lat-Long position	Altitude (m MSL)
i)Town: Udaipur	9.iv.1999, 15.xi.2000, 10.ii.2001, 30.viii.2001, 29.x.2001	N 23° 32' 15.8" - E 91° 28' 44"	14.45 53 439
(ii)Town: Amarpur	4.vi.2001, 28.x.2001	N 23° 31' 47" - E 91° 39' 49.7"	12.5
(iii)Village: Jatanbari (Nutanbazar)	6.vi.2001, 5.ii.2003	N 23° 25' 42.8" - E 91° 45' 29.8"	16.15
(iv)Village: Tirthamukh (Mandirghat)	5.vi.2001	N 23° 30' 59.4" - E 91° 39' 48.2"	88.5

River Gomati in Tripura

a) Town: Udaipur: N 23° 32' 15.8" - E 91° 28' 44" ; 14.45 53 439 m MSL; 9.iv.1999, 15.xi.2000, 10.ii.2001, 30.viii.2001, 29.x.2001

b) Town: Amarpur : N 23° 31' 47" - E 91° 39' 49.7"; 12.5 m MSL; 4.vi.2001, 28.x.2001

c) Village: Jatanbari (Nutanbazar): N 23° 25' 42.8" - E 91° 45' 29.8"; 16.15 m MSL; 6.vi.2001, 5.ii.2003

Material and Methods

Fish samples were collected by experimental fishing using cast nets (diameter 3.7 m – 1.0 m), gill nets (vertical height 1.0 m – 1.5 m; length 100 m – 150 m), drag nets (vertical height 2.0 m), triangular scoop nets (vertical height 1.0 m) and a variety of traps. Camouflaging technique had also been used to catch the fish. Fish

were preserved, at the beginning, in concentrated formaldehyde in the field itself and then in 10% formalin in the Laboratory. Fishes were identified through standard literature, Shaw and Shebbare; Misra; Menon, Talwar and Jhingran, Jayaram, and fishbase.org. The arrangement of classification, followed here, is that of Greenwood et al. and Jayaram; Kar and Khyntiam.

Systematic List of Fishes

Order (I): Osteoglossiformes

Family (A): Notopteridae

Genus (i): *Notopterus* Lacepede 1800

Species (1): *Notopterus notopterus*

Bronze featherback

Order (II): Cypriniformes

- Family (B): Danionidae
 Sub-family(a): Chedrinae
 Genus (ii): *Salmostoma* Swainson 1839
 Species (2): *Salmostoma bacaila* (Hamilton)
 Genus: (iii) *Cabdio* Hamilton 1822
 Species (3): *Cabdio morar* (Hamilton)
 Genus (iv): *Barilius* Hamilton
 Species (4): *Barilius barila* (Hamilton)
 Genus (v): *Opsarius* McClelland, 1838
 Species (5): *Opsarius bendelisis* (Hamilton)
 Genus(v): *Opsarius* McClelland, 1838
 Species (6): *Opsarius tileo* (Hamilton)
 Sub-family (b): Danioninae
 Genus (vi): *Laubuka* Bleeker, 1859
 Species (7) *Laubuka laubuca* (Hamilton)
 Sub-family (b): Danioninae
 Genus (vii) *Danio* Hamilton
 Species (8): *Danio dangila* (Hamilton)
 Sub-family (b): Danioninae
 Genus (viii): *Devario* Heckel, 1843
 Species (9): *Devario aequipinnatus* (McClelland, 1839)
 Sub-family (c): Esominae
 Genus (ix): *Esomus* Swainson, 1839
 Species (10): *Esomus danrica* (Hamilton)
 Sub-family(d): Rasborinae
 Genus (x): *Amblypharyngodon* Bleeker, 1860
 Species (11) *Amblypharyngodon mola* (Hamilton)
 Sub-family(d): Rasborinae
 Genus (xi): *Rasbora* Bleeker, 1860
 Species (12): *Rasbora daniconius* (Hamilton)
 Family(C): Cyprinidae
 Sub-family (e): Torinae
 Genus (xii): *Neolissochilus* Rainboth, 1985
 Species (13): *Neolissochilus hexagonolepis* (McClelland)
 Sub-family (f): Smiliogastrinae
 Genus (xiii): *Chagunius* H.M. Smith, 1938
 Species (14): *Chagunius chagunio* (Hamilton)
 Sub-family (f): Smiliogastrinae
 Genus: (xiv): *Puntius* Hamilton
 Species (15): *Puntius sophore* (Hamilton)
 Sub-family (f): Smiliogastrinae
 Genus: (xv) *Puntius* Hamilton
 Species (16): *Puntius chola* (Hamilton)
 Sub-family (f): Smiliogastrinae
 Genus: (xvi) *Pethia* Pethiyagoda, 2012
 Species (17): *Pethia conchonius* (Hamilton)
 Sub-family(g): Labeoninae
 Genus: (xvii) *Labeo* Cuvier, 1816
 Species (18) *Labeo rohita* (Hamilton)
 Sub-family (g): Labeoninae
 Genus (xviii) *Tariqilabeo* Kuhl van Hasselt, 1823
 Species (19): *Tariqilabeo latius* (Hamilton)
 Sub-family(g): Labeoninae
 Genus (xix): *Garra* Hamilton
 Species (20): *Garra annandalei* Hora, 1921
 Family(D): Psilorhynchidae
 Genus (xx): *Psilorhynchus* McClelland
 Species (21): *Psilorhynchus balitora* (Hamilton)
 Family (E): Balitoridae
 Genus (xxi): *Balitora* Gray, 1830
 Species (22): *Balitora Brucei* Gray, 1830
 Family(F): Nemacheilidae
 Genus (xxii): *Paracanthocobitis* Peters, 1861
 Species (23): *Paracanthocobitis botia* (Hamilton)
 Family (F): Nemacheilidae
 Genus (xxiii): *Schistura* McClelland, 1839
 Species(24): *Schistura multifasciata* (Day, 1878)
 Order (III): Siluriformes
 Family (G): Bagridae
 Genus (xxiv): *Sperata* Holly, 1939
 Species (25): *Sperata seenghala* (Sykes)
 Family (G): Bagridae

Genus(xxv): *Mystus* Scopoli, 1777,
 Species (26): *Mystus vittatus* (Bloch)
 Family (H): Siluridae
 Genus (xxvi): *Wallago* Bleeker, 1851
 Species (27): *Wallago attu* (Bloch and Schneider)
 Family (I): Schilbeidae
 Genus (xxvii): *Clupisoma* Swainson, 1938
 Species (28): *Clupisoma garua* (Hamilton)
 Family (I): Schilbeidae
 Genus (xxviii): *Eutropiichthys* Bleeker, 1862
 Species (29): *Eutropiichthys vacha* (Hamilton)
 Family (J): Sisoridae
 Sub-family (h): Sisorinae
 Genus (xxix): *Gagata* Bleeker, 1856
 Species (30): *Gagata cenia* (Hamilton)
 Order (IV): Mugiliformes
 Family (K): Mugilidae
 Genus(xxx) : *Rhinomugil* Gill, 1863
 Species(31): *Rhinomugil corsula* (Hamilton)
 Order (V): Beloniformes
 Family (L): Belonidae
 Genus (xxxi): *Xenentodon* Regan, 1911
 Species (32): *Xenentodon cancila* (Hamilton)
 Order (VI): Synbranchiformes
 Family(M): Mastacembelidae
 Genus (xxxii): *Macrognathus* Lacepede, 1800
 Species (33): *Macrognathus pancalus* Hamilton
 Genus(xxxiii): *Mastacembelus* Scopoli, 1777
 Species (34): *Mastacembelus armatus* (Lacepède)
 Order (VII): Anabantiformes
 Family (N): Ambassidae
 Genus (xxxiv): *Chanda* Hamilton
 Species (35): *Chanda nama* Hamilton
 Genus(xxxv): *Parambassis* Bleeker, 1874
 Species (36): *Parambassis ranga* (Hamilton)
 Family(O): Sciaenidae

Genus (xxxvi): *Johnius* Bloch, 1739
 Species (37): *Johnius coitor* (Hamilton)
 Family(P): Gobiidae
 Sub-family (i): Gobiinae
 Genus (xxxvii): *Glossogobius* Gill, 1859
 Species (38): *Glossogobius giuris* (Hamilton)
 Family (Q): Anabantidae
 Genus (xxxviii): *Anabas* Cuvier, 1816
 Species (39): *Anabas testudineus* (Bloch)
 Family (R): Osphronemidae
 Sub-family (j): Trichogastrinae
 Genus(xxxix): *Trichogaster* Bloch and Schneider
 Species (40): *Trichogaster fascinate* Bloch & Schneider
 Family (S): Channidae
 Genus (xxxx): *Channa* Scopoli, 1777
 Species(41) : *Channa punctata* (Bloch)
 Systematic account of the Fishes
 Genus: *Notopterus* Lacepede (1800)

Notopterus Lacepede (1800) Hist.nat. Poiss., 2 :190 (Type species: *Gymnotus notopterus* Pallas, by absolute tautonomy); Roberts, 1992, Ichthyol.Explor. Freshwaters, 2 (4):361-383 (revisioin); Talwar and Jhingran, 1991, Inland Fishes 1 : 62; Jayaram, 1999, FW Fishes of the Indian Region : 20; Menon, 1999, Rec. Zool. Surv. India Occ Paper No. 175: 9.

Generic Characters

Body oblong laterally compressed; cranio-dorsal profile straight or slightly concave. Abdomen with 25-28 pre-pelvic double serrations. Head compressed. Mouth wide, cleft of mouth extending up to or beyond posterior border of eyes. Eyes moderate, dorso-lateral. Gill membranes partly united. Dorsal fin small, tuft-like, inserted near middle of body with 8-10 rays. Anal fin very long, low, ribbon-like, with 100-135 rays; confluent with the caudal fin. Pelvic fins rudimentary. Caudal fin small. Scales small. Lateral line complete, more or less arched with about 180 scales.

Material Examined

River Gomati in Tripura; Coll.: 5 2 2003;1 ex; Museum No. 30,30(a)(76); Coll. Prof. D. Kar and Party:

1.1.1. **Key to Species:** Cranio-dorsal profile straight of slightly concave. *Notopterus notopterus* (Bloch & Schneider, 1801)

1.1.2. **Distribution:** Almost throughout India, Bangladesh, Indonesia, Java, Laos, Malaysia, Myanmar, Nepal, Pakistan,

Sumatra and Thailand.

IUCN Status: Least Concern (LC).

Genus: *Salmophasia* Swainson, Nat. Hist.Fish., 2: 184 (Type species, *Cyprinus oblonga* Swainson=*Cyprinus bacaila* Hamilton-Buchanan, by subsequent designation); Banarescu, 1968, Rev. Roum.Biol. Zool., 13: 13-14; Howes, 1979, Bull.Br.Mus. nat.Hist., (Zool.) 36(3):190-191; Talwar and Jhingran, 1999, Inland Fishes 1; Jayaram, 1999, FW Fishes of the Indian Region: 65; Menon, 1999, Rec.Zool. Surv. India Occ. Paper No. 175: 24; Vishwanath, 2002, Fishes of North-East India, NATP Pub: 51.

Generic Characters: Body elongated, compressed. Abdomen keeled from below pectoral fins to anus; keel not hardened. Head moderate to long, compressed. Snout blunt. Mouth oblique to body axis; cleft reaching anterior margin of orbit or slightly ahead. Lower jaw longer with a knob (generally present) at the symphysis of the 2 bones. Dorsal fin short; inserted mostly opposite to anal fin (or may be little ahead in some cases) with usually 7 to 10 rays. Pectoral fins long and presence of an elongated axillary scale. Anal fin short with 14-20 rays. Caudal fin deeply forked. LI complete with usually 39 to 112 scales.

Material Examined (a) River Gomati in Tripura; Collection, 4 – 6- 2001 (Lot B); 9 Ex.; Museum No. 32/1, 32/2, 32/52, 32/70, 32/80, 32/108, 32/110, 32/114, 32/116; Coll. Professor D. Kar and Party. (b) River Gomati in Tripura; Collection, 4 – 6- 2001 (Lot C); 6 Ex.; Museum No. 33/63, 33/64, 33 /65, 33 /66, 33/ 67, 33/ 68; Coll. Professor D. Kar and Party.

Key to Species: Presence of 4-6 LI scales between LI and pelvic fin base

Salmostoma Bacala (Hamilton)

Distribution: Almost throughout India, including River Barak at Lakhimpur, Assam (First Report by Professor D. Kar and Party), also, in River Gomati in Tripura (First Report by Professor D.Kar and Party); further, also, in Bangladesh, Nepal, etc.

IUCN Status: Least Concern (LC).

Genus: *Cabdio* Hamilton, an account of fishes found in the river Ganges: 333, 392.

Generic Characters: Body elongate. Abdomen rounded. The head is moderately rounded anteriorly. Snout obtuse. Mouth small, inferior. Eyes lateral. Lips thin. Lower jaw without any lip and with a sharp crescent bony edge. Barbel absent. The Dorsal fin inserted behind pelvic fins. Caudal fin forked. Lateral line much decurved. Scales of moderate size; eye, 17.2 to 25.3 % HL.

Material Examined: (1) River Gomati in Tripura; Collection, 4-6 2001 (Lot A); 3 Exs.; Museum No.31/36,31/37, 31/38; Coll. Professor D. Kar and Party; First Report. (2) River Gomati in Tripura; Collection, 4-6 2001 (Lot B); 6; Exs.; Museum Nos. 32/58, 32/59, 32/66, 32/76, 32/77, 32/92; Coll. Professor D. Kar and Party.

Key to Species: Lateral line scales 38 to 42. Anal fin with 10 to 12 rays. 2.5 to 3 rows of scales between lateral line and pelvic fin base.

Cabdio Morar (Hamilton)

Distribution: Throughout Northern India, including river Barak at Lakhimpur and at Khangbor (First reports by Prof. D Kar and Party); also in Bangladesh, Nepal, Pakistan, etc.

IUCN Status: Least Concern (LC)

Genus *Barilius* Hamilton: *Barilius* Hamilton, Fish Ganges, 266, 384 (Type species: *Cyprinus barila* Hamilton).

Generic Characters: Body moderately elongate and compressed. Abdomen rounded. Head sharply pointed; might have “peral organs” and tubercles. Mouth anterior or obliquely directed upwards. Eyes large and superior in the anterior half of the head, not visible from below the ventral surface. Upper jaw longer than lower. Characteristic muscular pads present in front of the bases of the pectoral fins. The Dorsal fin inserted opposite the inter-space between pelvic and anal fins, nearer to caudal-fin base than to the tip of the snout. Caudal fin forked. Scales moderate. Lateral line concave. The body usually covered with vertical bands.

Material Examined: (1) River Gomati in Tripura; Collection, 4 June 2001(Lot A); 1 Ex.; (Museum No. 31/27; Coll. Professor D. Kar and Party. (2) River Gomati in Tripura; Collection, 4 June 2001(Lot B); 3 Exs.; (Museum Nos. 32/47, 32/48, 32/49; Coll. Professor D. Kar and Party.

Key to Species: Body with 14 or 15 short vertical bars extending from back to lateral line.

Barilius Barila (Hamilton)

Distribution: Throughout North East India, including River Barak at Thingkal, NE India (first report by Prof. D. Kar and Party); also in Bihar, Delhi, Jammu and Kashmir, Madhya Pradesh, Mysore, Orissa, Rajasthan, Uttar Pradesh, West Bengal. Bangladesh, Myanmar and Nepal.

IUCN Status: Least Concern (LC).

Genus: *Opsarius* McClelland, Journal of the Asiatic Society of Bengal 7: 944.

Generic Characters: Body long, mouth widely cleft and horizontal with symphyseal knob received into a corresponding depression in the apex of the upper jaw. Back straight, dorsal fin placed opposite to anal fin, both fins situated near the caudal extremity.

Material Examined: (1) River Gomati in Tripura; Collection, 4 June 2001 (Lot B); 4 Exs.; Museum Nos. 32/21, 32/26, 32/89, 32/118; ; Coll. Professor D. Kar and Party.

Key to Species: Anal fin short with 7-8 branched rays. Each scale usually with a black spot.

Opsarius Bendelisis (Hamilton, 1807)

Distribution: Throughout India, including river Barak at Karong, Tamenglong, Vangai, Thingmun- Patpuihmun, Thingkal, Liben (Joining Barak) in North-East India, (first reports by Professor D. Kar and Party); also in Bangladesh, Bhutan, Myanmar, Nepal, Pakistan, Sri Lanka, and Thailand.

IUCN Status: Least Concern (LC).

Material Examined: Gomati in Tripura; Collection, Collection: 4 June 2001(Lot A); 5 Exs.; (Museum Nos. 46/4(i), 46/4(ii), 46/4(iii), 46/4(iv); Coll. Professor D. Kar and Party .

Key to Species: Presence of blotches and marks in a haphazard manner on the body.

Opsarius Tileo (Hamilton)

Distribution: In many rivers in NE and rest of India, particularly, in the upper gradient zones (including River Gomati in Tripura); also, in Bangladesh, Nepal, Myanmar, etc.

IUCN Status: Least Concern (LC)

Genus: Laubuka Bleeker, 1859

Laubuka Bleeker, 1859, Ichth. Archipel .Indici. Prodr. 2: 438, Cyprini (Type- species, *Perilampus guttatus* McClelland = *Cyprinus* (Chela) *laubuca* (Hamilton), by subsequent monotypy.

Generic Characters: Body long, compressed. Abdomen keeled from below pelvic origin to anus. Head short, compressed. Snout blunt, mouth oblique, cleft reaching below front margin of eye. Dorsal fin inserted slightly behind anal fin origin with generally 9 to 13 rays. Pelvic fins inserted nearer to pectoral fins rather than to anal; outer pelvic ray elongated. Pectoral fins stout and elongate; considerably longer than head. Anal fin generally with 13 to 26 rays. Caudal lobes equal. Ll generally with 34 to 68 scales.

Material Examined: River Gomati in Tripura; Collection, 4 6 2001 (Lot B); 1 Ex.; Museum No. 32/100; Coll. Professor D. Kar and Party.

Key to Species: Ll scales 34 to 37. Body depth 22.3 to 28.6 % TL.

Laubuka Laubuca (Hamilton)

Distribution: Almost throughout India including Shiv Narayanpur Anua at Katigorah in Cachar, Assam; River Barak at Lakhipur (in all these collections: First Reports by Prof. D.Kar and Party); also in Bangladesh, Myanmar, Nepal, Pakistan, Sri Lanka, etc.

IUCN Status: Least Concern (LC).

Genus: Danio Hamilton

Generic Characters: Body elongate, compressed, abdomen rounded, head moderate, blunt, snout obtuse, mouth anterior;

cleft of mouth shallow and protractile, directed obliquely upwards. The end of lower jaw in line with dorsal profile and with a symphyseal knob. Eyes large, centrally placed, not visible from below ventral surface. Lower jaw prominent with a knob at the symphysis. One or two pairs of barbells, rudimentary or none. The Dorsal fin inserted opposite inter-space between anal and pelvic fins, nearer to caudal fin base than to tip of snout, with 10 or 19 rays. Anal fin with nine to 14 rays. Caudal fin emarginated, lunate or forked. Scales moderate. Lateral line concave, complete with 32 to 42 scales. A stripe on the anal fin rays. An anterior lateral extension ventral on the dentary. Two or more pigmented stripes on the caudal fin rays.

Material Examined: River Gomati in Tripura; Collection, 4 June 2001 (Lot B); 1 Ex.; Museum No. 32/98; Coll. Professor D. Kar and Party.

Key to Species: Anterior rim of orbit without spine. Body with dark lateral bands breaking up into network anteriorly.

Danio Dangila (Hamilton)

Distribution: In different parts of India, including Rupairbala Anua in Cachar, Assam (first reports by Professor D. Kar and Party); also in Bihar, Eastern Himalayas, Madhya Pradesh, Uttar Pradesh, West Bengal in India, Bangladesh, Bhutan, Myanmar, Nepal.

IUCN Status: Least Concern (LC).

Genus: *Devario* Heckel, Ichthyologie (von Syrien) in von Russesa, Ereisen in Europa, Asia and Africa 1 (2): 1015 (Type species: *Cyprinus devario* Hamilton monotypy).

Generic Characters: Mainly differentiated from *Danio* by a short and wide pre-maxillary ascending process, a short maxillary barbel, a "P stripe" extending to median caudal-fin rays. Infraorbital five or not or slightly reduced.

Material Examined: River Gomati in Tripura; Collection, June 2001; 14 Exs.; Museum Nos Museum No.46/2(i), 46/2(ii), 46/2(iii), 46/2(iv), 46/2(v), 46/2(vi), 46/2(vii), 46/2(viii), 46/2(ix), 46/2(x), 46/2(xi), 46/2(xii), 46/2(xiii), 46/2(xiv); Coll. Professor D. Kar and Party.

Key to Species: Lateral line scales, 31-34; dorsal fin with 8-11 branched rays. A lateral band along the sides of the body with thinner golden bands above and below it.

Devario Aequipinnatus (McClelland, 1839)

Distribution: Almost throughout India, including Anuas in Barak valley; River Gomati in Tripura (All these collections, First report by Professor D. Kar and Party); also in Bangladesh, Bhutan, Indo-China, Myanmar, Nepal, Pakistan, Sri Lanka, Thailand, etc.

IUCN Status: Least Concern (LC).

Genus: *Esomus* Swainson, Nat.Hist. Fishes, 2: 285 (Type species: *Esomus vittatus* Swainson= *Cyprinus danrica* Hamilton-

Buchanan by monotypy); Ahl, 1923, Mitt.Zool. Mus.Berlin, 11: 38-43 (revision); Talwar and Jhingran, 1999, Inland Fishes I : 373; Jayaram, 1999, FW Fishes of the Indian Region : 76; Menon, 1999, Rec. Zool. Surv. India Occ. Paper No.175; Viswanath, 2002, Fishes of North-East India, NATP Pub: 48.

Generic Characters: Body elongated, strongly compressed, Abdomen rounded. Head and snout small, obliquely directed upwards. Presence of two pairs of barbels. Maxillary pair very long extending upto anal fin. The Dorsal fin inserted in the interspace between anal and pelvic fins, nearer to anal fin than pelvic with 6 branched rays and no spine. Anal fin with five branched rays. Caudal fin forked. The lateral line, when present, is strongly arched anteriorly and runs in the lower half of caudal peduncle with 27 to 34 scales.

Material Examined: (a) River Gomati in Tripura; Collection, 4 6 2001 (Lot A); 3 Exs; Museum No. 31/29, 31/30, 31/31; Coll. Professor D. Kar and Party. (b) River Gomati in Tripura; Collection, 4 6 2001 (Lot B); 1 Ex; Museum No. 32/50; Coll. Professor D. Kar and Party

Key to Species: Absence of pre-caudal spot. Presence of broad lateral bands on sides. Presence of 14 scales around caudal peduncle.

Esomus Danrica (Hamilton)

Distribution: Almost throughout India (including Karbhala Beel, Cachar; Assam; River Gomati in Tripura : in many of these collections: First report by Professor D. Kar and Party); also in Afghanistan, Bangladesh, Myanmar, Nepal, Pakistan, and Sri Lanka, etc.

IUCN Status: Least Concern (LC).

Genus: Amblypharyngodon Bleeker, [Natuurkundig Tijdschrift voor Nederlandsch Indië v. 20 (no. 3): 433] Masc. Cyprinus mola Hamilton 1822. Type by being a replacement name.

Generic Characters: Body moderately long, sub-cylindrical. Abdomen round. Head much compressed. Snout obtusely rounded. Mouth wide, antero-lateral and not protractile. Eyes centrally placed and large; they are not visible from below the ventral surface. Upper lip absent. Lower lip with a short labial fold. Lower jaw prominent with a thin sharp edge and a symphyseal knob which fits into the upper jaw. Barbells absent. A Dorsal fin inserted little behind insertion of pelvic fins. Anal fin short. Caudal fin forked. Scales minute.

Material Examined: River Gomati in Tripura; Collection, 4 6 2001 (Lot B); 1 Ex.; Museum No. 32/71; Coll. Professor D. Kar and Party .

Key to Species: Lateral line incomplete with 65-91 scales. A silvery lateral band with dark markings on dorsal, anal and caudal fins present.

Amblypharyngodon Mola (Hamilton)

Distribution: In many water bodies almost throughout India (including Sat Beel, Narapati Beel in Cachar Assam; River Gomati in Tripura (In many of these collections : First Report by Professor D. Kar and Party); also in Afghanistan, Bangladesh, Myanmar, Nepal, Pakistan, and Sri Lanka, etc.

IUCN Status: Least Concern (LC)

Genus: Rasbora Bleeker, Acta Soc. Sci. Indo-Neerl 7: 435 (Type species, Leuciscus cephalotaenia Bleeker, 1859, by subsequent designation by Bleeker, 1863: 28); Brittan, Monog. Inst. Sci & Techn., Manila, 3: 134 (revision); owes, 1941, Bull Brit. Mus. Nat. Hist., 37: 183; Kottelat, The Raffles Mus. 47 (2): 597; Talwar and Jhingran, Inland Fishes I : 386; Jayaram, FW Fishes of the Indian Region : 82; Menon, Rec. Zool. Surv. India, Occ. Paper No.175: 52; Nath and Dey, 2000, Fish and Fisheries of NE India (Arunachal Pradesh): 24.

Generic Characters: body elongated, compressed; abdomen rounded. head large, pointed. snout slightly pointed. mouth large; cleft oblique. the lower jaw prominent with one central and two internal prominences, one on each side, fitting into corresponding emargination on upper jaw. barbel absent. the dorsal fin inserted behind origin of pelvic fins with eight rays. caudal fin emarginated or forked. ll concave, complete with 25 to 37 scales

Material Examined: (a) River Gomati in Tripura; Collection, 5 2 2003; 4 Exs; Museum No. 71= Rasbora daniconius: Museum No. 30,30(a)(71), 30,30(a)(72), 30,30(a)(73), 30,30(a)(74); Coll. Professor D. Kar and Party.

Key to Species: 32 to 34 Ll scales. A black lateral stripe is present along centre of the body.

Rasbora Daniconius (Hamilton)

Distribution: In many water bodies in India including River Gomati in Tripura (First report by Professor D. Kar and Party); also in West Bengal, Bihar, Delhi, Jammu and Kashmir, Madhya Pradesh, Mysore, Orrisa, Rajasthan, Uttar Pradesh; also in Bangladesh, Myanmar and Nepal, etc.

IUCN Status: Least Concern (LC).

Genus: Neolissochilus Rainboth, Beaufortia 35 (3): 26 (Type species: Barbus stracheyi Day, 1871, by original designation).

Generic Characters: Body deep anteriorly. Trunk and peduncle are smoothly tapering from anterior end to posterior end. Abdomen rounded. Head broad. Snout blunt. Mouth oblique, terminal to horizontal or inferior. Species with horizontal mouth often have the lobe of the snout overhanging the upper lip. Mouth smoothly rounded when the lower jaw is blunt. Eyes in the upper half of head; visible both from dorsal and ventral surfaces. Lips thick. Cheeks with many tubercles. Labial fold interrupted. Scales

large and heavy.

Material Examined: River Gomati in Tripura(near origin of the river); Collection, June, 2001; 1 Ex.; Museum No. 46/9(i); Coll. Professor D. Kar and Party .

Key to Species: Mouth nearly truncate. Edge of lower jaw sharp.

Neolissochilus Hexagonolepis (McClelland, 1839)

Distribution: Almost Throughout North-East India (including River Barak at Karong (Nagaland-Manipur Border); River Gomati in Tripura (In many of these collections: First Report by Professor D.Kar and Party); also in other parts of Northern India; further, in Darjeeling and Eastern Himalaya; South and South-Eastern Asia; etc.

IUCN Status: Near Threatened (NT).

Genus: Chagunius H.M. Smith, Proc.biol.Soc., Washington, 15 :157)Type species: Cyprinus chagunio Hamilton-Buchanan, by original designation); Rainboth, 1986, Occ.Pap.Univ. Mich. Mus. Zool., (712): 1-17 (revision); Talwar and Jhingran, 1999, Inland Fishes, 1: 165; Jayaram, 1999, FW Fishes of the Indian Region: 106; Menon, 1999, Rec. Zool. Surv., India Occ.Paper No.175: 165 (Check list); Nath and Dey, 2000, Fish and Fisheries of NE India (Arunachal Pradesh): 54; Vishwanath, 2002, Fish and Fisheries of NE India, NATP Pub.: 57.

Generic Characters: Body elongated. Abdomen broadly rounded. Head compressed, Snout overhanging, divided into a central and two lateral lobes by a groove extending upward and forward from the base of each rostral barbel. Post-labial groove incomplete. Mouth narrow, sub-terminal, with two ends directed backwards. Barbels 4, one pair each rostral and maxillary. Dorsal inserted slightly ahead of pelvic fins with 13 rays and a stout, strong, serrated spine. Anal fin short with 8 or 9 rays. Caudal fin forked. Scales large, Lateral line complete with 40 to 48 scales.

Material Examined: River Gomati in Tripura; Collection, 5 February 2003; 3 Exs.; Museum No. 32/37, 32/53, 32/55; Coll. Professor D. Kar and Party .

Key to Species: Circumferential scales 40 or more. Circumpeduncular scales 23 to 25.

Chagunius Chagunio (Hamilton)

Distribution: In different water bodies in India (including River Barak at 10 km downstream from Tipaimukh (Tuivaimukh) Damsite : First Report by Professor D. Kar and Party); also in River Brahmaputra, Ganges drainages. Bangladesh, Myanmar, Nepal, Thailand, etc.

IUCN Status: Least Concern (LC).

Genus: Puntius Hamilton, Fish Ganges :310, 388 (Type species, Cyprinus sophore, Hamilton-Buchanan, by subsequent

designation); Jayaram, 1991, rec.Zool. Surv. India Occ. Paper No.135: 1-178 (revision); Talwar and Jhingran, 1991, Inland Fishes 1 : 250; Jayaram, 1999, FW Fishes of the Indian Region : 108; Menon, 1999, Rec Zool.Surv. India., Occ. Paper No. 175: 65; Nath and Dey, 2000. Fish and Fisheries of NE India (Arunachal Pradesh): 39; Vishwanath, 2002, Fish and Fisheries of NE India, NATP Pub: 69. Generic Characters: Body short to moderately long, deep, compressed. Abdomen round. Head short. Snout obtuse, conical or pointed; sometimes, may be with tubercles. Mouth arched, anterior or inferior. Upper jaw may be protractile. Eyes moderate to large, dorsolateral; they are not visible from below ventral surface. Lips thin, cover the jaws; without any horny covering. Jaws simple without any tubercle at the symphysis. Barbels four, two or may be absent. Dorsal fin short inserted nearly opposite to pelvic fins. Anal fin short. Caudal fin forked. Scales small, moderate or large.

Material Examined: (1)River Gomati in Tripura; Collection, 5 2 2003; 36 Exs.; Museum No. 30,30(a)/1, 30,30(a)/2, 30,30(a)/3, 30,30(a)/4, 30,30(a)/5, 30,30(a)/6, 30,30(a)/7, 30,30(a)/8, 30,30(a)/9, 30,30(a)/10, 30,30(a)/11, 30,30(a)/12, 30,30(a)/13, 30,30(a)/14, 30,30(a)/15, 30,30(a)/16, 30,30(a)/17, 30,30(a)/18, 30,30(a)/19, 30,30(a)/21, 30,30(a)/22, 30,30(a)/23, 30,30(a)/24, 30,30(a)/26, 30,30(a)/27, 30,30(a)/28, 30,30(a)/29, 30,30(a)/31, 30,30(a)/32, 30,30(a)/33, 30,30(a)/34, 30,30(a)/35, 30,30(a)/36, 30,30(a)/37, 30,30(a)/38, 30,30(a)/39, 30,30(a)/41; Coll. Professor D. Kar and Party. (2) River Gomati in Tripura; Collection, 4 June 2001(Lot A); 14 Exs.; Museum No. 31/6, 31/7, 31/8, 31/9, 31/10, 31/11, 31/12, 31/13, 31/14, 31/15, 31/16, 31/17, 31/18, 31/19; Coll. Professor D. Kar and Party . (3) River Gomati in Tripura; Collection, 4 June 2001(Lot B); 6 Exs.; Museum No. 32/34, 32/35, 32/44, 32/86, 32/88, 32/97; Coll. Professor D. Kar and Party. (4) River Gomati in Tripura; Collection, 4 June 2001(Lot C); 40 Exs.; Museum No. 33/7, 33/8, 33/9, 33/10, 33/11, 33/12, 33/13, 33/14, 33/15, 33/16, 33/17, 33/18, 33/19, 33/20, 33/21, 33/22, 33/23, 33/24, 33/25, 33/26, 33/27, 33/28, 33/29, 33/30, 33/31, 33/32, 33/33, 33/34, 33/35, 33/36, 33/37, 33/38, 33/39, 33/40, 33/41, 33/42, 33/43, 33/44, 33/45, 33/46; Coll. Professor D. Kar and Party .

Key to Species: Pre-dorsal scales 8-10. The presence of a black spot on dorsal fin and on caudal peduncle.

Puntius Sophore (Hamilton)

Distribution: Almost throughout India, including River Barak at Lakhipur; Rupairbala Anua in Cachar Assam; Different locations of River Monu in Tripura; Different locations of River Gomati in Tripura: In all these collections: First Report by Professor D.Kar and Party. Also, found in Bangladesh, Myanmar, Nepal, Pakistan, Sri Lanka, etc.

IUCN Status: Least Concern (LC)

Material Examined: (1) River Gomati in Tripura; Collection, 4 June 2001(Lot B); 7 Exs.; Museum No. 32/22, 32/23, 32/24,

32/25, 32/28, 32/30, 32/31; Coll. Professor D. Kar and Party .

Key to Species: Body marked with two conspicuous dark blotches.

Puntius Chola (Hamilton)

Distribution: Almost throughout India (including Salchapra Anua, Fulbari Anua in Cachar, Assam; River Gomati in Tripura: In many of these collections: First Report by Professor D.Kar and Party; also in Bangladesh, Myanmar, Nepal, Pakistan, Sri Lanka, etc.

IUCN Status: Least Concern (LC).

Genus: Pethia, Pethiyagoda, Meegaskumbura and Maduwage: 80 (Type species: *Barbus nigrofasciatus* Gunther, 1868. Type by original designation). Pethiyagoda, Meegaskumbura and Maduwage, 2012.

Generic Characters: Body short to moderately long, deep, and compressed. Abdomen rounded. Head short. Snout obtuse, conical, or pointed; sometimes, it may have tubercles. Mouth arched, anterior or inferior. The upper jaw may be protractile. Eyes moderate to large, dorsolateral; they are not visible from below the ventral surface. Lips thin, cover the jaws, without any horny covering. Jaws simple without any tubercle at the symphysis. Barbels four, two or may be absent. Dorsal fin short inserted nearly opposite to pelvic fins. Anal fin short. Caudal fin forked. Scales small, moderate, or large.

Material Examined: (a) River Gomati in Tripura; Collection, 5 February 2003; 3 Exs.; Museum No. 30,30(a)/25, 30,30(a)/30, 30,30(a)/35; Coll. Professor D. Kar and Party. (b) River Gomati in Tripura; Collection, 5 June 2001; 16 Exs.; Museum No. .46/1(i), .46/1(ii), .46/1(iii), .46/1(iv), .46/1(v), .46/1(vi), .46/1(vii), .46/1(viii), .46/1(ix), .46/1(x), .46/1(xi), .46/1(xii), .46/1(xiii), .46/1(xiv), .46/1(xv), .46/1(xvi); Coll. Professor D. Kar and Party.

Key to Species: Barbel absent, lateral line incomplete, and caudal peduncle with a black blotch.

Pethia Conchonius (Hamilton)

Distribution: Almost throughout India, including River Vomvadung and River Khuolzangvadung in Dima Hasao District, Assam; River Kopili: at Panimur (in all these collectiouns, first reports by Professor. D. Kar and Party); also in Bihar, Uttar Pradesh, Punjab, Maharashtra, Orissa, Eastern, and western Himalaya, Deccan, Afghanistan, Bangladesh, Myanmar, Nepal, Pakistan, and Sri Lanka.

IUCN Status: Least Concern (LC).

Genus: Labeo cuvier, Regne Animale, 2 (ed.1) : 194 (Type species, *Cyprinus niloticus* Forskal, by subsequent designation); Jayaram and Dhas,1998, Occ.Papers Zool. Surv.India, No. 183 : 1-143; Talwar and Jhingran, 1991, Inland Fishes I : 193; Jayaram, 1999, FW Fishes of the Indian Region : 132; Menon, 1999, Rec.Zool.

Surv. India Occ. Paper No., 175 : 125; Nath and Dey, 2000, Fish and Fisheries of NE India (Arunachal Pradesh): 45; Vishwanath, 2002, Fish and Fisheries of NE India, NATP Pub. : 611.

Generic Characters: Body of moderate size; sometimes, could be much big in size; elongated, abdomen rounded. Head quite large. Snout more or less swollen, rounded or truncated ; often projecting beyond mouth.; covered by a groove across and with or without tubercles; generally overhanging the mouth. Mouth usually semilunar and inferior. Eyes moderately large, generally placed at the commencement of the posterior half of the haead. Lips thick, fleshy and fringed; continuous at the angle of the mouth forming a labial fold. Post-labial groove may be continuous or discontinuous. Barbels may be present or absent. Dorsal fin inserted above anterior to origin of pelvic fins with 11 to 26 rays. Anal fin short with 7 or 8 rays. Caudal fin deeply forked or emarginated. Lateral line complete.

Material Examined: (a)River Gomati in Tripura; Collection, 4 06 2001 (Lot A); 1 Ex.; Museum No. 31/41; Coll. Professor. D. Kar and Party.

Key to Species: Presence of generally 6 to 6.5 scales between lateral line (Ll) and pelvic fin base

Labeo Rohita (Hamilton)

Distribution: Almost throughout India (including River Dhansiri at Bokajan in Karbi Anglong : First Report by Professor D. Kar and Party) ; also in Bangladesh, Myanmar, Nepal, Pakistan, Sri Lanka, etc.

IUCN Status: Least Concern (LC)

Genus: Tariqilabeo Kuhl van Hasselt, Algem-Konst.Letter-Bode,2,p:132 (Type species, Tariqilabeo oblongus (*Crossocheilus oblongus*)Kuhl and van Hasselt, by monotypy); Mukerji, 1934, J.Bombay nat. Hist. Soc., 37 (1): 49-54; Banarescu, Trans Mus. Hist. natn. Gr.Antipa. 28 : 142-154; Kottelat, Jap. J. Ichthyol., 33 (4): 371; Talwar and Jhingran, Inland Fishes 1 : 413; Jayaram, FW Fishes of the Indian Region :152; Menon, Rec. Zool. Surv., India, Occ. Paper No. 175 : 139.

Generic Characters: Body more or less elongate. Ventral profile horizontal or slightly curved. Abdomen rounded. Head small. Snout obtusely pointed. Mouth inferior. Eyes large. Post-labial groove generally present. Rostral cap thick; its margin fimbriate. Presence of a pair of rostral and maxillary barbels only; latter may be absent. Dorsal fin inserted midway between pectoral and pelvic fins; considerably nearer to tip of snout than base of caudal fin with 10 or 11 rays and without any spine. Anal fin short with 7 rays. Caudal fin deeply forked. Lateral line scales 33 to 46.

Material Examined: (a)River Gomati in Tripura; Collection, 4 06 2001 (Lot A); 1 Ex.; Museum No. 31/40; Coll. Professor. D. Kar and Party. (b)River Gomati in Tripura; Collection, 5 06 2001; 3 Exs.; Museum No. 46/6(i), 46/6(ii), 46/6(iii); Coll. Professor. D.

Kar and Party.

Key to Species: Presence of 37-39 ll scales. Diameter of eye 21.3 to 23.8 % of HL .

Tariqilabeo Latius (Hamilton)

Distribution: Almost throughout NE India (including Salchapra Anua in Cachar, Assam (First Report by Professor D. Kar and Party) ; River Monu in Tripura ((First Report by Professor D. Kar and Party); also in Arunachal Pradesh, Bangladesh, Nepal, etc.

IUCN Status: Least Concern (LC)

Genus: Garra Hamilton, Fish Ganges: 343, 393 (Type species: Cyprinus (Garra) lamtaby later designation).

Generic Characters: Body short, sub-cylindrical. Ventral surface flat. Head little depressed anteriorly. Snout blunt; smooth or with pores; with or without a deep, transverse groove-like depression. Mouth inferior, transverse, semi-circular. Eyes small; in the posterior half of the head; lateral; not visible from below ventral surface. Lips thick and fleshy. Upper and lower lips are continuous without any lateral lobes. A proboscis may or may not be present. A suctorial disc of semi-cartilaginous pad present on the chin. Scales moderate.

Material Examined: (a)River Gomati in Tripura; Collection, 5 06 2001; 8 Exs.; Museum No. 46/5(i), 46/5(ii), 46/5(iii), 46/5(iv), 46/5(v), 46/5(vi), 46/5(vii), 46/5(viii); Coll. Professor. D. Kar and Party.

Key to Species: Lateral line scales 33-34. Distance between vent and anal fin origin 31.25 to 38.5 % in inter-distance between pelvic and anal fin origin.

Garra Annandale Hora, 1921

Distribution: In many water bodies in India and its environs (including River Barak at Chotrikhal along Manipur, Mizoram, Assam border in North-East India: First Report by Prof. D. Kar and Party); also in Darjeeling Himalayas, Arunachal Pradesh, Bangladesh, Nepal, etc.

IUCN Status: Least Concern (LC)

Genus: Psilorhynchus McClelland, Asiatic Researches, 19: 300, 428 (Type species: Cyprinus sucatio Hamilton, by subsequent designation).

Generic Characters: Body spindle-shaped, arched dorsally and flattened ventrally; anteriorly depressed. Ventral surface markedly flattened. Snout flat obtusely pointed anteriorly. A shallow depression may be present on the cheek. Mouth small, inferior, transverse. Eyes large, dorsolateral in the posterior half of the head; not visible from below ventral surface. Lips entire, fleshy, continuous at the angle of mouth; reflected off from both the jaws; and, with glands and folds. Presence of a distinct lateral groove on either side passing along the sides of the snout. The upper jaw overhangs the mouth. Absence of barbels. Dorsal fins

inserted ahead of pelvic fins with 10-12 rays. Pectoral fins simple with four-six rays. Anal fin short with seven rays. Caudal fin forked; upper lobe longer. Scales relatively large along the lateral line. Lateral line complete with 32-34 scales.

Material Examined: (a)River Gomati in Tripura; Collection, 5 2 2003; 1 Ex.; Museum No.; 30,30(a)/75 Coll. Professor. D. Kar and Party. (b) River Gomati in Tripura; Collection, 4 6 2001 (Lot B); 1 Ex.; Museum No.; 32/93; Coll. Professor. D. Kar and Party.

Key to Species: Pectoral fin with 6-7 simple rays. Lateral line scales 30-34.

Psilorhynchus Balitora (Hamilton)

Distribution: In many water bodies in India, particularly, in the hill streams (including upstream rheophilic stretch of River Barak at Phulpui, Collection 23.04.2008: and also, in the upstream hilly stretch of River Tuivai at 20 km upstream from Damsite, collection, 17.04.2008: In all these collections, First report by Professor D. Kar and Party); also, in the Ganga-Brahmaputra basin. Bangladesh, Bhutan, Nepal, etc.,

IUCN Status: Least Concern (LC). Balitora Gray, 1830 Balitora Gray, 1830, Ill.Ind.Zool., I, pl. 88, Fig. 1 (Type species, Balitora brucei Gray, by monotypy); Silas, 1953, Rec.Indian Mus., 50 : 205 (revision); Menon, Fauna India, 4(1) : 228 (revision); Talwar and Jhingran, 1999, Inland Fishes, 1 : 445; Jayaram, 1999, FW Fishes of the Indian Region : 170; Vishwanath, 2002, Fish and Fisheries of NE India, NATP Pub.95.

Generic Characters: Anterior part of body, head and abdomen greatly depressed; ventral surface of the body flattened. Snout broad and rounded. Mouth inferior and small. The rostral flap divided into 3 lobes; the median one being the largest lying between the rostral barbels. Barbels 3 pairs: 2 pairs of short thick rostral barbels and 1 pair of maxillary barbels. Dorsal fin inserted above or slightly ahead of pelvic fins with 11-12 rays. Presence of broad and horizontal paired fins. Pectoral fins with 19 to 21 rays. Adhesive pads present the ventral surface of the 8 to 11 anteriormost pectoral fin rays and 3 or 4 pelvic fin rays. Anal fin short with 7 fin rays. Caudal fin forked. Lateral line (LL) complete with 62-70 scales.

Material Examined: (a)River Gomati in Tripura; Collection, 5 06 2001; 1 Ex.; Museum No. 46/8(i); Coll. Professor. D. Kar and Party.

Key to Species: Maximum head width 83.3 to 105.7 % HL. Eyes small.

Balitora Brucei Gray, 1830

Distribution: In many water bodies in India, particularly, in the hill streams (including River Gomati in Tripura near its origin at Tirthamukh, Mandirghat: Reported by Professor D. Kar and Party); also, in the Ganga-Brahmaputra basin. Bangladesh, Bhutan, Nepal, etc.

IUCN Status: Near Threaten

Genus: Paracanthocobitis Peters, Monats. Akad. Wiss. Berlin for 1861 : 712 (Type species: Acanthocobitis longipinnis Peters = Cobitis pavonaceus McClelland, by monotypy); Menon, 1987, Fauna India, 4 (1): 140; Kottelat, 1990, Verlag Dr. Friedrich Pfeil, Munchen : 18 (as a valid genus); Banarescu and Nalbant, 1995, Trav. Mus. Hist. nat. "Grigore Antipa", 35 : 430 (as a valid genus); Jayaram, 1999, FW Fishes of the Indian **Region:** 173; Vishwanath, 2002, Fish and Fisheries of NE India, NATP Pub. : 101.

Generic Characters: Body deep and strongly compressed posteriorly. Head slightly compressed. Nostrils close together. Presence of a slight indication of an adipose keel. Upper lip covered by 2 or 3 rows of papillae. Lower lip interrupted in the middle and with numerous papillae. Dorsal fin usually with 10 to 18 branched rays. Caudal fin slightly emarginated. Presence of conspicuous black spot at upper extremity of caudal fin.

Material Examined: (a) River Gomati in Tripura; Collection, 5 2 2003; 5 Exs.; Museum No. 30,30(a)/66, 30,30(a)/67, 30,30(a)/68, 30,30(a)/69, 30,30(a)/70; Coll. Professor. D. Kar and Party. (b) River Gomati in Tripura; Collection, 4 06 2001 (Lot A); 1 Ex.; Museum No. 31/35; Coll. Professor. D. Kar and Party. (c) River Gomati in Tripura; Collection, 4 06 2001 (Lot B); 3 Exs.; Museum No. 32/42, 32/72, 32/73; Coll. Professor. D. Kar and Party. (d) River Gomati in Tripura; Collection, 4 06 2001 (Lot C); 1 Ex.; Museum No. 33/54; Coll. Professor. D. Kar and Party.

Key to Species: Dorsal fin with 9-11 branched rays. Body depth about 20.00 to 23.63 % SL.

Paracanthocobitis Biota (Hamilton)

Distribution: Almost throughout India (including Baskandi Anua in Cachar, Assam (First report by Prof. D. Kar and Party); River Monu in Tripura (First report by Prof. D. Kar and Party); other parts of NE India and also rest of India; also in Manipur, Myanmar, etc.

IUCN Status: Least Concern (LC).

Genus: Schistura McClelland, Asiatic Res., 19: 306, 439 (Type species: Cobitis (Schistura) rupecula McClelland by subsequent designation).

Generic Characters: Body elongate of almost uniform depth; compressed posteriorly. Head either depressed or compressed. Snout usually blunt. The posterior nostril may be prolonged as a tube in some species. Lips with a few furrows; medially interrupted. Upper lip slightly furrowed; continuous or with a narrow median interruption. Lower lip interrupted in the middle; moderately furrowed. Processus dentiform of upper jaw present with a corresponding incision on the lower jaw in many species. Dorsal fin short; inserted ahead or opposite to pelvic fins; with seven-eight rays; rarely 10. An auxiliary pelvic lobe may be present. Caudal fin slightly emarginated, forked, or truncate

(never rounded); with a black bar. A general absence of adipose crest. If present, mostly in the posterior part of the body. Lateral line complete or incomplete. Presence of scales on the body generally. Usually, the presence of a characteristic color pattern.

Material Examined: River Gomati in Tripura; Collection, 4 06 2001 (Lot B); 6 Exs.; Museum No. 32/36, 32/87, 32/99, 32/1112, 32/113, 32/117; Coll. Professor. D. Kar and Party.

Key to Species: Body marked with 14 -16 vertical bands often bands split up particularly in front of dorsal fin into several narrower bands. Lateral line complete.

Schistura Multifasciata (Day, 1878)

Distribution: Almost throughout India, particularly in the hill streams in North-East India and the Eastern Himalayas (including River Barak at Karong (Nagaland-Manipur Border), River Barak at Phulpui in the upper hill stream stretch of the River Barak along Assam, Manipur, Mizoram border in NE India: In all these collections, First Report by Professor D. Kar and Party); also in Bhutan, Nepal, Myanmar, Thailand, etc.

IUCN Status: Least Concern (LC)

Genus: Holly, Replacement name for Macrones Dumeril, 1856; therefore, taking the same type species Bagrus lamarii Valenciennes, 1840 (Type species: Sperata vittatus (Bloch) in error); Ferraris and Runge, 1999, Proc. Acad. Nat. Sci. Philad. 51 (10): 400 (Revision); Jayaram, 2006, Catfishes of India: 23; Ferraris, 2007, Zootaxa, 1418: 106. Macrones Dumeril, 1856, Ichthyologie analytique : 484 (Type species Bagrus lamarii Valenciennes, 1840, by original designation; preoccupied by Macrones Newman, 1841, Insecta (Coleoptera). Aoria Jordan, 1856, Proc Acad. Nat. Sci. Philad. 70: 341 (substitute name for Macrones Dumeril, 1856, preoccupied by Aoria baly, 1863. Insecta, Coleoptera).

Generic Characters: Dorsal profile arched. Head large elongate, slightly depressed. Snout spatulate or rounded. Mouth moderately wide. Presence of a distinct inter-neural shield in between basal bone of dorsal fin and occipital process. Presence of 4 pairs of barbels; one each maxillary and nasal and two mandibular. Gill membranes free from each other and also from isthmus. Rayed dorsal fin generally with 7 rays and a robust spine. Adipose dorsal fin low with slightly convex margin. Pectoral fins with 9 or 10 rays and a spine. Pelvic fins generally with 6 rays. Anal fin short with 11 to 15 rays. Caudal fin deeply forked. Presence of a large round or ovoid dark spot near the posterior margin of the adipose fin.

Material Examined: (a) River Gomati in Tripura; Collection, 4 06 2001 (Lot A); 1 Ex.; Museum No. 31/25; Coll. Professor. D. Kar and Party. (b) River Gomati in Tripura; Collection, 4 06 2001 (Lot B); 1 Ex.; Museum No. 32/43; Coll. Professor. D. Kar and Party. (c) River Gomati in Tripura (near its origin); Collection, 5 06 2001; 2 Exs.; Museum No. 46/7(i), 46/7(ii); Coll. Professor. D. Kar and Party.

Key to Species: Snout spatulate. Pectoral fin with 8 or 9 rays.

Sperata Seenghala (Sykes, 1839)

Distribution: In many water bodies almost throughout India (including Chatla Haor and Bakri Haor in Assam: In all these collections, First Report by Professor D. Kar and Party); also in Bangladesh, Myanmar, Nepal, Pakistan, Sri Lanka etc.

IUCN Status: Least Concern (LC)

Genus: *Mystus* Russell, Nat. Hist. Aleppo 1: 76; *Mystus anguillaris* Meuschen. *Mystus*, Talwar and Jhingran, 1991, Inland Fishes, 2: 554; Roberts, 1994, Ichthyological Exploration of Freshwaters 5(3):243.

Generic Characters: Body short or moderately elongated. Head short, flattened. Snout obtuse or rounded. Mouth sub-terminal, transverse. Eyes anteriorly situated, moderately large. Teeth numerous. Upper surface of head mostly smooth with one or two median longitudinal grooves of varying length. Occipital process long or short, situated superficially concealed under skin. Four pairs of barbells; one each of maxillary, nasal and two mandibular, two dorsal fins; an anterior rayed dorsal with seven or eight rays and a spine; a posterior smooth low adipose fin of varying lengths. Pectoral fins with seven to 11 rays and a strong spine serrated along the inner edge. Pelvic fins with six rays. Anal fin with nine to 14 rays. Caudal fin forked, bilobed with unequal lobes; lobes may be rounded, pointed or prolonged into filamentous extensions. Lateral line complete.

Material Examined: River Gomati in Tripura; Collection, 4 06 2001 (Lot B); 1 Ex.; Museum No. 32/29; Coll. Professor. D. Kar and Party.

Key to Species: Body with two parallel stripes on each side of lateral line. There may also be a dark humeral spot.

Mystus Vittatus (Bloch, 1794)

Distribution: Almost throughout India (including Chatla haor in Assam : First Report by Professor D. Kar and Party); also in Myanmar, Pakistan, Sri Lanka etc.

IUCN Status: Least Concern (LC)

Genus: *Wallago* Bleeker, Nat.Tijdschr.Nederl.Inde, 2 : 265 (Type species: *Silurus mulleri* Bleeker= *Silurus attu* Bloch and Schneider by subsequent designation; Roberts, 1982, Copeia (4) : 890 – 894 (revision); Jayaram, 2006, Catfishes of India : 112; Ferraris, 2007, Zootaxa 1418 : 380 (Check list Wallagonia Myers, 1918, **Copeia (1)** : 98 (Type species: *Wallago leerii* Bleeker, y original designation).

Generic Characters: Body elongated, compressed. Abdomen rounded. Head large. Snout spatulate, somewhat protruded. Mouth oblique, gape wide, reaching to or beyond anterior border of eyes. Lower jaw longer and prominent. The presence of 2 pairs of barbels; of which, one pair maxillary and one pair mandibular.

A rayed dorsal fin inserted above half of pectoral fins, with 5 rays and no spine. Absence of adipose dorsal fin. Pectoral fins with 13-15 rays and a feeble smooth spine. Pelvic fin with 8 to 10 rays. Anal fin long with 72- 96 rays free from caudal fin. Caudal fin deeply forked. Lateral line simple and complete.

Material Examined: River Gomati in Tripura; Collection, 4 06 2001 (Lot C); 1 Ex.; Museum No. 33/1; Coll. Professor. D. Kar and Party.

Key to Species: Teeth villiform in bands on jaws and in patches on palate.

Wallago Attu (Bloch and Schneider,1801)

Distribution: In many lentic and lotic water bodies in India (including Sone Beel and Chatla Haor In Assam : Forst report by Professor D. Kar and party; also in Rivers Barak and in River Gomati in NE India); further, it is said to be found in Bangladesh, Pakistan, Myanmar, Sri Lanka, Thailand, Vietnam, Kampuchea, Java, Sumatra, etc.

IUCN Status: Vulnerable

Genus: *Clupisoma* Swainson, Nat. Hist. Animal. Fish., 2: 347, 351, 354 (Type species, *Pimelodus argentea* Swainson = *Silurus garua* Hamilton, by monotypy); Hora, 1937, J.Bombay nat. Hist., Soc., 39(4) : 659-678; Jayaram, 2006, Catfishes of India : 121; Ferraris, 2007, Zootaxa 1458 : 357.

Generic Characters: Body elongate, compressed with the portion between pelvic fins and vent keeled. Head of moderate size. Snout rounded. Cleft of mouth does not reach front edge of eyes. Presence of 4 pairs of barbels: one pair each of maxillary, nasal; and, two pairs of mandibular. Rayed dorsal fin inserted above near base of pectoral fins with 6-9 rays and a spine. Pelvic fin with 6 rays. Anal fin moderately long with 29 to 54 rays. Caudal fin deeply forked.

Material Examined: River Gomati in Tripura; Collection, 4 06 2001 (Lot A); 5 Exs.; Museum No. 31/20, 31/21, 31/22, 31/23, 31/24; Coll. Professor. D. Kar and Party.

Key to Species: Maxillary barbels generally extend beyond pectoral fins or just reach pelvic fins. Anal fin with 29-36 fin rays.

Clupisoma Gaur (Hamilton)

Distribution: Almost throughout India, (including Baskandi Anua wetland in Assam : (First Report by Professor D. Kar and Party); other parts of North-East (NE) India, different parts of rest of India, Bangladesh, Myanmar, Nepal, etc.

IUCN Status: Least Concern (LC)

Genus: *Eutropiichthys* Bleeker, versl. Akad. Amsterdam, 14: 398 (Type species: *Pimelodus vacha* Hamilton-Buchanan, by original description); Hora, 1937, J. Bonmbay nat. Hist. Soc., 39 : 431-446 (review); Jayaram, 2006, Catfishes of India : 132;

Ferraris, 2007, Zootaxa 1418: 358.

Generic Characters: Body elongate, compressed. Abdomen rounded. Head of moderate size, conical, snout pointed or blunt. Cleft of mouth reaching below orbit or slightly beyond. Eyes moderately large, lateral. Presence of 4 pairs of barbells; one pair each maxillary, nasal and two pairs mandibular. Rayed dorsal fin inserted above half of pectoral fins with 7 rays and a spine. Adipose dorsal fin short, posteriorly free. Pectoral fins with 10 to 16 rays and a spine. Pelvic fins with six rays. Anal fin long with 38 to 54 rays. Caudal fin deeply forked

Material Examined: River Gomati in Tripura; Collection, 4 06 2001 (Lot A); 1 Ex.; Museum No. 31/26; Coll. Professor. D. Kar and Party.

Key to Species: Nasal barbels reach hind border of head or slightly beyond

Eutropiichthys Vacha (Hamilton)

Distribution: Almost throughout India (including River Barak at Fulertal in Assam:(First Report by Professor D. Kar and Party); also in Bangladesh, Myanmar, Thailand, etc.

IUCN Status: Least Concern (LC)

Genus: Gagata Bleeker. Ichthyol. Archipel Indici Prodr., 1: 204 (type species: Pemelodusgagata Hamilton-Buchanan, by absolute tautonymy); - Hora and Law 1941, Rec. Indian Mus. 43 (10): 9 (revision); - Roberts and Ferraris, 1998. Proc. Calif. Acad. Sci, 50 (14): 317; - Jayaram, 2006, Catfishes of India: 187; Thompson ad Page, 2006, Zootaxa, 1345: 29 (Check list)- Ferraris, 2007, Zootaxa, 1418: 385 (Check list).

Generic Characters: Dorsal profile rising not very sharply upto dorsal fin base; thereafter, slopes very gently; nearly straight. Head and body compressed. Head short. Snout obtusely rounded. Mouth inferior, small and narrow. Median longitudinal groove on head distinct. Eyes large, dorso-lateral. Maxillary barbels with an osseous base and lying in a groove anteriorly. Nasal pair of barbels with broad flaps, separating the 2 nostrils. Mandibular barbels inserted in a transverse row but at the same level. Rayed dorsal fin inserted above middle of pectoral fins. Caudal fin deeply forked. Lateral line complete with pores on anterior half.

Material Examined: (a)River Gomati in Tripura; Collection, 4 06 2001 (Lot A); 1 Ex.; Museum No. 31/34; Coll. Professor. D. Kar and Party. (b)River Gomati in Tripura; Collection, 4 06 2001 (Lot B); 5 Exs.; Museum No. 32/15, 32/18, 32/19, 32/61, 32/106; Coll. Professor. D. Kar and Party. (c)River Gomati in Tripura; Collection, 4 06 2001 (Lot C); 2 Exs.; Museum No. 33/47, 33/48.; Coll. Professor. D. Kar and Party

Key to Species: Tip of snout acutely pointed in lateral profile with a distinct notch anteriorly. Maxillary barbels shorter than head length.

Gagata Cenia (Hamilton)

Distribution: In many water bodies in India,(including Salchapra Anua in Cachar, Assam : First Report by Prof. D. Kar and Party); Manipur, Bangladesh, Myanmar, Nepal, Pakistan, Thailand, etc.

IUCN Status: least Concern (LC)

Genus: Rhinomugil Gill, Proceedings of the Academy of Natural Sciences of Philadelphia v. 15: 169 (Type species: Mugil corsula Hamilton by monotypy).

Generic Characters: Body moderately elongate, cylindrical or slightly compressed. Head broad and depressed; snout obtuse and short; interorbital space broad. Mouth small, terminal or inferior. Two short widely separated spinous and soft dorsal fins present. Pectoral fins placed rather high on body; pelvic fins subabdominal. Caudal fin moderately forked, emarginated or truncate. Scales fairly large on head and body. Lateral line absent.

Material Examined: River Gomati in Tripura; Collection, 4 06 2001 (Lot C); 1 Ex.; Museum No. 33/2.; Coll. Professor. D. Kar and Party

Key to Species: Body rather stout, head moderate. Operculum without spine. Mouth ventral, protrusible. First dorsal fin inserted nearer to caudal fin base than to tip of snout. Caudal fin slightly emarginate, scales in lateral series 48-52.

Rhinomugil Corsula (Hamilton)

Distribution: In different water bodies in India (including River Jamuna at Silvetta in Karbi Anglong, Assam First Report by Professor D. Kar and Party); also in other parts of India, Bangladesh, Myanmar, Nepal, etc.

IUCN Status: Least Concern (LC)

Genus: Xenentodon Regan, Ann Mag nat Hist (8)7: 332 (type-species, Belone cancila Hamilton-Buchanan, by subsequent designation); - Roberts, 1989, Mem Calif Acad Sci No 14: 152 (review).

Generic Characters: Body very elongate, compressed. Abdomen rounded. Head pointed. Snout sharply pointed. Mouth superior, wide, cleft extending to orbit. Eyes moderate. Both the jaws prolonged into a beak. Presence of a deep longitudinal groove along upper surface of the head. The Dorsal fin usually inserted above anal fin. Caudal fins truncate. Scales small. Lateral line present on posterior half of the body, without a keel.

Material Examined: (a)River Gomati in Tripura; Collection, 4 06 2001 (Lot B); 1 Ex.; Museum No. 32/5; Coll. Professor. D. Kar and Party. (b)River Gomati in Tripura; Collection, 4 06 2001 (Lot C); 9 Exs.; Museum No. 33/71, 33/72, 33/73, 33/74, 33/75, 33/76, 33/77, 33/78, 33/80; Coll. Professor. D. Kar and Party

Key to Species: Dorsal fin rays 15 – 18. Anal fin rays 16 – 18. Pre-dorsal scales >200.

Xenentodon Cancila (Hamilton)

Distribution: In water bodies in India (including Salchapra Anua in Cachar, Assam : First report by Prof. D. Kar and Party); also in Manipur, Nepal, etc.

IUCN Status: Least Concern (LC)

Genus: Macrognathus Lacepede, Hist. Nat. Poiss., 2 : 283 (Type species: *Ophidium aculeatum* Bloch by subsequent designation); Sufi, 1953, Bull. Raffles Mus., No. 27: 99-105; Roberts, 1980, Copeia, No. 3 : 385-391; Travers, 1984, Bull. Brit. Mus.Nat. Hist. (Zool.). 47 (2): 141-145; Roberts, 1986, Jap. J. Ichthyol., 33 (2): 97-103; Rhynchodella Bloch and Schneider, 1801, Syst. Ichth: 478

Generic Characters: Body deep, eel-like, long, compressed. Head long pointed. Snout long fleshy, accommodating a concave prolongation of the upper jaw consisting of a paired series of tooth plates. Mouth inferior. Cleft narrow. Eyes, small, superior, in middle of head. Dorsal fin inserted far behind end of pectoral fins with 13 to 32 detached, depressible spines and 42 to 58 rays. Anal fin with 3 spines and 42 to 58 rays. Caudal fin rounded; and, distinctly separated from dorsal and anal fins. Pelvic fins absent.

Material Examined: River Gomati in Tripura; Collection, 4 06 2001 (Lot A); 2 Exs.; Museum No. 31/32, 31/33; Coll. Professor. D. Kar and Party.

Key to Species: Dorsal fin with 24 to 26 spines and 30 to 42 soft rays. Anal with three spines. Caudal fin distinctly separated from dorsal and anal fins.

Macrognathus Pancalus Hamilton

Distribution: In many water bodies in India (including Salchapra Anua, Shiv Narayanpur Anua in Cachar, **Assam:** in all these water bodies, First report by Prof. D. Kar and Party); also in Bangladesh, Pakistan, etc.

IUCN Status: Least Concern (LC)

Genus: *Mastacembelus* Scopoli, 1777 *Mastacembelus* Scopoli, 1777, Introd. Hist. Nat.: 458 (type –species, *Ophidium mastacembelus* Banks and Solander, by subsequent monotype); Travers, 1984, Bull. Brit. Mus. nat. Hist. (zool.)47 (2): 141-145 (review); Roberts, 1986, Jap. J. Ichthyol., 23 (2): 103-107 (review); - Sufi, 1956, Bull. Raffles. Mus., No. 27: 105-143 (systematic review).

Generic Characters: Body eel-like, elongated, compressed, long, pointed. Snout long, conical. Mouth inferior; cleft narrow. Eyes small, superior. Rim of anterior nostrils with two finger-like fimbriae and two flaps. Dorsal fin inserted above middle of pectoral fins. Pelvic fins absent. Caudal fin rounded. Dorsal and anal fins may or may not be confluent with caudal fin. Pelvic fins absent.

Material Examined: River Gomati in Tripura around its origin at Tirthamukh, Mandirghat; Collection, 5 06 2001; 1 Ex.; Museum No. 46/10(i); Coll. Professor. D. Kar and Party.

Key to Species: Dorsal fin with 32 – 40 detached, depressible spines and 67 to 90 rays. Anal with three spines and 46 to 90 rays. Caudal fin merged and continuous with dorsal and anal fins, Caudal fin rays 14 to 17.

Mastacembelus Armatus (Lacepede, 1800)

Distribution: In many water bodies in India (including Baskandi Anua in Cachar, Assam: First report by Prof. D. Kar and Party); also in Bangladesh, South China, Malaya, Java, Myanmar, Nepal, etc.

IUCN Status: Least Concern (LC)

Genus: Chanda Hamilton, An account of the fishes found in the river Ganges: 103, 370 (type species: Chanda nama Hamilton 1822 by designation of ICZN)

Generic Characters: Body ovate, deep compressed. Abdomen rounded. Head short, compressed with sharp snout. Mouth wide, protractile; extended up to border of orbit or slightly beyond. Eyes large, superior. Pre-orbital edge with four serrae. Lower jaw strongly projecting. Lower limb of pre-opercle with a double-serrated edge. Opercula without a prominent spine. Two dorsal fins; 1st with seven spines and 2nd with 15-17 rays; the two dorsal fins continuous. A forwardly directed recumbent spine present in the dorsal fin. Anal fin with three spines and 17 rays. Caudal fin forked. Body with cycloid scales. Lateral line complete with 125 scales.

Material Examined: (a)River Gomati in Tripura; Collection, 5 2 2003; 23 Exs.; Museum No. 30,30(a)/32, 30,30(a)/42, 30,30(a)/44, 30,30(a)/45, 30,30(a)/46, 30,30(a)/47, 30,30(a)/48, 30,30(a)/49, 30,30(a)/50, 30,30(a)/51, 30,30(a)/52, 30,30(a)/53, 30,30(a)/54, 30,30(a)/55, 30,30(a)/57, 30,30(a)/58, 30,30(a)/59, 30,30(a)/60, 30,30(a)/61, 30,30(a)/62, 30,30(a)/63, 30,30(a)/64, 30,30(a)/65 ; Coll. Professor. D. Kar and Party. (b)River Gomati in Tripura; Collection, 4 06 2001 (Lot B); 6 Exs.; Museum No. 32/67, 32/69, 32/95, 32/96, 32/103, 32/104; Coll. Professor. D. Kar and Party. (c)River Gomati in Tripura; Collection, 4 06 2001 (Lot C); 3 Exs.; Museum Nos. 33/50, 33/51, 33/53 ; Coll. Professor. D. Kar and Party.

Key to Species: Lower jaw strongly projecting; thus, differ from all other ambassids. Presence of three prominent canine teeth on either side of lower jaw.

Chanda Nama Hamilton

Distribution: Almost throughout India(including Salchapra Anua and Baskandi Anua in Cachar, Assam : in all these water bodies, First report by Prof. D. Kar and Party); also, in Bangladesh, Nepal, Pakistan, etc.

IUCN Status: Least Concern (LC).

Genus: *Parambassis* Bleeker, Nat. Verh.Holland. Maatsch. Wetensch., 2(2) : 102 (Type species, *Ambassis apogonoides* Bleeker by original designation); Guha and Talwar, 1975, J.Inland Fish. Soc. India, 8 : 76; Roberts, 1994, Nat. Hist. Brit. Siam. Soc., 42 : 271-289.

Diagnostic characters: Body elongate, compressed. Abdomen round. Head short, compressed. Snout pointed. Mouth large; gape oblique; extending to anterior border of orbit. Eyes large, superior, not visible from below ventral surface of head. Jaws straight or only slightly upturned. Supra-orbital ridge smooth or serrated, with one or two spines posteriorly. Pre-orbit serrated on both ridge and edge. Sub-orbit also serrated. Cheek with four to seven transverse scale rows.

Material Examined: River Gomati in Tripura; Collection, 4 06 2001 (Lot C); 1 Ex.; Museum Nos. 33/52; Coll. Professor. D. Kar and Party.

Key to Species: Body transparent with a silvery broad lateral stripe on sides. Body depth 41.7 to 43.4 % of SL

Parambassis Ranga (Hamilton)

Distribution: Almost throughout India (including Rupairbala Anua in Cachar, Assam: First report by Prof. D. Kar and Party) ; also, in Bangladesh, Myanmar, many parts of SE Asia; also, further, in Australian region including New Guinea, etc.

IUCN Status: Least Concern (LC).

Genus: *Johnius* Bloch, Naturge. Ausland. Fische., 7, p. 132 (type species, *Johnius carutta* Bloch, by subsequent designation); Talwar and Shetty, Proc. Indian Acad. Sci, 74 (2): 74 – 80 (generic relationship). **Generic Characters:** Body oblong, compressed. Abdomen rounded. Head large, compressed. Snout blunt, prominent and swollen superiorly. Mouth inferior; cleft horizontal. Eyes superior. Upper jaw somewhat longer. Two dorsal fins continuous; inserted near base of pectoral fins. Caudal fin wedge-shaped. Lateral line curved.

Material Examined: River Gomati in Tripura; Collection, 4 06 2001 (Lot B); 1 Ex.; Museum No. 32/105; Coll. Professor. D. Kar and Party.

Key to Species: First dorsal fin with 10 weak spines; second with 26 to 28 rays and a feeble spine. Anal fin with two spines and 7 rays.

Johnius Coitor (Hamilton)

River Barak at Thingkal, 2 ex., 23.5.2009. Collector: Prof. D. Kar and Party.

Distribution: In many water bodies almost throughout India (including River Barak at Thingkal in NE India First report by Prof. D. Kar and Party); also in Bangladesh, Myanmar, East Indies to the East coast of Australia, etc.

IUCN Status: Least Concern (LC)

Family: Gobiidae

Genus: *Glossogobius* Gill, Proc. Acad. nat. Sci. Philad.,: 46 (Type species, *Gobius platycephalus* Richardson, by monotypy); Akihito, In: Masuda et.al., 1984, Fish. Jap.Archipel., : 274; Rema Devi, Rec.zool. Surv. India, 90 (1-4): 174 (Ennore estuary)

Generic Characters: Body elongate, anteriorly cylindrical, compressed. Abdomen rounded. Head depressed, little pointed. Snout obtusely rounded or pointed. Mouth a little oblique. Cleft not extending to eyes. Eyes large, superior, almost in middle of head. Gill openings continued far below the eyes. Presence of 2 dorsal fins, separated by a short interspace; first dorsal inserted above half or three-fourth of pectoral fins with six rays. Second dorsal fin with 6 to 10 rays. Pelvic fins united, oblong. Anal fin with 8 or 9 rays. Caudal fin oblong to rounded. Scales ctenoid on body; cycloid on head.

Material Examined: (a) River Gomati in Tripura; Collection, 5 2 2003; 1 Ex.; Museum No. 30,30(a)/77; Coll. Professor. D. Kar and Party. (b) River Gomati in Tripura; Collection, 4 06 2001 (Lot B); 12 Exs.; Museum No. 32/10, 32/12, 32/13, 32/33, 32/39, 32/40, 32/41, 32/51, 32/54, 32/60, 32/74, 32/101; Coll. Professor. D. Kar and Party. (c) River Gomati in Tripura; Collection, 4 06 2001 (Lot C); 7 Exs.; Museum Nos. 33/3, 33/4, 33/58, 33/59, 33/60, 33/61, 33/62; Coll. Professor. D. Kar and Party.

Key to Species: First dorsal fin with one black spot or without it. Gill membranes connected to isthmus.

Glossogobius Giuris (Hamilton)

Distribution: Found in many water bodies almost throughout India (including Wetlands in Assam, like Salchakra Anua, in Cachar, Assam : in all these water bodies, First report by Prof. D. Kar and Party); also, in Bangladesh, Myanmar, etc.

IUCN Status: Least Concern (LC)

Genus: *Anabas* Cuvier, 1816 *Anabas* Cuvier, 1816. Le Regne Animal., 2 : 339 (Type species: *Perca scandens* Daldorf, by monotypy). **Generic Characters:** Body oblong, compressed. Abdomen rounded. Head moderate, compressed. Snout slightly conical or bluntly rounded. Mouth relatively terminal, oblique; cleft not wide. Eyes large, lateral, in anterior part of head. Upper jaw weakly protrusible. Presence of a single dorsal fin, inserted above pectoral fin base with 16 to 18 spines and 8 to 10 rays; number of spines variable. Anal fin with 8 to 11 spines and 9 to 11 rays. Number of spines variable. Caudal fin rounded.

Material Examined: River Gomati in Tripura; Collection, 4 06 2001 (Lot A); 1 Ex.; Museum No. 31/28; Coll. Professor. D. Kar and Party.

Key to Species: Body depth 28.6 to 33.3 % SL. Dorsal fin with 8 to 10 rays. *Anabas testudineus* (Bloch, 1792) Assam, Cachar district, Rupairbala Anua, 2 ex., 26.01.2000. Coll. Prof. D. Kar and

Party. First Report.

Distribution: Almost throughout India in many water bodies (including Rupairbala Anua in Cachar, Assam: First report by Prof. D. Kar and Party); also, in Bangladesh, Myanmar, Borneo, Philippines, Singapore, Sri Lanka, etc.

IUCN Status: Data Deficient(DD)

Genus: *Trichogaster* Bloch and Schneider, 1801 *Trichogaster* Bloch and Schneider, 1801, *Syst. Ichth.*, p.164 (Type species, *Trichogaster fasciatus*; *Trichopodus* Lacepede, 1801, *Hist. Nat. Poiss.*, 3, p. 125 (Type species: *Labrus trichopterus* Pallas, by subsequent designation; *Colisa* Cuvier, 1831. *IN: Cuvier and Valenciennes, Hist. Nat. Poiss.*, 7 : 359 (Type species, *Colisa vulgaris* Cuvier=*Trichopodus colisa* Hamilton-Buchanan (by absolute tautonymy).

Generic Characters: Body elevated, compressed. Head moderate, compressed. Snout blunt. Mouth upturned, terminal, cleft small. Eyes large, lateral, in middle of head, not visible from below ventral surface of head. Jaws a little protractile. Ventral border of pre-opercle usually serrated. Number of spines in dorsal and anal fins variable. Pelvic fins in the form of single long filiform ray, and a rudimentary adnate spine. Caudal fin slightly emarginated or truncate. Lateral Line (Ll) may be interrupted with 6-29 scales.

Material Examined: River Gomati in Tripura; Collection, 4 06 2001 (Lot B); 3 Exs.; Museum No. 32/63, 32/64, 32/75; Coll. Professor. D. Kar and Party.

Key to Species: Bands on body 14 or more. Caudal fin may be slightly notched or cut-square.

Trichogaster Fasciata Bloch & Schneider

Distribution: In many water bodies throughout India (including Wetlands in Assam like Salchapra Anua, Shiv Narayanpur Anua: in all these water bodies, First report by Prof. D. Kar and Party); also, in Bangladesh, Myanmar, Nepal, etc.

IUCN Status: Least Concern (LC)

Genus: *Channa* Scopoli, 1777, *Introd. Hist. Nat.*: 459 (Type species, *Channa orientalis* Bloch and Schneider, by subsequent designation).

Generic Characters: Body elongated, sub-cylindrical anteriorly. Abdomen rounded. Head large depressed with plate-like scales. Snout somewhat obtuse. Mouth reasonably large; opening moderate to wide; may extend to below orbit. Eyes lateral, moderate; in the anterior part of the head. The lower jaw protrudes beyond the upper. Gill openings wide. Membranes of two sides connected beneath the isthmus. Dorsal fin long; inserted almost above the pectoral fins with 29-55 rays and no spine. Anal fin long with 21 to 36 rays. Both dorsal and anal fins are free from caudal fin. Caudal fin rounded; scales small; cycloid

or ctenoid; scales on the head are more extensive than those on the body. Lateral line abruptly curved or almost interrupted with 37 to 110 scales.

Material Examined: River Gomati in Tripura; Collection, 4 06 2001 (Lot A); 1 Ex.; Museum No. 31/39; Coll. Professor. D. Kar and Party.

Key to Species: Dorsal fin with 28-33 rays. A number of dark blotches on flanks; some with many black spots on body and also on dorsal and caudal fins. Ventral side of body usually white or pale yellow.

Channa Punctata (Bloch, 1793)

Distribution: Almost throughout India in many water bodies (including Salchapra Anua and Fulbari Anua in Cachar, Assam (in all these water bodies, First report by Prof. D. Kar and Party); also, in Bangladesh. China, Malaya, Myanmar, etc.

IUCN Status: Least Concern (LC)

Discussion

The river Gomati originates from the Mandirghat point of the South Tripura Hill ranges. In fact, the River Gomati is formed by the union of two small rivers originally, viz., Raima and Saima, which unite to form the River Gomati after flowing a very short distance from their origin. The course of River Gomati from its origin to end has been detailed earlier in this paper. An overall look into the habitat characteristics of the river Gomati reveals that the microhabitat of the river consists mainly of riffles and pools with some amount of cascades in the upstream Mandirghat and Tirthamukh region; whereas, it is mostly Run-sheet with occasional riffle-pool type of microhabitat in the mid-reach region. The downstream plainwater stretch mainly consists of a run-sheet type of microhabitat with mostly laminar flow of water. The above account reveals the occurrence of both rheophilic hill stream as well as plainwater fishes commensurating with the hillstream rheophilic portion and plainwater downstream portion of the River Gomati. Occurrence of many plainwater forms of fishes indicate that the river Gomati flows through a sufficiently long mid-reach and plainwater stretch.

Concomitant to above, with regard to preference of the people to Gomati river fishes, species (Table 2), like *Notopterus notopterus*, *Labeo rohita*, *Sperata seenghala*, *Wallago attu*, etc., seem to be highly commercially important having high market value. *Barilius barila*, *Opsarius bendelisis*, *Neolissochilus hexagonolepis*, *Taricquilabeo latius*, etc., seemed to be preferred by the hill tribes being rheophilic species and found in the vicinity of the tribal villages in the hills. Further studies on the feeding and breeding biology of the fishes could throw more light on the biology of the fishes. Notwithstanding the above, Barman RP described a new cobitid fish of the Genus *Aborichthys* Chaudhuri from India.

Table 2 : Fish Diversity on different dates and Collection Stations in River Gomati in Tripura .

Fish name	River Coll No. 30,30(a),30(b),Collection date 5 2 2003 (No. of Fishes), Museum No.	River Coll No. 31, Collection date 4 6 2001 (Lot A) (No. of Fishes), Museum No.	River Coll No. 32,Collection date 4 6 2001 (Lot B) (No. of Fishes), Museum No.	River Coll No. 33,Collection date 4 6 2001 (Lot C) (No. of Fishes), Museum No.	River Coll No. 46,Collection date June 2001 (No. of Fishes), Museum No.	No. of Fish collected	Conservation Status	Conservation Status
<i>Notopterus notpterus</i>	+ (1), 30, 30 (a), 30 (b) / 76					1	Least Concern (LC)	C
<i>Cabdio morar</i>		+ (3),31 / 36 to 38	+ (7),32 / 32,58,59,66,76,77,9			10	LC	NC
<i>Barilius barila</i>		+ (1),31 / 27	+ (3),32 / 47 to 49			4	LC	C
<i>Opsarius bendelisis</i>			+ (5), 32 / 21,38,89,118,26		+ (10),46 / 3 (i) to 3 (x)	15	LC	NC
<i>Opsarius tileo</i>		+ (5),31 / 1 to 5			+ (4),46 / 4 (i) to 4 (iv)	9	LC	LC
<i>Laubuca laubuca</i>			+ (1),32 / 100			1	LC	C
<i>Danio dangila</i>			+ (1),32 / 98			1		
<i>Devario aequipinnatus</i>					+ (14),46 / 2 (i) to 2 (xiv)	14		
<i>Esomus danrica</i>		+ (3),31 / 29 to 31	+ (1), 32 / 50			4		
<i>Amblypharyngodon mola</i>			+ (2),32 / 71, 91			2	LC	C
<i>Rasbora daniconius</i>	+ (4),30, 30 (a), 30 (b) / 71 to 74		+ (1),32 / 82			5		
<i>Neolissochilus hexagonolepis</i>					+ (1),46 / 9 (i)	1		
<i>Chagunius chagunio</i>			+ (3),32 / 37, 53, 55			3		
<i>Puntius sophore</i>	+ (36),30, 30 (a), 30 (b) / 1 to 19, 21 to 24, 26 to 29, 31 to 34,36 to 39,41	+ (14),31 / 6 to 19	+ (6),32 / 34,35,44,86,88,9	+ (40),33 / 7 to 46		96	LC	NC
<i>Puntius chola</i>			+ (7),32 / 22 to 25, 28,30,31			7	LC	C
<i>Pethia conchonius</i>	+ (4),30, 30 (a), 30 (b) / 20, 25, 30, 35				+ (16),46 / 1 (i) to 1 (xvi)	20	LC	C
<i>Labeo rohita</i>		+ (1),31 / 41				1	LC	C
<i>Tariquilabeo latius</i>		+ (1),31 / 40			+ (3),46 / 6 (i) to 6 (iii)	4	LC	LC
<i>Garra anandalei</i>					+ (8),46 / 5 (i) to 5 (viii)	8		
<i>Psilorhynchus balitora</i>	+ (1),30, 30 (a), 30 (b) / 75		+ (1),32 / 93			2		
<i>Balitora brucei</i>					+ (1),46 / 8 (i)	1		

<i>Paracanthocobitis botia</i>	+ (5),30, 30 (a), 30 (b) / 66 to 70	+ (1), 31 / 39	+ (3),32 / 42, 72, 73	+ (1),33 / 54		10	LC	LC
<i>Schistura multifasciata</i>			+ (6),32 / 36,87,99,112,113,117			6	LC	C
<i>Sperata seenghala</i>		+ (1),31 / 25	+ (1),32 / 43		+ (2),46 / 7 (i), 7 (ii)	4	LC	NC
<i>Mystus vittatus</i>			+ (1),32 / 29			1	LC	NC
<i>Wallago attu</i>				+ (1),33 / 1		1		
<i>Clupisoma garua</i>		+ (5),31 / 20 to 24				5	LC	C
<i>Eutropiichthys vacha</i>		+ (1),31 / 26				1	LC	C
<i>Gagata cenia</i>		+ (1),31 / 34	+ (5),32 / 15,18.19,61,106	+ (2),33 / 47, 48		8	LC	C
<i>Rhinomugil corsula</i>				+ (1),33 / 2		1	LC	C
<i>Xenentodon cancila</i>			+ (1),32 / 5	+ (9),33 / 71 to 78, 80		10	LC	C
<i>Macrognaathus pancalus</i>		+ (2),31 / 32, 33				2	LC	C
<i>Mastaembelus armatus</i>					+ (1),46 / 10 (i)	1	LC	C
<i>Chanda nama</i>	+ (22),30, 30 (a), 30 (b) / 42 to 55,57 to 63, 65		+ (6), 32 / 67,69,95,96,103,104	+ (3),33 / 50, 51, 53		31		
<i>Parambassis ranga</i>				+ (1),33 / 52		1	LC	C
<i>Johnius coitor</i>			+ (1),32 / 105			1		
<i>Glossogobius giuris</i>	+ (1),30, 30 (a), 30 (b) / 77		+ (13), 32 / 10,12,13.3 3.30,31,39,40,41,54,6 0,74,101	+ (7),33 / 3, 4,, 58 to 62		21	LC	C
<i>Anabas testudineus</i>		+ (1),31 / 28				1		
<i>Trichogaster fasciata</i>			+ (4),32 / 27,63,64,7			4	LC	C
<i>Channa punctata</i>		+ (1),31 / 39				1	LC	C

- (a) Udaipur: N 23o 32' 15.8"- E 91o28' 44", 14.45 m MSL;
 (b) Amarpur : N 23o31' 47"-E 91o 39' 49.7" , 12.5 m MSL;
 (c)Jatanbari (Natanbazar): N 23o 25' 42.8"-E 91o45' 29.8" , 16.15 m MSL;
 (d) Mandirghat (Tirthamukh): N 23o30' 59.4"-E 91o39' 48.2" 88.5 m MSL.

Barman RP described a new freshwater fish of the Genus Barilius Hamilton from West Bengal, in India. Barman, RP reported a new cyprinid fish of the Genus Danio Hamilton from Andhra Pradesh in India. Barman RP reported about Barilius nelsoni, a new cyprinid fish from Tripura in North-East India. Barman RP described a new record of a croaker, Johnius coitor (Hamilton Buchanan) from Tripura. Barman RP reported the Fish fauna of Tripura in North-East India. Tilak, Raj and Jain Seema worked on the Systematic status of Danio (Danio) menoni Barman. Notwithstanding the above, Kar, reported on the Fishes,

their habitats and other related parameters in NE India including many works on the water bodies and fishes of Tripura.

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