

## Original Paper

# DISTRIBUTION AND CONSERVATION STATUS OF FISH SPECIES IN RIVER SERLUI IN MIZORAM: PIONEERING DETAILED TAXONOMIC STUDY AND REPORT

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### Abstract

*Ichthyofaunal surveys conducted in the River Serlui at different locations and on different dates in the province of Mizoram, done as a pioneering work (since updated), revealed the occurrence of 18 species of fishes belonging to 17 genera, 4 sub-families, 10 families and 4 orders during the entire period of study. These included 9 species under Cypriniformes, 7 species under Siluriformes; and, 1 species each under Belontiiformes and Anabantiformes. Distribution and Conservation status of each fish species have been discussed in the present communication.*

### Keywords

*Fish taxonomy, diversity, River Serlui, Mizoram, North-East India Himalayan Biodiversity Hotspot, Conservation*

## 1. Introduction

Fish constitutes approximately half of the total vertebrate population in the world. They live almost in all aquatic habitats in the world. *c* 21,723 species of living fish faunal resources have been recorded out of approx. 39,900 species of vertebrates on the earth (Jayaram, 2003, 2010; Nelson *et al.*, 2016, Kar, 2025 a, b, c, d). Out of these, *c* 8411 are freshwater (FW) dwellers and *c* 11,650 live in the sea. Meanwhile, India is one of the Megabiodiversity countries in the world (Mittermeier & Mittermeier, 1997). In India, *c* 2500 species of fishes have been reported; out of which, *c* 930 species are freshwater (FW) forms and *c* 1570 are marine (Jayaram, 2010; Kar, 2003, 2007, 2010, 2019, 2025 a,b,c,d). This bewildering piscian biodiversity of this region had been attracting many Fishery scientists, Aquaculturists, sport

fishing personnels, etc., both from India and abroad. Incidentally, North-East (NE) region of India has been identified as a 'Hotspot' of Biodiversity in the Eastern Himalayan belt, by the World Conservation Monitoring Centre (WCMC, 1998). This prolific biodiversity of this region could be related to certain reasons, notably, the geomorphology and the tectonics of this region. The mountains and the undulating terrains of this zone are said to give rise to innumerable torrential hill streams, which lead to big rivers; and, ultimately, become integral components of the Ganga-Brahmaputra-Barak-Chindwin-Kolodnye-Gomati-Meghna river system (Kar, 2000, 2007, 2013, 2019, 2021a, b, c, d, 2025a b c d).

Concomitant to above, there are numerous lentic and lotic water bodies in India. And, the province of Mizoram, situated in the NE Himalayan belt, is a hotspot of fish biodiversity harbouring innumerable lentic and lotic water bodies of various types, including hill streams; and, to some extent, plainwater rivers and streams. However, the water bodies and the biota in them, have been much impacted by human interventions. A modest review of literature on fish -taxonomic works revealed that, Menon (1978) had dealt with an appraisal of Satpura Hypothesis of Distribution of the Malayan species to Peninsular India.

Concomitant to above, Kar (1990, 1996, 1999, 2000, 2003 a,b, 2005, 2007, 2013, 2015, 2019, 2021 a,b,c,d, 2022, 2024 a, b; 2025 a b c d; Kar and Kumar(2023), Kar and Das (2024) have been doing large-scale research studies in NE India on different aspects of fish and their habitats. Kar and Sen (2007) reported a detailed study on fish' biodiversity in NE India with particular reference to Barak drainage, Mizoram, and Tripura. Recently, Kar and Khynriam (2020, 2022, 2023, 2024; Kar *et al.*, 2007, 2008, 2011, 2018, 2020 did extensive and intensive research works on the fish taxonomy and diversity and other associated parameters in many water bodies in NE India.

Kar and Das, BK (2015), Kar and Kumar (2023), Barbhuiya, A.H.; Singha, R; and, Kar, D. (2021) had dwelt upon the present status of aquatic bodies and human impact *vis-a-vis* sustainability of fishes, specifically, the endangered mahseer fishes. Kar and Das B (2024) had dealt with the ichthyo diversity in rivers in Karbi Anglong in Assam. Kar and Khynriam (2020 a, b) reported pioneering taxonomic research works on the fishes of rivers Diyung, Vombadung, Khuolzangvadung, Tuikoi and Mahur; and, in River Jinam in Dima Hasao district of Assam. Kar and Khynriam (2022) reported their research works on the fishes of River Barak at Karong. along Manipur-Nagaland border. Further, Kar and Khynriam (2023) published Pioneering research works on the Taxonomic Diversity of Fishes in the Headwaters of River Barak in Assam, Manipur and Mizoram in NE India. Further, Kar and Khynriam (2024), in continuation of their reconnaissance pilot survey, did further pioneering research works on the systematics, Distribution and Conservation of Fish species in the Headwaters of River Barak (Assam, Manipur and Mizoram) in NE India. Kar (2015) and Kar and Roy (2021 a, b) dealt with the *hitherto* unknown, virulent and enigmatic fish disease called Epizootic Ulcerative Fish Disease Syndrome (EUS) with regard to its isolation, ecology and epidemiology. Kar *et al.* (2008 a, b, c, d; 2003, 2007, 2008, 2011, 2018 a, b) had studied various aspects of fishes, including fish taxonomy, fish disease and fish parasites, zooplankton as fish food fauna, fishing gears and fish catching devices; and,

so on. Incidentally, Das *et al.* (2018) worked on the zooplankton assemblage in the water bodies in Assam.

Notwithstanding the above, Kar (2005 b) deliberated on the Fish Diversity in the Major Rivers in Southern Assam, Mizoram and Tripura at the 2<sup>nd</sup> International Symposium on GIS and Spatial Analyses in Fisheries and Aquatic Sciences, held at the University of Sussex at Brighton in the UK. In addition, Kar (2007 b) presented his research findings on the Sustainability issues of Inland Fish Biodiversity and Fisheries in Barak drainage (Assam), in Mizoram and in Tripura at the International Symposium on 'Improved sustainability of Fish Production Systems and Appropriate Technologies for Utilisation' ('Sustain Fish'), held at the Cochin University of Science and Technology (CUSAT) at Cochin in Kerala. Further, Kar D (2016 a) dwelt upon an overview of the Wetlands, Rivers, Fish resources and Fish Disease in NE 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). In addition, Kar, D (2016 b) delivered his research findings on 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' organised by the Indian Institute of Science, Bengaluru, and the Alva's Education Foundation, Mengaluru (India).

Concomitant to above, some of the other important works on the fishes and water bodies in India in general and NE India, in particular, are those of Ghosh. and Lipton, 1982; Barman, 1984, 1992, 1994; Jayaram, 1981, 1999, 2003, 2010; Sen, 1985; Kar *et al.*, 2007, 2008, 2011, 2018, 2020; Menon, 1974, 1999; Nath and Dey, 1989, 1997; Sinha, 1994; Sen, 2000; Sen and Khynriam, 2014; Arunachalam, *et al.* 2013; Das, *et al.*, 2015; Dey, *et al.*, 2015; Lalramliana *et al.*, 2018; Lokeshwor *et al.* 2013; Khynriam & Sen, 2014). Incidentally, Bănăduc *et al.*, 2020 worked significantly on the water bodies in Romania.

Notwithstanding the above, Bailey (1994, 1996), had worked on the water bodies in Africa, notably in Congo republic. Further, Bailey and Hickley (1986) had published on *Nothobranchius virgatus* Chambers, a new killifish from southern Sudan. Further, Didem *et al.* (2012) published a New Record of occurrence of *Symphodus bailloni* (Osteichthyes: Perciformes: Labridae) in the Western Black Sea Coast of Turkey. Notably, Kullander *et al.* (2008) published a new species of cyprinid fish from Myanmar. Further, Conway and Kottelat (2007) had reported a new species of *Psilorhynchus* from the Ataran River Basin, in Myanmar. Wikramanayake, and Moyle (1989) had dealt with the ecological structure of Tropical Fish Assemblages in wet-zone streams in Sri Lanka.

#### **Geographical position of the Sampling site and Study points in River Serlui in Mizoram:**

Chemphai Village (Near Belkhatri)

Village:	N 24 ° 22' 39.8"
Chemphai	E 92° 47' 4.4"

**Altitude (m MSL):** 34.14 m MSL

The diversity of ichthyofauna of River Serlui in Mizoram along with their conservation status at the

global and regional levels have been presented in Table 1.

Further, **Total Systematic list of Fishes and the corresponding Systematic description of the individual Fish Species of all Collections for the entire surveyed period in River Serlui is given below: *R Serlui Orderwise Spp Nos***

*Cypriniformes: 9 Fish species*

*Siluriformes: 7 Fish species*

*Beloniformes: 1 Fish species*

*Anabantiformes: 1 Fish specie*

**Systematic List of Fishes of whole R Serlui for the entire collections for all collection Dates, Sites during the whole study period**

**R. Serlui: Total No. of:**

**Order: 4**

**Family: 10**

**Sub-family: 4**

**Genus: 17**

**Species: 18**

**R. Serlui: Total Systematic Fish List:**

***Order(I): Cypriniformes***

***Family (A): Danionidae***

***Sub-family(a): Chedrinae***

**Genus (i): *Salmostoma* Swainson 1839**

***Species (1): Salmostoma bacaila (Hamilton, 1822)***

***Order(I): Cypriniformes***

***Family (A): Danionidae***

***Sub-family(a): Chedrinae***

**Genus: (ii) *Cabdio* Hamilton 1822**

***Species(2): Cabdio morar (Hamilton, 1822)***

***Order(I): Cypriniformes***

***Family (A): Danionidae***

***Sub-family(a): Chedrinae***

***Genus(iii): Opsarius McClelland, 1838***

***Species (3): Opsarius tileo (Hamilton, 1822)***

***Order(I): Cypriniformes***

***Family (A): Danionidae***

***Sub-family(a): Chedrinae***

***Genus (iv): Barilius Hamilton, 1822***

*Species(4): **Barilius** *vagra* (Hamilton, 1822)*

*Order(I): Cypriniformes*

*Family(B): Cyprinidae*

*Sub-family(b): Labeoninae*

*Genus: (v) **Labeo** Cuvier, 1816*

*Species (5): **Labeo** *gonius* (Hamilton, 1822)*

*Order(I): Cypriniformes*

*Family(B): Cyprinidae*

*Sub-family(b): Labeoninae*

*Genus (vi) **Cirrhinus** Cuvier, 1817*

*Species (6): **Cirrhinus** *mrigala* (Hamilton, 1822)*

*Order(I): Cypriniformes*

*Family(C): Psilorhynchidae*

*Genus (vii): **Psilorhynchus** McClelland, 1839*

*Species (7): **Psilorhynchus** *balitora* (Hamilton, 1822)*

*Order (I): Cypriniformes*

*Family(D): Nemacheilidae*

*Genus (viii): **Schistura** McClelland, 1839*

*Species(8): **Schistura** *multifasciata* (Day, 1878)*

*Order(I): Cypriniformes*

*Family(E): Botiidae*

*Sub-family (c): Botiinae*

*Genus(ix): **Botia** Gray,1831*

*Species (9): **Botia** *dario* (Hamilton, 1822)*

*Order(II): Siluriformes*

*Family (F): Bagridae*

*Genus (x) **Mystus** Scopoli, 1777,*

*Species(10): **Mystus** *cavasius* (Hamilton, 1822)*

*Order (II): Siluriformes*

*Family (F): Bagridae*

*Genus (x): **Mystus** Scopoli, 1777,*

*Species (11): **Mystus** *tengara* (Hamilton, 1822)*

*Clupisoma garua*

*Order:(II): Siluriformes*

*Family (G): Schilbeidae*

*Genus (xi): **Clupisoma** Swainson, 1938*

*Species (12): **Clupisoma** *garua* (Hamilton, 1822)*

Order: (II): Siluriformes

Family (G): Schilbeidae

**Genus (xii): *Eutropiichthys*** Bleeker, 1862

Species (13): ***Eutropiichthys vacha*** (Hamilton, 1822)

Order(II): Siluriformes

Family: (H): Sisoridae

Sub-family (d): Sisorinae

Genus (xiii): *Gagata* Bleeker, 1856

Species (14): ***Gagata cenia*** (Hamilton, 1822)

Order(II): Siluriformes

Family (H): Sisoridae

Sub-family(d): Sisorinae

**Genus (xiv): *Glypthorax*** Blyth, 1860

Species(15): ***Glypthorax telchitta*** (Hamilton, 1822)

Order (II): Siluriformes

Family (H): Sisoridae

Sub-family(d): Sisorinae

Genus (xv): *Pseudolaguvia*. Misra, 1976

Species (16): ***Pseudolaguvia shawi*** (Hora, 1921)

Order (III): Beloniformes

Family (I): Belonidae

**Genus (xvi): *Xenentodon*** Regan, 1911

Species (17): ***Xenentodon cancila*** (Hamilton, 1822)

Order (IV): Anabantiformes

Family (J): Ambassidae

**Genus(xvii): *Parambassis*** Bleeker, 1874

Species (18): ***Parambassis ranga*** (Hamilton, 1822)

## 2. Method

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 fishes. Fishes 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 (Day, 1873, 1885, 1878, 1889; Shaw and Shebbeare, 1937; Misra, 1959; Menon, 1974, 1999; Talwar and Jhingran, 1991; Jayaram, 1981, 1999, 2010) and fishbase.org. The arrangement of classification, followed here,

is that of Greenwood *et al.* (1966) and Jayaram (1981, 1999, 2003, 2010); Kar and Khynriam, 2022, 2024, Kar, 2025 a, b, c).

Concomitantly, species composition of the ichthyospecies collected from River Serlui from different sites on different dates have been presented in the following running table:

Collectns.	SI 102: R Serlui: Coll: 29	SI 103: R Serlui: Coll: 26
From River	10 2002	10 2000
Serlui		
Order	2	4
Family	4	9
Sub-family	3	4
Genus	6	13
Species	6	14

### 3. Result

#### Systematic account of the Fishes of River Serlui

*Genus: Salmostoma* Swainson, 1839

***Salmophasia*** Swainson, 1839, *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, 2010, *FW Fishes of the Indian Region*: 65; Menon, 1999, *Rec.Zool. Surv. India Occ. Paper* No. 175: 24.

*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. Ll complete with usually 39 to 112 scales.

*Material examined*:

(a) River Serlui in Mizoram; Collection date: 26 10 2000; 1 Ex.; *Museum No.* 103 / 11 (i); Collection and First Report by: Professor D. Kar and Party.

*Key to species*: Presence of 4-6 Ll scales between Ll and pelvic fin base

***Salmostoma bacaila*** (Hamilton, 1822)

*Distribution*: In many water bodies in India (including Sone Beel, Shiv Narayanpur Anua, etc, in Assam: First Report by Professor D. Kar and Party; River Barak in Assam: First Report by Professor D.

Kar and Party; Rivers Tuirial, Tlawng, Kolodyne, Karnafuli, Serlui in Mizoram: First Reports by Professor D. Kar and Party); also, in Bangladesh, Nepal, etc.

*IUCN status*: Least Concern (LC).

**Genus: *Cabdio* Hamilton 1822**

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

**Generic characters**: Body elongate. Abdomen rounded. Head moderate rounded anteriorly. Snout obtuse. Mouth small, inferior. Eyes lateral. Lips thin. Lower jaw without any lip and with a sharp crescentic bony edge. Barbel absent. 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:

(a) River Serlui in Mizoram; Collection date: 26 10 2000; 2 Ex.; *Museum No.* 103 / 9 (i), 9 (ii); Collection and First Report by: 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, 1822)**

**Distribution**: In many water bodies in India (including River Barak at Lakhipur and at Khangbor in NE India: First Reports by Professor D. Kar and Party; River Gomati in Tripura: First Report by Professor D. Kar and Party; Rivers Tlawng, Mat, Kolodyne, Serlui in Mizoram: First Reports by Professor D. Kar and Party), also, in Bangladesh, Nepal, Pakistan, etc.

*IUCN Status*: Least Concern (LC)

**Genus: *Opsarius* McClelland, 1838**

*Opsarius* McClelland, 1838. *Journal of the Asiatic Society of Bengal* 7: 944.

Generic characters: Body long, mouth widely cleft and horizontal with symphysial 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:

(a) River Serlui in Mizoram; Collection date: 29 10 2002; 1 Ex.; *Museum No.* 102 / 1 (I); Coll. and First Report by: Professor D. Kar and Party.

Key to species: Body with 2 or 3 rows of blue spots and blotches along sides of body.

***Opsarius tileo* (Hamilton, 1822)**

**Distribution**: In water bodies in India particularly in the rheophilic hill streams (including River Barak at Karong (Nagaland-Manipur Border): First Report by Professor D. Kar and Party; River Barak at Lakhipur: First Report by Professor D. Kar and Party; Rivers Tuirial, Tlawng, Serlui in Mizoram: First Reports by Professor D. Kar and Party; also in West Bengal. Bangladesh, Myanmar, Nepal, Pakistan, etc.

*IUCN Status*: Least Concern (LC).

**Genus *Barilius* Hamilton, 1822.**



*Barilius* Hamilton, 1822, 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. 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. Adults generally live in hill streams with gravelly bottom.

*Material examined:*

(a) River Serlui in Mizoram; Collection date: 29 10 2002; 1 Ex.; *Museum No. 102 / 2 (i)*; Collection and First Report by: Professor D. Kar and Party.

**Key to species:** Body depth 20.9 to 22.3 % SL.

***Barilius vagra* (Hamilton, 1822)**

Distribution: In water bodies in India (including Rivers Tuirial, Tlawng, Serlui in Mizoram: First reports by Prof. D. Kar and Party: also in Rivers Brahmaputra, Ganges, Indus, Yamuna river systems; Bangladesh, Nepal, Pakistan, Sri Lanka, etc.

IUCN Status: Least Concern (LC).

***Genus: Labeo* Cuvier, 1816**

*Labeo* *cuvier*, 1816, *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, 2010, *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.

*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 semi-lunar and inferior. Eyes moderately large, generally placed at the commencement of the posterior half of the head. 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 Serlui in Mizoram; Collection date: 26 10 2000; 1 Ex.; *Museum No. 103 / 1 (i)*; Collection and First Report by: Professor D. Kar and Party.

**Key to species:** Barbels two very short pairs, rostral and maxillary. Dorsal fin with 16-18 branched rays. Lateral line with 65 - 84 scales. Lips thick and fringed.

***Labeo goni* (Hamilton, 1822)**

**Distribution:** In water bodies in India (including wetlands like Salchapra Anua, Rupairbala Anua in Assam: First Report by: Professor D. Kar and Party; River Serlui in Mizoram: First Report by: Professor D. Kar and Party); also in Afghanistan, Bangladesh, Myanmar, Nepal, Pakistan, etc.

**IUCN Status:** Least Concern (LC).

**Genus: *Cirrhinus* Cuvier, 1817**

***Cirrhinus*** (Oken), Cuvier, 1817, V.KI. *Fische*. IN: Isis order Encyclopädische Zeitung, 8: 113 (type species, *Cyprinus cirrhosus* Bleeker, by monotypy), -Banarescu, 1983, Rev.Roum. Biol. (Zool). 28 (1): 13-17 (revision)

**Generic characters:** Body moderate, elongate, compressed. Abdomen rounded. Head short. Snout obtusely rounded, with thin skin covering it. Mouth wide, transverse. Eyes moderately large. Upper lip fringed or entire, not continuous with lower. Lower jaw sharp with a small tubercle at the symphysis. Barbels four, two or none. Dorsal fin inserted ahead of pelvic fins. Anal fin short. Scales of varying sizes. Lateral line complete.

**Material examined:**

(a) River Serlui in Mizoram; Collection date: 26 10 2000; 1 Ex.; *Museum No. 103 / 2* (i); Collection and First Report by: Professor D. Kar and Party.

**Key to species:** Lateral line scales 40 to 45. Dorsal fin with 15 or 16 rays.

***Cirrhinus mrigala* (Hamilton, 1822)**

**Distribution:** Almost throughout India (including Sone Beel, Salchapra Anua in Assam: First Report by: Professor D. Kar and Party; River Serlui in Mizoram: First Report by: Professor D. Kar and Party); also, in Bangladesh, Darjeeling, and Eastern Himalayas, South and South-Eastern Asia, etc.

**IUCN Status:** Least Concern (LC).

**Genus: *Psilorhynchus* McClelland, 1839**

***Psilorhynchus*** McClelland, 1839, 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, dorso-lateral 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 Serlui in Mizoram; Collection date: 29 10 2002; 22 Ex.; *Museum No. 102 / 5* (i) to 5 (xxii); Collection and First Report by: Professor D. Kar and Party.

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

***Psilorhynchus balitora*** (Hamilton, 1822)

Distribution: In many water bodies in India, particularly, in the hill streams (including upstream rheophilic stretch of River Barak at Phulpui in North-East India: First report by Professor D. Kar and Party; in the upstream hilly stretch of River Tuivai at 20 km upstream from Barak Damsite: First report by Professor D. Kar and Party; in Rivers Tuirial, Tlawng, Mat, Kolodyne, Tuichong, Tuivai, Serlui in Mizoram: First reports by Professor D. Kar and Party; in **River Gomati in Tripura**: First report by Professor D. Kar and Party); also, in the Ganga-Brahmaputra basin. Bangladesh, Bhutan, Nepal, etc., IUCN Status: Least Concern (LC).

**Genus: *Schistura*** McClelland, 1839

*Schistura* McClelland, 1839, Asiat. 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 auxillary 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:*

(a) River Serlui in Mizoram; Collection date: 26 10 2000; 1 Ex.; *Museum No.* 103 / 14 (i); Collection and First Report by: 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: In many water bodies in India, particularly, in the hill streams (including River Barak at Karong (Nagaland-Manipur Border): First Report by Professor D. Kar and Party; River Barak at Phulpui in the upper hill stream stretch of the River Barak along Assam, Manipur, Mizoram border in NE India: First Report by Professor D. Kar and Party; **Rivers Tuirial, Tlawng, Serlui in Mizoram**: First Reports by Professor D. Kar and Party; **River Gomati in Tripura**: First Report by Professor D. Kar and Party); also, in other parts of the Himalayas, notably, in Bhutan, Nepal, Myanmar, Thailand, etc.

IUCN status: Least Concern (LC) *Genus: Botia* Gray, 1831.

**Botia** Gray, 1831, Zool Misc. 8 (Type species, Botia almorhae Gray, by monotype), - Hora, 1922, Rec India Mus., 24: 313-321 (revision)- Banarescu and Nalbant, 1968, Mitt. Hamburg Zool. Mus. Inst, 65: 341 (revision)-Taki, 1972, Jap. J. Ichthyol., 19 (2): 63-81 (review)-Menon, 1992, Fauna India, 4(2), p. 31 (revision)-Jayaram, 1999, 2010, Freshwater Fishes of the Indian Region: 209, -Menon, 1999, Rec Zool Surv India, Occ. Paper No. 175: 155 (Check list).

**Generic characters:** Body oblong, short, moderately deep. Abdomen rounded. Head long, pointed. Snout conical, ventrally flat. Mouth small. Eyes moderately large, superior, in mid-part of head without any skin covering them. Anterior nostrils tubular. Lips thick, fleshy. Presence of a bifid erectile sub-orbital spine below or in front of eyes. Dorsal fin inserted above origin of pelvic or slightly ahead. Anal fin short. Caudal fin deeply forked. Scales absent on head.

**Material examined:**

(a) River Serlui in Mizoram (MZ); Collection date: 29 10 2002; 4 Ex.; *Museum No. 102 / 3* (i) to 3 (iv); Collection and First Report by: Professor D. Kar and Party.

(b) River Serlui in Mizoram (MZ); Collection date: 26 10 2000; 3 Ex.; *Museum No. 103 / 4* (i) to 4 (iii); Collection and First Report by: Professor D. Kar and Party.

**Key to species:** Body with 7 or 8 brownish oblique vertical bands. Eye diameter 33.3 % snout length.

**Botia dario** (Hamilton, 1822).

**Distribution:** In many water bodies in India, both in lotic and lentic water bodies (including Sone Beel in Assam: First Report by: Professor D. Kar and Party; Baskandi Anua in Assam: First Report by: Professor D. Kar and Party; River Barak at Teulien in North-East India: First Report by: Professor D. Kar and Party; River Barak at Fulertal, Katigora in Assam: First Report by: Professor D. Kar and Party; Rivers Tuirial, Tlawng, Serlui in Mizoram: First Reports by: Professor D. Kar and Party); also, in Bihar, North Bengal, Punjab, UP, Bhutan, Bangladesh, Myanmar, Nepal, Pakistan, Sri Lanka, etc.

**IUCN status:** Least Concern (LC).

**Genus: *Mystus*** Scopoli, 1777.

***Mystus*** Russell, 1756, *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. **Genus: *Mystus*** Scopoli, 1777. *Introduction and historiam naturalem*: 451 (Type by subsequent designation: *Masc. Bagrus halepensis* Valenciennes 1840).

**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 barbels; 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 simple, complete.

*Material examined:*

(a) River Serlui in Mizoram; Collection date: 26 10 2000; 2 Ex.; *Museum No.* 103 / 3 (ii), 8 (i); Collection and First Report by: Professor D. Kar and Party.

*Key to species:* Maxillary barbels reach caudal fin base or even beyond. A mid-lateral stripe along Ll may sometimes be seen and another faint one above. Presence of a faint spot at base of dorsal spine.

***Mystus cavasius*** (Hamilton, 1822)

*Distribution:* In many water bodies in India (including wetlands in Assam, notably, Sone Beel, Fulbari Anua, Rupairbala Anua in Assam: First Reports by Professor D. Kar and party; River Gomati in Tripura: First Report by Professor D. Kar and party; Rivers Tuirial, Kolodyne, Karnafuli, Serlui in Mizoram: First Reports by Professor D. Kar and party); also, in Myanmar, Pakistan, Sri Lanka, etc.

*IUCN status:* Least Concern (LC)

*Material examined:*

(a) River Serlui in Mizoram; Collection date: 26 10 2000; 1 Ex.; *Museum No.* 103 / 13 (i); Collection and First Report by: Professor D. Kar and Party.

*Key to species:* Maxillary barbels reaching base of pectoral fin. Presence of approximately 5 parallel longitudinal stripes on each side of the lateral line.

***Mystus tengara*** (Hamilton, 1822)

*Distribution:* In many water bodies in India (including Sone Beel, Chatla Haor in Assam: First Reports by Professor D. Kar and Party; Rivers Tlawng, Karnafuli, Serlui in Mizoram: First Reports by Professor D. Kar and Party); also in Bangladesh, Myanmar, Nepal, Pakistan, Sri Lanka, etc.

*IUCN status:* Least Concern (LC)

*Genus:* ***Clupisoma*** Swainson, 1838

*Clupisoma* Swainson, 1838, *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:*

(a) River Serlui in Mizoram; Collection date: 26 10 2000; 1 Ex.; *Museum No.* 103 / 7 (i); Collection and First Report by: 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 garua*** (Hamilton, 1822)

**Distribution:** In many water bodies in India (including Sone Beel in Assam: First Report by Professor D. Kar and Party; Baskandi Anua in Assam: First Report by Professor D. Kar and Party; Rivers Tlawng, Serlui in Mizoram: First Reports by Professor D. Kar and Party); also in Bangladesh, Myanmar, Nepal, etc.

**IUCN status:** Least Concern (LC)

**Genus:** *Eutropiichthys* Bleeker, 1862

*Eutropiichthys* Bleeker, 1862, *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 barbels; 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:**

(a) River Serlui in Mizoram; Collection date: 26 10 2000; 1 Ex.; *Museum No. 103 /3 (i)*; Collection and First Report by: Professor D. Kar and Party.

**Key to species:** Nasal barbels reach hind border of head or slightly beyond.

***Eutropiichthys vacha*** (Hamilton, 1822)

**Distribution:** In many water bodies in India (including Sone Beel, in Assam: First Report by Professor D. Kar and Party; River Barak at Fulertal in Assam: First Report by Professor D. Kar and Party; Rivers Mat, Kolodyne, Karnafuli, Tuichong, Serlui in Mizoram: First Reports by Professor D. Kar and Party); also, in Bangladesh, Myanmar, Thailand, etc.

**IUCN status:** Least Concern (LC)

**Genus:** *Gagata* Bleeker, 1858

*Gagata* Bleeker, 1858. *Ichthyol. Archipel Indici Prodr.*, 1: 204 (type species: *Pemelodus gagata* 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 and 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 Serlui in Mizoram; Collection date: 26 10 2000; 2 Ex.; *Museum No. 103 /6(i),6 (ii)*; Collection and First Report by: 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, 1822):

Distribution: In many water bodies in India, usually, in the hill streams (including River Barak at Khangbor in NE India: First Report by Professor D. Kar and Party; **River Gomati in Tripura**: First Report by Professor D. Kar and Party; Rivers Tlawng, Karnafuli Tuichong, Serlui in Mizoram: First Reports by Professor D. Kar and Party); also, in Nepal, Myanmar, Bangladesh, Thailand, Sumatra, etc.

IUCN status: Least Concern (LC)

**Genus: *Glyptothorax*** Blyth, 1860

***Glyptothorax*** Blyth, 1860, *J.Asiat.Soc., Bengal*, 29: 154 (Type species: *Glyptothorax trilineatus* Blyth); Hora, 1923, *Rec.Indian Mus.*, 25: 8 (revision); Prashad and Mukerji, 1929, *Rec. Indian Mus.*, 31: 164, 183, 185)Burmese species0; Hora and Gupta, 1941, *Bull. Raffles Mus.*, 17: 33, Pl. 3 (Malayan species); Menon, M.A.S., 1954, *Rec.Indian Mus.*, 62: 30 (revision); Li, 1986, *Indo-Paific Fish Biology*: 521-528; Nath and Dey, 2000, *Fish and Fisheries of NE India*: 111; Jayaram, 2006, *Catfishes of India*: 256; Thompson and Page, 2006, *Zootaxa*, 1345: 40 (Check list); Ferraris, 2007, *Zootaxa*, 1418: 387 (Check list).

**Generic characters:** Body of small to moderate size. Dorsal profile not much arched. Head small, depressed, covered with thick skin. Mouth conical but not pointed. Upper jaw longer. Mouth inferior, transverse, narrow. Presence of an adhesive organ on the ventral surface of thorax; which is confined to the abdomen immediately between the pectotal fins; and, further, it may be of varying lengths and may be with or without a pit or depression. Barbels: 4 pairs; 1 pair each of maxillary and nasal; and, 2 pairs of mandibular. Rayed dorsal fin with 5 to 7 rays and a spine. Adipose dorsal fin short and posteriorly free. Pectotal fins inserted laterally with 6 to 11 rays and a flat strong spine. Pelvic fins with 6 rays. Anal fin short with 7 to 14 rays. Caudal fin deeply forked. Lateral line simple and complete.

*Material examined:*

(a) River Serlui in Mizoram; Collection date: 29 10 2002; 4 Ex.; *Museum No. 102 /4 (i) to 4 (iv)*; Collection and First Report by: Professor D. Kar and Party.

(b) River Serlui in Mizoram; Collection date: 26 10 2000; 2 Ex.; *Museum No. 103 / 12 (i), 12 (ii)*; Collection and First Report by: Professor D. Kar and Party.

**Key to species:** Thoracic adhesive apparatus with narrow folds of skin, incomplete osteriorly. Nostrils separated from the snout by a distance equal to eye diameter.

***Glyptothorax telchitta*** (Hamilton, 1822)

Distribution: In many water bodies in India, particularly, in the hill streams. Also, found in the plain water mid-stream and downstream stretches of Rivers, like River Barak at Lakhipur and Katigora: First Reports by Professor D. Kar and Party; in Rivers Tuirial, Tlawng, Mat, Kolodyne, Tuivai, Serlui in Mizoram: First Reports by Professor D. Kar and Party); also, found in Bangladesh, Nepal, etc.

IUCN status: Least Concern (LC)

***Pseudolaguvia*** Misra, 1976

***Pseudolaguvia*** Misra, 1976, *Fauna of India, Pisces*, Ed. 2, 2: 258 (Type species: *Glyptothorax tuberculatus* Prashad and Mukerji, by original designation); Britz and Ferraris, 2003, *Zootaxa*, 388: 1-8 (*Laguvia* species considered as belonging to *Pseudolaguvia*)(Jayaram, 2010); Jayaram, 2006, *Catfishes of India*: 299; Thompson and Page, 2006; *Zootaxa*, 1340: 20 (Checklist); Ferraris, 2007, *Zootaxa*, 1418: 401 (Check list).

*Generic characters*: Presence of a prominent elongated adhesive thoracic apparatus formed by longitudinal, muscular skin-folds, with a distinctive central pit. Adipose dorsal contiguous with rayed dorsal with very little inter-space.

*Material examined*:

(a) River Serlui in Mizoram; Collection date: 29 10 2002; 1 Ex.; *Museum No. 102 / 4 (v)*; Collection and First Report by: Professor D. Kar and Party.

*Key to species*: Thoracic adhesive apparatus comparatively poorly developed. Presence of two broad vertical bands each below the rayed dorsal fin. Pelvic fins inserted nearer to tip of snout than caudal fin base.

***Pseudolaguvia shawi*** (Hora, 1921)

Distribution: In water bodies in India, (including Rivers Tuirial, Tlawng, Serlui in Mizoram: First Reports by Professor D. Kar and Party); also in Darjeeling, Kalimpong, Duars, Siliguri, Arunachal Pradesh, etc.

IUCN status: Least Concern (LC)

*Genus*: ***Xenentodon*** Regan, 1911

*Xenentodon* Regan, 1911, *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. 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 Serlui in Mizoram; Collection date: 26 10 2000; 2 Ex.; *Museum No. 103 / 5 (i), 5 (ii)*; Collection and First Report by: 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, 1822)

**Distribution:** In many water bodies in India (including wetlands in Assam, notably, Sone Beel, Salchapra Anua in Assam: First Reports by Professor D. Kar and party; River Gomati in Tripura: First Report by Professor D. Kar and party; Rivers Tuirial, Tlawng, Mat, Kolodyne, Karnafuli, Serlui in Mizoram: First Reports by Professor D. Kar and party); also in Manipur, Nepal, etc.

**IUCN status:** Least Concern (LC)

**Genus:** *Parambassis* Bleeker, 1874

***Parambassis*** Bleeker, 1874, *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.

**Generic Characters:** Body elongate, compressed. Abdomen round. Head short, compressed. Snout pointed. Mouth large; gape oblique; extending to anterior border of orbit. Eyes large, superior. Jaws straight or only slightly upturned. Supra-orbital ridge smooth or serrated, with one or two spines posteriorly. Presence of 2 dorsal fins with 6 or 7 spines and 11 to 14 rays, which are closely placed with a notch in between. Anal fin with 3 spines and with 11 to 16 rays.

**Material examined:**

(a) River Serlui in Mizoram; Collection date: 26 10 2000; 1 Ex.; *Museum No. 103 /10 (i)*; Collection and First Report by: Professor D. Kar and Party.

**Key to species:** Body depth 41.7 to 43.4 %; caudal peduncle depth 0.9 to 12 % SL.

***Parambassis ranga*** (Hamilton, 1822)

**Distribution:** In many water bodies in India (including Sone Beel, Sat Beel in Assam: First Reports by Professor D. Kar and party; Rivers Tuirial, Tlawng, Kolodyne, Karnafuli, Serlui in Mizoram: First Reports by Professor D. Kar and party); also, in Bangladesh; Malaysia, Myanmar, etc.

**IUCN status:** Least Concern (LC).

#### 4. Discussion

An overall recapitulation of the habitat inventory parameters of the River Serlui had portrayed that, four distinct types of substrates usually constitute the bottom or substratum of a Hill stream. These are: (i) Bedrock, (ii) Boulder, (iii) Cobbles and Gravels and (iv) Fines consisting of silt, sand and clay. However, falls are rarely seen in the entire length of the River Serlui. Moreover, all the components may not be equally represented in every river. The River Serlui in Mizoram, being not too long a river, does not have a very long rheophilic stretch in its hilly portion; as the river flows through a not much long range of mountains. In the upstream hilly portion, the River Serlui mainly depicts riffle-pool type of microhabitat being occasionally amalgamated with cascade type of microhabitat. Cobbles and

gravels form the predominant type of substrata; having been very rarely associated with boulders. On the other hand, as the river Serlui enters the plains in Barak valley region of Assam, the River Serlui becomes known as River Rukni; and, its micro-habitat mainly consists of run-sheet type with laminar flow of water; as is characteristic of many other plain water rivers. Concomitantly, the substratum is also formed mainly by fines consisting of silt, sand and clay. Ultimately, the River Rukni Joins River Sonai (called River Tuirial in Mizoram) around a village called Palonghat in Cachar, Assam; and, the combined flow joins the River Barak around village Kaptanpur in Sonai town.

Concomitant to above, local conservation strategies are generally devised (corroborating with IUCN criteria) for adopting locally suitable species-specific conservation strategies.

Notwithstanding the above, various scientists, notably, Bailey, R.G.(1994,1996) and Bailey and Hickley (1986) had worked on the aquatic bodies and fish species in Africa. In addition, Didem *et al.* (2012) dwelt upon the fishes of Western Black Sea Coast of Turkey; while, Kullander and Britz (2008) and Conway and Kottelat (2007) had reported about the fishes of Myanmar..

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**Table 1. Ichthyospecies composition, Seasonal Distribution and Conservation Status of Fishes of River Serlui in Mizoram**

Fish name	Collection date: 29 10 2002	Collection date: 26 10 2000	Total No. of Fish collected	Conservation Status (Global) IUCN Conservation status (Global)	Conservation Status (Local) Conservation status (Local) (based on occurrence of Fish species)
River No. 102, +(No. of Fishes), River No./Fish No.	River Coll No. 102, +(No. of Fishes), River No./Fish No.	River Coll No. 103, +(No. of Fishes), River No./Fish No.			

		=Museum No.	=Museum No.		LC=Least Concern VU= Vulnerable EN= Endangered NT=Near Threatened NE=Not Evaluated DD-Data Deficient	in 1 or >1 locations: 1 Location: of Concern(C) 2 Locations:Less Concern(LC) >2Locations:No Concern(NC) )
1	<i>Salmostoma bacaila</i>		+(1),103 / 11 (i)	1	LC	C
2	<i>Cabdio morar</i>		+(2),103 / 9 (i), 9 (ii)	2	LC	C
3	<i>Opsarius tileo</i>	+(1),102 / 1 (I)		1	LC	C
4	<i>Barilius vagra</i>	+(1),102 / 2 (i)		1	LC	C
5	<i>Labeo gonius</i>		+(1), 103 / 1 (i)	1	LC	C
6	<i>Cirrhinus mrigala</i>		+(1), 103 / 2 (i)	1	LC	C
7	<i>Psilorhynchus balitora</i>	+(22),102 / 5 (i) to 5 (xxii)		22	LC	C
8	<i>Schistura multifasciata</i>		+(1),103 / 14 (i)	1	LC	C
9	<i>Botia dario</i>	+(4),102 / 3 (i) to 3 (iv)	+(3), 103 / 4 (i) to 4 (iii)	7	LC	LC
10	<i>Mystus cavasius</i>		+(2),103 / 3 (ii), 8 (i)	2	LC	C
11	<i>Mystus tengara</i>		+(1), 103 / 1 13 (i)	1	LC	C

12	<i>Clupisoma garua:</i>		+(1), 103 / 7	1	LC	C
			(i)			
13	<i>Eutropiichthys</i>		+(1), 103 / 3	1	LC	C
	<i>vacha</i>		(i)			
14	<i>Gagata cenia</i>		+(2), 103	2	LC	C
			/6(i), 6 (ii)			
15	<i>Glyptothorax</i>	+(4), 102 / 4	+(2), 103 / 12	6	LC	LC
	<i>telchitta</i>	(i) to 4 (iv)	(i), 12 (ii)			
16	<i>Pseudolaguvia</i>	+(1), 102 / 4		1	LC	C
	<i>shawii</i>	(v)				
17	<i>Xenentodon</i>		+(2), 103 / 5	2	LC	C
	<i>cancila</i>		(i), 5 (ii)			
18	<i>Parambassis</i>		+(1), 103 / 10	1	LC	C
	<i>ranga</i>		(i)			