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Original Paper

DISTRIBUTION AND CONSERVATION STATUS OF FISH SPECIES IN RIVER THING TLAWNG LUI (HILL SINGLA) IN MIZORAM (NORTH-EAST INDIA): PIONEERING TAXONOMIC STUDY AND REPORT

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Abstract

Fish faunal surveys conducted in the River Thing Tlawng Lui (hill Singla) in Mizoram, North-East India Himalayan Biodiversity Hotspot region, revealed the occurrence of 27 species of fishes belonging to 23 genera, 7 sub-families, 13 families and 6 orders. These include 17 species of fishes under Cypriniformes; 4 Fish species under Anabantiformes; 3 ichthyospecies under Siluriformes; and, 1 ichthyospecies each under Clupeiformes, Beloniformes and Cichliformes. Distrubution and Conservation status of each fish species have been discussed in the present communication.

Keywords

Fish taxonomy, ***Thing Tlawng Lui (hill Singla), Mizoram, North-East India*** *Himalayan Biodiversity Hotspot, Conservation*

1. Introduction

Fish constitutes approximsterly half of the total craniate population in the earth. Fishes live in almost every conceivable aquatic habitats in the world. *c* 21,723 species of living piscian fauna have been noted out of *c* 39,900 species of craniates in the globe. (Jayaram, 2003, 2010; Nelson *et al.,* 2016, Kar, 2025 a, b, c, d). Of these, *c* 8411 are freshwater (FW) inhabitants and *c* 11,650 are marine. Incidentally, India is considered as a Megabiodiversity country in the globe (Mittermeier & Mittermeier, 1997). In India, *c* 2500 fish species have been reported; out of which, *c* 930 species are freshwater (FW) inhabitants; while, *c* 1570 are marine (Jayaram, 2010; Kar, 2003, 2007, 2010, 2019, 2025 a,b,c,d). This

bewildering fish biodiversity of this region had been attracting many ichthyologists both from India and abroad. Concomitantly, North-East (NE) region of India is regarded as a “Hotspot” of Biodiversity in the Eastern Himalayan region, by the World Conservation Monitoring Centre (WCMC, 1998). The prolific biodiversity of this region could be assigned to a number of reasons; notably, the geomorphology and the tectonics of this zone. The hills and the undulating terrains of this region are said to give rise to innumerable torrential hill streams, which lead to big rivers; and, ultimately, become integral components and part and parcel of the Ganges-Brahmaputra-Barak-Chindwin-Kolodyne-Gomati-Meghna river system (Kar, 2000, 2007, 2013, 2019, 2021a, b, c, d, 2025a b c d).

There are numerous lentic and lotic water bodies in India. And, the province of Assam, situated in the NE Himalayan belt, is a hotspot of fish biodiversity living in many lentic and lotic water bodies of different kinds, including hill streams (containing rheophilic fishes); and, also in plainwater rivers and streams. Nevertheless, the water bodies and the biota in them, have been much impacted by human interventions.

An overall 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 Peninsiular 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 conducting extensive and intensive research works in NE India on various aspects of fish and their habitats. Incidentally, Kar and Sen (2007) reported about 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; and, Kar *et al.,* 2007, 2008, 2011, 2018, 2020 did extensive and intensive research studies on the fish taxonomy and diversity and other related parameters in many water bodies in North-East India.

Concomitant to above, Kar and Das (2015), Kar and Kumar (2023), Barbhuiya, Singha, and, Kar (2021) reported the present status of water bodies and human impact *vis-a-vis* sustainability of fishes, particularly the endangered mahseer fishes. Kar and Das (2024) reported the fish 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) published their research results on the fishes of River Barak at Karong. along Manipur-Nagaland border. In addition, Kar and Khynriam (2023) published results of thier Pioneering research studies 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 studies on the Taxonomy, 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) had dealt with the *hitherto* unknown, virulent and enigmatic fish disease called Epizootic Ulcerative Fish Disease

Syndrome (EUS). Kar *et al.* (2008 a, b, c, d; 2003, 2007, 2008, 2011, 2018 a, b) had worked on 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 zooplankon assemblage in the water bodies in Assam.

Notwithstanding the above, Kar (2005 b) had presented his research results 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, held at the University of Sussex at Brighton in the UK. Moreover, Kar (2007 b) deliberated 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 (2016a) had 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 (2016b) presented his research results 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).

Notwithstanding the 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). Meanwhile, Bănăduc *et al.* (2020) had worked significantly on the water bodies in Romania.

Concomitant to above, Bailey, R. G. (1994) had worked with the fishes of River Nile in the Congo Republic. Moreover, Bailey (1996) had studied the Fish and Fisheries Ecology of a lentic system in Tanzania. Further, Bailey and Hickley (1986) had reported about *Nothobranchius virgatus* Chambers, a new killifish from southern Sudan. Moreover, Didem *et al.* (2012) had dwelt upon a New Record of occurrence of *Symphodus bailloni* (Osteichthuyes: Perciformes: Labridae) in the Western Black Sea Coast of Turkey. Incidentally, Kullander *et al.* (2008) had reported a new species of cyprinid fish from Myanmar. Further, Conway and Kottelat (2007) had published a new species of *Psilorhynchus* from the Ataran River Basin, in Myanmar. Further, 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 around RiverThing Tlawng Lui (River Singla in Mizoram (MZ)):

N 24^0 15' 12.1" E 92^0 22' 56.8"

Altitude: 83.09 m MSL

The diversity of ichthyofauna of River Thing Tlawng Lui (River Singla in Mizo Hills) 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 from** River Thing Tlawng Lui **is given below:**

R Singla MZ Hills: Systematic Fish List: of All Collections

Order: 6

Family: 13

Sub-family: 7

Genus: 23

Species: 27

Order (I): Clupeiformes

Family(A): Dorosomatidae

Genus (i): *Gudusia* Fowler 1911

Species(1): Gudusia chapra (Hamilton, 1822)

Order(II): Cypriniformes

***Family (B):* Danionidae**

Sub-family(a): Chedrinae

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

Species (2):Salmostoma bacaila (Hamilton, 1822)

Order(II): Cypriniformes

***Family (B):* Danionidae**

Sub-family(a): Chedrinae

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

Species (3): Opsarius bendelisis (Hamilton, 1807)

Order(II): Cypriniformes

***Family (B):* Danionidae**

Sub-family(a): Chedrinae

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

Species (4): Opsarius barna (Hamilton, 1807)

Order(II): Cypriniformes

***Family (B):* Danionidae**

Sub-family (b): Danioninae

Genus (iv): ***Laubuka*** Bleeker, 1859

Species (5)Laubuka laubuca (Hamilton, 1822)

Order(II): Cypriniformes

Family (B): **Danionidae**

Sub-family (b): Danioninae

Genus: (v): Devario Heckel, 1843

Species (6): *Devario aequipinnatus* (McClelland, 1839)

Order(II): Cypriniformes

Family (B): **Danionidae**

Sub-family(c): Rasborinae

Genus (vi): ***Amblypharyngodon*** Bleeker, 1860

Species (7) Amblypharyngodon mola (Hamilton, 1822),

Order(II): Cypriniformes

Family(C): **Cyprinidae**

Sub-family (d): Smiliogastrinae

Genus (vii) ***Systomus*** McClelland, 1838

Species: **(8)** ***Systomus*** *clavatus (*McClelland, 1845*)*

Order(II): Cypriniformes

Family(C): **Cyprinidae**

Sub-family (d): Smiliogastrinae

Genus: (viii): ***Puntius*** Hamilton, 1822

Species (9): Puntius chola (Hamilton, 1822)

Order(II): Cypriniformes

Family(C): **Cyprinidae**

Sub-family (d): Smiliogastrinae

Genus: (viii) ***Puntius*** Hamilton, 1822

Species (10): ***Puntius sophore*** (Hamilton, 1822)

Order(II): Cypriniformes

Family(C): **Cyprinidae**

Sub-family (d): Smiliogastrinae

Genus: (ix) Pethia Pethiyagoda, 2012

Species (11): ***Pethia conchonius*** (Hamilton, 1822)

Order(II): Cypriniformes

Family(C): **Cyprinidae**

Sub-family (d): Smiliogastrinae

Genus: (ix) Pethia Pethiyagoda, 2012

Species (12): ***Pethia ticto*** (Hamilton, 1822)

Order(II): Cypriniformes

Family(C): **Cyprinidae**

Sub-family(e): Labeoninae

Genus (x) Cirrhinus Cuvier, 1817

Species (13): *Cirrhinus mrigala* **(Hamilton, 1822)**

Order(II): Cypriniformes

Family(C): **Cyprinidae**

Sub-family(e): Labeoninae

Genus (x) Cirrhinus Cuvier, 1817

Species (14):Cirrhinus reba (Hamilton, 1822)

Order(II): Cypriniformes

Family(C): **Cyprinidae**

Sub-family(e): Labeoninae

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

Species (15): Labeo calbasu (Hamilton, 1822)

Order(II): Cypriniformes

Family(C): **Cyprinidae**

Sub-family(e): Labeoninae

Genus (xii) ***Tariqilabeo*** Kuhl van Hasselt, 1823

Species(16): Tariqilabeo latius (Hamilton, 1822)

Order(II): Cypriniformes

Family(D): Nemacheilidae

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

Species(17): Schistura multifasciata (Day, 1878)

Order(II): Cypriniformes

Family: (E): Botiidae

Sub-family:(f): Botiinae

Genus: (18): Botia **Gray,1831**

Species(18): Botia dario **(Hamilton, 1822)**

Order(III): Siluriformes

Family(F): Bagridae

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

Species (19): ***Mystus vittatus*** (Bloch, 1794)

Order (III): **Siluriformes**

Family (F): Bagridae

Genus: (xvi): Batasio **Blyth, 1860**

Species (20): Batasio batasio(**Hamilton, 1822)**

Order (III): Siluriformes

Family (G): Sisoridae

Sub-family:(g): Sisorinae

Genus:(xvii): Erethistes Muller and Troschel, 1849,

Species(21): Erethistes hara (pusillus), Muller and Troschel, 1849/(Hamilton, 1822)

Order (IV): Beloniformes

Family (H): Belonidae

Genus (xviii): Xenentodon Regan, 1911

Species (22): ***Xenentodon cancila*** (Hamilton, 1822)

Order (V): Anabantiformes

Family (I): Ambassidae

Genus (xix): C*handa* Hamilton, 1822

Species (23): *Chanda nama* Hamilton, 1822

Order (V): Anabantiformes

Family (J): Badidae

Genus(xx): Badis Bleeker, 1853

Species (24): ***Badis badis*** (Hamilton, 1822)

Order: (VI): Cichliformes

Family (K): Cichlidae

Genus (xxi): Oreochromis Gunther, 1889

Species: (25): Oreochromis mosambicus (Peters, 1852)

Order: (V): Anabantiformes

Family: (L) Anababtidae

*Genus (xxii): Anabas C*uvier, 1816

Species (26): Anabas testudineus (Bloh, 1792)

Order: (V) Anabantiformes

Family (M): Channidae

***Genus (xxiii): Channa* Scopoli, 1777**

Species(27): ***Channa striata*** (Bloch, 1793)

Number of fish species under each order in River Singla in Mizo Hills:

Order (I): Clupeiformes: 1 Fish species

***Order (II): Cypriniformes:* 17 Fish species**

Order (III): Siluriformes: 3 Fish species

Order (IV): Beloniformes: 1 Fish species

Order (V): Anabantiformes: 4 Fish species

Order: (VI): Cichliformes 1 Fish species

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 theLaboratory. Fishes were identified through standard literature (Day, 1873, 1885, 1878, 1889; Shaw & Shebbeare, 1937; Misra, 1959; Menon, 1974, 1999; Talwar & Jhingran, 1991; Jayaram, 1981, 1999, 2010) and fishbase.org. The arrangement of classification, followed here, is that of Greenwood *et a1.* (1966) and Jayaram (1981, 1999, 2003, 2010); Kar & Khynriam, 2022, 2024). Genus: Gudusia Fowler, 1911. Gudusia Fowler, 1911. Proc Acad. Nat. Sci, Philad. 63: 207 (Type species: Clupanodon chapra Hamilton-Buchanan, by orginal designation); Whitehead, 1985, FAO Fish Synopsis,(125) 7(1): 228-230; Talwar and Jhingran, 1999, Inland Fishes 1: 95; Menon, 1999, Rec. Zool. Surv. India, Occ. Paper No. 175: 7; Jayaram, 1999, 2010, FW Fishes of the Indian Region. *Generic characters*: Body well-compressed and oblong. Abdomen serrated with 18 to 19 pre-pelvic and 8 to 10 post-pelvic scutes. Head short and much compressed. Snout rounded. Mouth terminal. Cleft of mouth not extending upto orbit. Eyes large, lateral. With a broad adipose eyelid. Dorsal fin inserted above pelvic fin origin with 14 to 17 rays. Anal fin with 18 to 29 rays. Caudal fin forked. Scales small. Lateral line absent.

Material examined:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in Mizoram (MZ); Collection date: 28 8 2017; 1 Ex.; *Museum No. 180(d)/12;* Collection and Reported by: Professor D. Kar and Party. *Key to species*: Anal fin with 18 to 22 rays. Body with round spots and absence of any cross bars on sides. ***Gudusia chapra*** (Hamilton, 1822)

Distribution: In many water bodies in India (including Sone Beel in Assam: First Report by Professor D. Kar and Party; Baskandi Anua, Salchapra Anua, Fulbari Anua; Rupairbala Anua, Shiv Narayanpur Anua, etc, in Assam: First Report by Professor D. Kar and Party; River Karnafuli in Mizoram: First Report by Professor D. Kar and Party; River Khujailok in Manipur: Reported by Prof D. Kar and Party); River Thing Tlawng (River Singla in Mizo Hills) in Mizoram (MZ); also, in Bangladesh, Indonesia Malaya, Nepal, Pakistan, etc.*IUCN status*: Least Concern (LC).

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 reachin 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 shaort with 14-20 rays. Caudal fin deeply forked. Ll complete with usually 39 to 112 scales. *Material examined*:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: **16 3 2004;** 6 Ex.; *Museum No. 118 /* 3 (i) to 3 (vi)*;* Collection and Reported 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 in Assam: First Report by Professor D. Kar and Party; Shiv Narayanpur Anua in Assam: First Report by Professor D. Kar and Party; River Barak in Assam: First Report by Professor D. Kar and Party; R Baleswar in Barak valley, Assam: First Report by Professor D. Kar and Party; River Dhaleswari in Assam: First Report by Professor D. Kar and Party; River Singla in Assam: First Report by Professor D Kar and Party; River Thing Tlawng Lui (River Singla in MZ): First Report by Professor D Kar and Party; Rivers Tuirial, Tlawng, Kolodyne, Karnafuli, Serlui, Singla in Mizoram: First Reports by Professor D. Kar and Party); also, in Bangladesh, Nepal, 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.

(A).*Material examined*:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: **16 3 2004;** 25 Ex.; *useum No. 118 /* 1 (i) to 1 (xxv)*;* Collection and First Reported by: Professor D. Kar and Party.

(b) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: **17 4 2015;** 3 Ex.; *Museum No.* 113 / 1 (i) to 1 (iii) Collection and First Reported by: Professor D. Kar and Party.

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

O*psarius bendelisis*(Hamilton, 1807)

Distribution: In many water bodies in India (including River Barak at Karong,Tamenglong, Vangai, Thinghmun-Patpuihmun, Thingkal, Liben (Joining Barak) in North-East India, River Tuirial in MZ: In all these collections: First reports by Professor D. Kar and Party); also in Bangladesh, Bhutan, Myanmar, Nepal, Pakistan, Sri Lanka, and Thailand.

IUCN Status: Least Concern (LC).

***(B) Material examined*:**

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 28 8 2017**;** 1 Ex.; *Museum No. 180(d)/9;* Collection and First Reported by: Professor D. Kar and Party.

(b) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 8 11 2021**;** 10 Ex.; *Museum No180(f)/* 1(i) to 1(x)*;* Collection and First Reported by: Professor D. Kar and Party.

Key to species: Coloured bands usually present on the upper part of Lateral line and generally does not extend below the Lateral line. No barbels.

Opsarius barna McClelland, 1839

Distribution: In many water bodies in India (including River Barak between Patpuihmun and Sartuinek, River Barak at Karnifai; River Barak at Taithu in North-East India: First reports by Professor D. Kar and Party; Rivers Tuirial, Tlawng, Mat, Kolodyne, Tuichong in Mizoram: First reports by Professor D Kar and Party; Rivers Irang, Iril in Manipur: Reports by Professor D. Kar and Party; River Baleswar in Assam: First report by Professor D. Kar and Party; River Singla in Assam: First report by Professor D. Kar and Party; River Thing Tlawng Lui (River Singla) in Mizoram: First report by Professor D. Kar and Party); also in Bihar, Delhi, Jammu and Kashmir, Madhya Pradesh, Mysore, Orrisa, Rajasthan, Uttar Pradesh, West Bengal. Bangladesh, Myanmar, Nepal, 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:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 28 8 2017**;** 1 Ex.; *Museum No. 180(d)/7;* Collection and First Reported by: Professor D. Kar and Party.

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

Laubuka laubuca (Hamilton, 1822)

Distribution: In water bodies in India (including River Barak at Lakhipur: first report by Prof. D. Kar and Party; River Singla in Assam: First report by Prof. D. Kar and Party; River Thing Tlawng Lui (River Singla in Mizo Hills); also, in Bangladesh, Myanmar, Nepal, Pakistan, Sri Lanka.

IUCN status: Least Concern (LC).

Genus: ***Devario*** Heckel, 1843

Devario Heckel, 1843, 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:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 28 10 2023**;** 2 Ex.; *Museum No. 180(g)/* 1(ii),1(iv)*;* Collection and First Reported by: 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: In many water bodies in India (including Anuas in Barak valley: First Report by Professor D. Kar and Party; River Baleswar in Cachar, Assam: First report by Professor D. Kar and Party; River Singla in Assam: First report by Professor D. Kar and Party; River Thing Tlawng Lui (River Singla in Mizo Hills); River Gomati in Tripura: First Report by Professor D. Kar and Party; River Barak at Karong, Khowpan in North-East (NE) India: First report by Professor D. Kar and Party; Rivers Tuirial, Tlawng, Mat, Tuichong in Mizoram: First reports by Professor D. Kar and Party; Rivers Imphal, Irang, Thaobal in Manipur: Reported 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: ***Amblypharyngodon*** Bleeker, 1860

Amblypharyngodon Bleeker, 1860 [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 ventral surface. Upper lip absent. Lower lip with a short labial fold. Lower jaw prominent with a thin sharp edge and a symphysial knob which fits into the upper jaw. Barbells absent. Dorsal fin inserted little behind insertion of pelvic fins. Anal fin short. Caudal fin forked. Scales minute.

Material examined:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: **16 3 2004;** 7 Ex.; *Museum No. 118 /* 5 (i) to 5 (vii)*.;* Collection and First Reported by: 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, 1822)

Distribution: In many water bodies almost throughout India (including Sone Beel, Sat Beel, Narapati Beel, River Singla in Barak valley region in Assam: River Thing Tlawng Lui (River Singla in Mizo Hills alo found in River Gomati in Tripura (First Report by Professor D. Kar and Party); also in Afghanistan, Bangladesh, Myanmar, Nepal, Pakistan, and Sri Lanka, etc.

IUCN status: Least Concern (LC)

Systomus McClelland, 1838

Jayaram, 1999,2010, FW Fishes of the Indian Region; Menon, 1999, *Rec.Zool.Surv. India, Occ. Ppaer No.* 175: 82.

Generic Characters: Last simple dosal fin ray invariably strongly serrated, and dorsal fin soft rays almost invariably 8 or 8.5. Presence of 2 pairs of well developed barbels, rostral and maxillary; but, some species have small maxillary barbels only. Upper and lower caudal fin lobes with sub-marginal black stripes. Lateral line scales 41-42. Pre-dorsal scales 14-15. Body depth 29.5-32.9 % of SL; Dorsal fin height 28.9-31.4 % SL.

Material examined:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: **17 4 2015;** 1 Ex.; *Museum No. 113 /* 2 (i).*;* Collection and First Reported by: Professor D. Kar and Party.

Key to species: Lateral line scales 40-42. Pre-dorsal scales 14.

Systomus clavatus (McClelland, 1845)

Distribution: In water bodies in India (including River Thing Tlawng Lui (River Singla in Mizo Hills): First Report by Professor D. Kar and Party); also in Bangladesh, etc..

IUCN status: Near Threatewned (NT)

Genus: ***Puntius*** Hamilton, 1822

Puntius Hamilton, 1822, *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, 2010, *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 (Arunachlal Pradesh):* 39.

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.

(A) *Material examined*:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 28 8 2017; 1 Ex.; *Museum No. 180(d)/3.;* Collection and First Reported by: Professor D. Kar and Party.

***Key to species*:** Pre-dorsal scales 8-10. Presence of 2 conspicuous dark blotches on the body black spot on dorsal fin and on caudal peduncle. Presence of one pair of barbels.

Puntius chola (Hamilton, 1822)

Distribution: In many water bodies in India (including Fulbari Anua and Salchapra Anua in Assam: First Report by Professor D. Kar and Party; Also found in Sone Beel, Sat Beel, Javda Beel, Rani

Meghna Beel in Assam: First Reports by Professor D. Kar and Party; Chatla Haor in Assam: First Report by Professor D. Kar and Party; River Baleswar in Cachar, Assam: First Report by Professor D.Kar and Party; River Dhaleswari in Assam: First report by Prof. D. Kar and Party; River Singla in Assam: First report by Prof. D. Kar and Party; Rivers Tlawng, Kolodyne and Tuivai in Mizoram: First Reports by Professor D. Kar and Party); also in Bangladesh, Myanmar, Nepal, Pakistan, Sri Lamka, etc.

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

(B)Material examined:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 28 8 2017**;** 2 Ex.; *Museum No. 180(d)/4,5.;* Collection and First Reported by: Professor D. Kar and Party.

(b) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 29 10 23**;** 2 Ex.; *Museum No.* 180(g)/ 1(i), 1(iii)*;* Collection and First Reported by: Professor D. Kar and Party.

Key to species: Pre-dorsal scales 8-10. Presence of a black spot on dorsal fin and on caudal peduncle.

Puntius sophore (Hamilton, 1822)

Distribution: In many water bodies in India, in both lentic and lotic water bodies (including Sone Beel in Assam: First Report by Professor D. Kar and Party; Rupairbala Anua in Cachar, Assam: First Report by Professor D. Kar and Party; Javda Beel and Karbhala Beel in Assam: First Reports by Professor D. Kar and Party; River Baleswar in Cachar, Assam: First Report by Professor D.Kar and Party; River Dhaleswari in Assam: First report by Prof. D. Kar and Party; River Singla in Assam: First report by Prof. D. Kar and Party; Rivers Tuirial, Tlawng, Kolodyne, Karnafuli, River Thing Tlawng Lui (River Singla in Mizo Hills) in Mizoram: First Reports by Professor D. Kar and Party; Loktak Lake, River Imphal, River Iril, River Nambol, River Thaobal in Manipur: Reported by Professor D Kar and Party); also in Bangladesh, Myanmar, Nepal, Pakistan, Sri Lanka, etc.

IUCN status: Least Concern (LC).

Genus: ***Pethia*** Pethiyagoda, 2012

Pethia, 2012, 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, dorso-lateral; 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.

(A) *Material examined*:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 29 10 2023**;** 1 Ex.; *Museum No. 180(g)/* 1(v).*;* Collection and First Reported by: Professor D. Kar and Party.

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

Pethia conchonius (Hamilton, 1822)

Distribution: In many water bodies in India (including River Vomvadung and river Khuolzangvadung in Dima Hasa District, Assam: First report by Professor. D. Kar and Party; River Kopili: **at Panimur:** First report by Professor. D. Kar and Party; River Baleswar in Cachar, Assam: First Report by Professor D.Kar and Party; River Dhaleswari in Assam: First report by Prof. D. Kar and Party; River Singla in Assam: First report by Prof. D. Kar and Party; River Thing Tlawng Lui (River Singla in Mizo Hills) in Mizoram: First Reports by Professor D. Kar and Party; River Monu in Tripura: First report by Professor. D. Kar and Party; Rivers Tuirial, Tlawng, Mat, Kolodyne, Karnafuli, Tuichong in Mizoram: First reports by Professor. D. Kar and Party; River Irang in Manipur: Report 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, etc.

IUCN Status: Least Concern (LC).

(B)Material examined:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: **16 3 2004;** 1 Ex.; *Museum No. 118 /* 4 (i).*;* Collection and First Reported by: Professor D. Kar and Party.

(b) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 9 10 2018**;** 2 Ex.; *Museum No. 180(e)/* 18,19*;* Collection and First Reported by: Professor D. Kar and Party.

Key to species: Presence of 22-25 Lateral line scales. Pre-dorsal scales (PDS) usually 9. Presence of a long transverse black blotch above pectoral fin and another almost similar on caudal peduncle over the end of anal fin, generally in fresh/live fishes. Usually, presence of a red border in the dorsal fins of males.

Pethia ticto (Hamilton, 1822)

Distribution: In many water bodies in India, in both lotic and lentic systems (including Baskandi Anua, Shiv Narayanpur Anua, in Cachar, Assam: First reports by Prof. D. Kar and Party; River Baleswar in Cachar, Assam: First report by Prof. D. Kar and Party; River Singla in Assam: First report by Prof. D. Kar and Party; River Thing Tlawng Lui (River Singla in Mizo Hills) in Mizoram: First Reports by Professor D. Kar and Party; River Monu in Tripura: First report by Prof. D. Kar and Party; Rivers Tuirial, Tlawng, Mat, Kolodyne, Karnafuli in Mizoram: First reports by Prof. D. Kar and Party; River Lokchao in Manipur: Reported by Professor D Kar and Party); also, in Bangladesh, Myanmar, Nepal, Thailand, etc.

IUCN Status: Least Concern (LC).

Done at SR on 7 10 25 arnd 9-30 am

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

Cirrhinus (Oken), Cuvier, 1817, V.KI. *Fische*. IN: Isis order Encyclopadische Zeituny, 8: 113 (type species, *Cyprinus cirrhosus* Bleeker, by minotypy), -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.

(A) *Material examined*:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 28 8 2017**;** 1 Ex.; *Museum No. 180(d)/1.;* Collection and First Reported 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: In many water bodies throughout India, in both lentic and lotic systems (including Sone Beel in Assam: First Report by: Professor D. Kar and Party; Salchapra Anua in Assam: First Report by: Professor D. Kar and Party; River Barak at Lakhipur, Jhakradahar in NE india: First Report by: Professor D. Kar and Party; River Baleswar in Assam: First Report by: Professor D. Kar and Party; River Dhaleswari in Assam: First report by Prof. D. Kar and Party; River Singla in Assam: First report by Prof. D. Kar and Party; River Thing Tlawng Lui (River Singla in Mizo Hills) in Mizoram: First Reports by Professor D. Kar and Party; River Serlui in Mizoram: First Report by: Professor D. Kar and Party; River Iril, River Nambol in Manipur: Reported by Professor D Kar and Party); also, in Bangladesh, Darjeeling, and Eastern Himalayas, South and South-Eastern Asia, etc.

IUCN Status: Least Concern (LC).

(B)Material examined:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 28 8 2017**;** 2 Ex.; *Museum No. 180(d)/2,8;* Collection and First Reported by: Professor D. Kar and Party.

Key to species: Lateral line scales 34 to 38. Dorsal fin less than body height.

Cirrhinus reba (Hamilton, 1822)

Distribution: In many water bodies throughout India, in both lentic and lotic systems (including Sone Beel in Assam: First Report by: Professor D. Kar and Party; Salchapra Anua in Assam: First Report by: Professor D. Kar and Party; River Thing Tlawng Lui (River Singla in Mizo Hills) in Mizoram: First Reports by Professor D. Kar and Party); also, in Bangladesh, Pakistan, Punjab, 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 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.

(A) Material examined:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: **16 3 2004;** 2 Ex.; *Museum No. 118 /* 6 (i), 6 (ii)*;* Collection and First Reported by: Professor D. Kar and Party.

Key to species: Dorsal finrays 15-18. Pectoral fins as long as head. Body deep and little blackish in colour. Mouth distinctly inferior and wide. Presence of 1 pair of barbels generally.

Labeo calbasu (Hamilton, 1822)

Distrubution: In many water bodies in India (including Sone Beel in Assam: First Report by: Professor D. Kar and Party; River Barak at Lakhipur in Cachar, Assam: First Report by: Professor D. Kar and Party; River Thing Tlawng Lui (River Singla in Mizo Hills) in Mizoram; First report by Prof. D. Kar and Party; River Singla in Assam; First report by Prof. D. Kar and Party); also, in Bangladesh, Myanmar, Nepal, Pakistan, Thailand, etc.

IUCN Status: Least Concern (LC).

Genus: ***Tariqilabeo*** Kuhl van Hasselt, 1823

Tariqilabeo Kuhl van Hasselt, 1823,*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, 1986, *Trans Mus. Hist. natn. Gr.Antipa.* 28, 142-154; Kottelat, 1987, *Jap. J. Ichthyol.,* 33 (4): 371; Talwar and Jhingran, 1999, *Inland Fishes* 1, 413; Jayaram, 1999, *FW Fishes of the Indian Region*: 152; Menon, 1999, *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 Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 9 Oct 2018**;** 17 Ex.; *Museum No. 180 (e)/* 1 to 17*.;* Collection and First Reported by: 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, 1822)

Distribution: In many water bodies in India (including Salchapra Anua in Cachar, Assam; (First Report by Professor D. Kar and Party); River Singla in Assam: First Report by: Professor D. Kar and Party; River Thing Tlawng Lui (River Singla in Mizo Hills) in Mizoram; First report by Prof. D. Kar and

Party; River Monu in Tripura (First Report by Professor D. Kar and Party); River Barak (First Report by Professor D. Kar and Party); Rivers Tuirial, Mat, Kolodyne, Karnafuli in Mizoram (First Reports by Professor D Kar and Party; Rivers Irang, Iril in Manipur: reports by Professor D Kar and Party); also, in Arunachal Pradesh, Bangladesh, 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 amcharacteristic color pattern.

Material examined:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 8 11 2021**;** 3 Ex.; *Museum No. 180(f)/* 2(i) to 2(iii).*;* Collection and First Reported 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: 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; in River Tuirial in Mizoram: First Report by Professor D. Kar and Party; in River Baleswar in Cachar, Assam: First Report by Professor D. Kar and Party; in River Singla in Assam: First Report by: Professor D. Kar and Party; River Thing Tlawng Lui (River Singla in Mizo Hills) in Mizoram; First report by Prof. D. Kar and Party; in **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, Botiaalmorhae 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, 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 Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: **16 3 2004;** 48 Ex.; *Museum No. 118 /*7 (i) to 7 (xxxxviii)*;* Collection and First Reported by: Professor D. Kar and Party.

(b) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 28 8 2017; 1 Ex.; *Museum No. 180(d)/11.;* Collection and First Reported by: Professor D. Kar and Party.

(c) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 29 10 2023**;** 2 Ex.; *Museum No. 180(g)/* 2(i), 2(iii).*;* Collection and First Reported 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; River Thing Tlawng Lui (River Singla in Mizo Hills) in Mizoram; First report by Prof. D. Kar and Party; River Irang in Manipur: report 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; Jayaram, 2010, 2006, *Catfishes of India*; Roberts, 1994, *Ichthyological Exploration of Freshwaters* 5(3):243. *Genus*: *Mystus* Scopoli, 1777. *Introductio ad 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 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 simple, complete.

Material examined:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 9 10 2018; 2 Ex.; *Museum No. 180 (e)/*20,21*;* Collection and First Reported by: 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: In many water bodies in India, in both lentic and lotic systems (including wetlands in Assam, notably, Sone Beel: First Report by Professor D. Kar and party; Fulbari Anua, Salchapra Anua in Assam: First Reports by Professor D. Kar and party; River Baleswar in Cachar, Assam: First Report by: Professor D. Kar and Party; River Dhaleswari in Assam: First report by Prof. D. Kar and Party; River Singla in Assam: First report by Prof. D. Kar and Party); River Thing Tlawng Lui (River Singla in Mizo Hills) in Mizoram; First report by Prof. D. Kar and Party);also, in Bangladesh, Myanmar, Sri Lanka, etc.

IUCN status: Least Concern (LC)

Batasio, Blyth, 1860; *J. Asiatic Soc. Bengal,* 29, p.149 (Type species, *Batasio buchanani* Blyth= *Pimelodus batasio* Hamilton); Hora and Law, 1941, *Rec. Indian Mus.,* 43, p.28; Jayaram, 2006, *Catfishes of India:* 76; Ferraris, 2007, *Zootaxa,* 1418: 84 (Check list)

Macronoides Hora, 1921, *Rec. Indian Mus.,* 22, p. 179 (Type species: *Macrones affinis* Blyth = *B.tengana* (Hamilton) as a sub-genus

Generic characters: Body short, high and laterally compressed. Abdomen rounded. Head small, laterally compressed, conical, with pores ventrally and on sides.Snout rounded or slightly pointed. Mouth inferior, crescentic. Eyes dorso-lateral. Lips fleshy, fimbriated.Presence of 4 pairs of barbels: one pair each of maxillary and nasal; and, 2 pairs of mandibular; all usually do not extend beyond head. Rayed dorsal fin inserted 3/4th of pectoral fins anteriorly with 7-8 rays and a spine. Adipose dorsal fin low. Pectoral fins with 5-9 rays and a spine serrated along the inner edge. Pelvic fins generally with 6 rays and no spine. Anal fin with 12-15 rays and no spine. Caudal fin usually forked.

Material examined:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 28 8 2017; 1 Ex.; *Museum No. 180(d)/10;* Collection and First Reported by: Professor D. Kar and Party.

Key to species: Adipose dorsal fin short. Absence of humeral spot. Dorsal spine long.

Batasio batasio (Hamilton, 1822)

Distribution: In water bodies in India (including Rivers Kolodyne, Karnafuli in Mizoram; First Reports by Professor D. Kar and party; River Thing Tlawng Lui in Mizoram: First Reports by Professor D. Kar and party); also, in Teesta river system in North Bengal, Tripura, Bangladesh, etc.

Genus: *Erethistes* Muller and Troschel, 1849

Erethistes Muller and Troschel, 1849, *Horae Ichthy.,* 3: 12. Pl.,1; Fig. 3, 1849 (Type species: *Erethistes pussilus* Muller and Troschel by monotypy); Guenther, 1864, *Cat Fis.Brit. Mus.,* 5: 233; *Hora, 1950, Rec Indian Museum,* 47: 183 (revision); Rossel, 1964, *Mitt. Hamburg Zool.Mus.Inst.,* 61: 152; Kottelat, 1965, *Hydrobiologia, 107: 71-74; 1963 (Teview); Nath* and Dey*, 2000,* Fish and Fishereies of NE India: 108)Arunachal Prades); *Jayaram,* 2006;*Catfishes of India*: 280); Thompson and Page, 2006: *Zootaxa,* 1345: 13; Ferraris, 2007, *Zootaxa, 1417:* 384 (check list)

Generic character: Dorsal profile sharp upto occiput, steeply rising upto base of dorsal fin; thereafter, slpes down to caudal base. Head elongated depressed, covered with backwardly directed spines. Snout conical. Mouth small, inferior, nostrils close together., separated by a flap of skin bearing the nasal barbel. Four pairs of barbells; one pair each of maxillary, nasals, outer and inner mandibular, all annulated with black rings. No thoracic adhesive apparatus. Rayed dorsal fin inserted almost above pelvic fins, with a strong serrated spine. Adipose dorsal fin short, free. Pectoral fins with 5 rays and a spine separated along both edges; serrations along the outer edge arranged in the form of divergent spines; pectroral fins not reaching pelvics, also, pelvic fins may or may not reach anal fin. Anal fin short not reaching caudal base. Lateral line complete, may be with tubercles.

Material examined:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: **16 3 2004; 2**1 Ex.; *Museum No. 118/* 8 (i) to 8 (xxi),*;* Collection and First Reported by: Professor D. Kar and Party.

Key to species: Pectoral spine shorter than head length (66.7-95.3 % of head length), fin not extending to pelvic fin base.

Erethistes hara (Hamilton, 1822)

Distribution: In many water bodies in India, usually, in the hill streams (including River Barak around upstream of Lakhipur along Assam, Manipur, Mizoram Hills: First Report by Professor D. Kar and Party**;** River Karnafuli in Mizoram: First Report by Professor D. Kar and Party; River Thing Tlawng Lui in Mizoram: First Reports by Professor D. Kar and party); also, in different stretches of Ganges and Brahmaputra drainages, Bangladesh, 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 Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 28 8 2017; 1 Ex.; *Museum No.,180(d)/14;* Collection and First Reported 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 in both lenic and lotic water bodies (including wetlands in Assam, notably, in Sone Beel: First Report by Professor D. Kar and party; Salchapra Anua in Assam: First Report by Professor D. Kar and party; River Baleswar in Cachar, Assam: First Report by Professor D. Kar and Party; River Singla in Assam: First Report by Professor D. Kar and Party; River Thing Tlawng Lui in Mizoram: 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; River Khujailok in Manipur: Reported by: Professor D. Kar and Party); also in Nepal, etc.

IUCN status: Least Concern (LC)

Genus: ***Chanda*** Hamilton, 1822

Chanda Hamilton,1822, 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 Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 28 8 2017; 1 Ex.; *Museum No.*, *180(d)/6;* Collection and First Reported by: 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, 1822

Distribution: **In** many water bodies in India (including **Sone Beel,** Baskandi Anua, Salchapra Anua in Assam: First reports by Prof. D. Kar and Party; Rivers Mat, Kolodyne, Karnafuli in Mizoram: First reports by Prof. D. Kar and Party; River Thing Tlawng Lui in Mizoram: First Reports by Professor D. Kar and party); also in Bangladesh, Nepal, Pakistan., etc.

IUCN Status: Least Concern (LC). *Genus*: ***Badis*** Bleeker, 1853 *Badis* Bleeker, 1853, *Verh. Bat. Genootsch.,* 25: 106 (Type species: *Labrus buchanani* Bleeker = *Labrus* Hamilton-Buchanan, by tautonomy)**;** Kullander & Britz, 2002, *Ichthyol. Explor. Freshwaters,* 13(4): 303.

Generic Characters: Body moderately elongated, compressed. Abdomen rounded. Head usually large, compressed. Snout bluntly rounded. Mouth relatively small, slightly upturned, slightly protractile; cleft not extending to anterior margin of eye. Eyes large. Lower jaw longer. Opercle with one sharp spine. Presence of a single dorsal fin, inserted above base of pectoral fins; the spinous portion longer than soft portion with 16 to 18 spines and 7 to 10 rays. Anal fin with 3 spines and 6 to 8 rays. Caudal fin rounded. Lateral line scales generally 26 to 33. Unique characters include a black stripe along middle of dorsal fin and dark bars on trunk.

Material examined: (a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 8 11 2021; 1 Ex.; *Museum No.*, *180(f)/3 (i);* Collection and First Reported by: Professor D. Kar and Party.

Key to species: Presence of usually 26 scales in lateral row. ***Badis badis*** (Hamilton, 1822)

Distribution: **In** many water bodies in India (including Karbhala Beel in Silchar, Cachar, etc., in Assam: First Report by Professor D. Kar and party; River Thing Tlawng Lui in Mizoram: First Reports by Professor D. Kar and party); also, in Bangladesh, Nepal, etc. *IUCN status*: Least Concern (LC), ***Genus*****:** ***Oreochromis*** Guenther, 1889***Oreochromis*** Guenther, 1889, *Ann.Mag. nat. Hist.,* 4 (6): 70 (Type species: *Oreochromis hunter* (Gunther, by monotypy); Trewavas, 1983, *Publ. Brit. Mus. Nat. Hist.* No. 878: 139-373. *Generic Characters*: Body more or less elongate. Abdomen rounded. Head compressed, with concave upper profile. Mouth terminal, large; cleft extending to below anterior border of eyes. Snout rounded. Eyes large, lateral, almost in middle of head. Dorsal fin inserted above base of pectoral fins with 15 or 16 spines and 10 or 12 rays. Anal fin generally with 3 spines. Caudal fin rounded.

Material examined:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date: 28 8 2017**;** 1 Ex.; *Museum No.*, *180(d)/13;* Collection and First Reported by: Professor D. Kar and Party.

Key to species: Dorsal spinous portion longer than soft part; the latter may be prolonged with a filamentous tip. ***Oreochromis mossambicus*** (Peters, 1852)

Distribution: In many water bodies in India (including Karbhala Beel in Barak valley of Assam: First Report by Professor D. Kar and Party; River Thing Tlawng Lui in Mizoram: First Reports by Professor D. Kar and party; Rivers Imphal, Thaobal in Manipur: Reported by Professor D.Kar and Party); used as a cultured exotic fish; also, in Bangladesh Sri Lanka, etc.

IUCN status: Vulnerable ***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 sigle 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:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date 29 10 2023**;** 1 Ex.; *Museum No.*, *180 (g)/* 3(i)*;* Collection and First Reported by: 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)

Distribution: **In** many water bodies in India (including Sone Beel in Assam: First Report by Professor D. Kar and party; Karbhala Beel in Assam: First Report by Professor D. Kar and party; River Thing Tlawng Lui in Mizoram: First Reports by Professor D. Kar and party; Loktak Lake, Rivers Imphal, Iril,Khujailok, Thaobal in Manipur: Reported by Professor D Kar and Party); also, in Bangladesh, Myanmar, Borneo, The Philippines, Singapore, Sri Lanka, etc.

IUCN status: Least Concern (LC).

Genus: Channa Scopoli, 1777

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:

(a) River Thing Tlawng Lui (River Singla in Mizo Hills) in MZ; Collection date **16 3 2004;** 6 Ex.; *Museum No.*, *118 /* 2 (i) to 2(vi)*;* Collection and First Reported by: Professor D. Kar and Party.

Key to species: Dorsal fin with 37 - 46 rays. Pre-dorsal.scales 18-20. Caudal fin dardk with 2 distinct pale vertical bands on its base. Belly is usually white in colour.

Channa striata **(**Bloch, 1793)

Distribution: **In** many water bodies in India (including River Thaobal in Manipur: Reported by Professor D Kar and Party; River Thing Tlawng Lui in Mizoram: First Reports by Professor D. Kar and party); also, in Bangladesh, Borneo, South China, Malaya, The Philippines, Thailand, etc.

IUCN Status: Least Concern (LC)

4. Discussion

A modest analysis of the habitat inventory parameters of the River Singla in Mizo Hills (called River Thing Tlawng Lui) had depicted that, four kinds of substrates usually form the bottom or substratum of

a lotic system, particularly, in its hilly upstream stretch. These are: (i) Bedrock, (ii) Boulder, (iii) Cobbles and Gravels and (iv) Fines, which consist of silt, sand and clay. However, the River Singla, having been flowing largely through the plains (in Barak valley), falls are alomst totally absent. Morever, all the habitat components may not be equally represented in every stretch of the river. The River Singla is called River Thing Tlawng Lui in Mizoram (MZ), where it portrays different standard constituents of micro-habitat, *viz.,, cascade, riffle, pool and run-sheet type laminar flow.* On the other hand*,* the downstream portion of River Thing Tlawng Lui, called the River Singla, flows mainly through the plains; as a result, thus, portray mainly run-sheet type of microhabitat and fines type of substratum consisting mainly of clay, silt and sand. Consequently, the ichthyofauna is represented mainly by plain water forms,; unlike, rheophilic forms in the upstream stretches.

The river Thing Tlawng Lui in Mizoram (MZ) continues its flow through Barak valley region of Assam before it ends itself in Sone Beel, the biggest wetland in Assam; and, one of the biggest wetlands in India and Asia (Area 3458.12 ha at FSL).

Concomitant to above, the status of the ichthyospecies based on locally estimated information (but, corroborating with IUCN criteraia) has been determined for designing locally suitable species-specific conservation strategies.

Notwithstanding the above, different workers, notably, Bailey, R. G. (1994, 1996) and Bailey and Hickley (1986) had dealt with the water bodies and fish species in Africa. Moreover, Didem *et al.* (2012) had studied the fishes of Western Black Sea Coast of Turkey. On the other hand, Kullander and Britz (2008) and. Conway and Kottelat (2007) had worked with the fishes of Myanmar.

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 worked and published about the fishes of Myanmar.

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Table 1. Species Composition and Conservation Status of Fish Species in River Thing Tlawng Lui (River Hill Singla) in Mizo (MZ) Hills

	Fish name	Collection date **17 4 2015** & River Coll No. 113 +(No.of Fishes), River No/Fish No. =Museum No.	Collection date : **16 3 2004** & River Coll No. **118** +(No.of Fishes), River No/Fish No. =Museum No.	Collection date : 28 8 2017 (a) & River Coll No. **180 (d)** +(No.of Fishes), River No/Fish No. =Museum No .	Collection date 9 Oct 2018 (b) & River Coll No 180 (e) +(No.of Fishes), River No/Fish No. =Museum No.	Collection date 8 11 2021 (c) & River Coll No. 180 (f) +(No.of Fishes), River No/Fish No. =Museum No.	Collection date 29 Oct 2023(d) & River Coll No. **180 (g)**, +(No.of Fishes), River No/Fish No. =Museum No.	Total No. of Fish collected	Conservation Status (Global) LC=Least Concern VU= Vulnerable EN= Endangered NT=NearThreatened NE=Not Evaluated DD-Data Deficient	Conservation status (Local) (based on occurrence of Fish species in 1 or >1 locations 1 Location: of Concern(C) 2 Locations :Less Concern(LC) >2Locatio

										ns:No Concern(NC)
1	*Gudusia chapra*			+(1),*180 (d)/12*				1	LC	C
2	*Salmostoma bacaila*		+(6),*118 /* 3 (i) to 3 (vi)					6	LC	C
3	*Opsarius bendelisis*	+(3),113 / 1 (i) to 1 (iii)	+ (25),*118 /* 1 (i) to 1 (xxv)					28	LC	LC
4	*Opsarius barna*			+(1), *180(d)/9*		+(10),*180(f)/* 1(i) to 1(x)		11	LC	LC
5	*Laubuka laubuca*			+(1),*180 (d)/7*				1	LC	C
6	*Devario aequipinnatus*						+(2),*180(g)/* 1(ii),1(iv)	2	LC	C
7	*Amblypharyngodon mola*		+(7), *118 /* 5 (i) to 5 (vii)					7	LC	C
8	*Systomus clavatus*	+(1), *113 /* 2 (i)						1	NT	C
9	*Puntius chola*			+(1),*180 (d)/3*				1	LC	C
10	*Puntius sophore*			+(2), *180(d)/4, 5*			+(2),180(g)/ 1(i),	4	LC	LC

							1(iii)			
11	*Pethia conchonius*						+(1), *180(g)/* 1(v)	1	LC	C
12	*Pethia ticto*		+(1), *118 /* 4 (i)		+(2),*180(e)/* 18,19			3	LC	LC
13	*Cirrhinus mrigala*			+(1),*180 (d)/1*				1	LC	C
14	*Cirrhinus reba*			+(2), *180(d)/2, 8*				2	LC	C
15	*Labeo calbasu*		+(2),*118 /* 6 (i), 6 (ii)					2	LC	C
16	*Tariquilabeo latius*				+(17),*180 (e)/* 1 to 17			17	LC	C
17	*Schistura multifasciata*					+(3),*180(f)/* 2(i) to 2(iii)		3	LC	C
18	*Botia dario*		+(48),*118 /7* (i) to 7 (xxxxviii)	+(1),*180 (d)/11*			+(2),*180 (g)/* 2(i),2(ii)	51	LC	NC
19	*Mystus vittatus*				+(2),*180 (e)/*20,21			2	LC	C
20	*Batasio batasio*			+(1),*180 (d)/10*				`1	LC	C
21	*Erethistes hara*		+(21),*118/* 8 (i) to 8					21	LC	C

			(xxi)							
22	*Xenentodon cancila*			+(1),*180 (d)/14*				1	LC	C
23	*Chanda nama*			+(1),*180 (d)/6*				1	LC	C
24	*Badis badis*					+(1), *180(f)/3 (i)*		1	LC	C
25	*Oreochromis mossambicus*			+(1),*180 (d)/13*				1	VU	C
26	*Anabas testudineus*						+(1),*180 (g)/* 3(i)	1	LC	C
27	*Channa striata*		+(6), *118 /* 2 (i) to 2(vi)					6	LC	C