Xiao-yong CHEN, Tao QIN, Feng LIN, Nay Htet NAING, Thinn Su TIN, Khin Yadanar HTAY and Shu-sen SHU

An Illustrated Guide to the Fishes of Indawgyi Lake in Myanmar





Contributions from Southeast Asia Biodiversity Research Institute, Chinese Academy of Sciences

Printed in France

EDP Sciences – ISBN(print): 978-2-7598-3243-9 – ISBN(ebook): 978-2-7598-3244-6 DOI: 10.1051/978-2-7598-3243-9

All rights relative to translation, adaptation and reproduction by any means whatsoever are reserved, worldwide. In accordance with the terms of paragraphs 2 and 3 of Article 41 of the French Act dated March 11, 1957, "copies or reproductions reserved strictly for private use and not intended for collective use" and, on the other hand, analyses and short quotations for example or illustrative purposes, are allowed. Otherwise, "any representation or reproduction – whether in full or in part – without the consent of the author or of his successors or assigns, is unlawful" (Article 40, paragraph 1). Any representation or reproduction, by any means whatsoever, will therefore be deemed an infringement of copyright punishable under Articles 425 and following of the French Penal Code.

The printed edition is not for sale in Chinese mainland.

© Science Press, EDP Sciences, 2024

Contributions

Editor-in-chief: Xiao-yong Chen Associate editor: Tao Qin, Feng Lin

Introduction: Xiao-yong Chen, Thinn Su Tin, Nay Htet Naing, Khin Yadanar Htay

Osteoglossiformes: Xiao-vong Chen Clupeiformes: Feng Lin Cypriniformes: Feng Lin Cyprinidae: Feng Lin Devario spp.: Khin Yadanar Htay, Tao Qin Laubuka indawgyiana: Khin Yadanar Htay Bangana devdevi: Khin Yadanar Htay, Feng Lin Cirrhinus cirrhosus: Khin Yadanar Htay, Feng Lin Labeo spp.: Khin Yadanar Htay, Feng Lin Osteochilus rostellatus: Khin Yadanar Htay, Feng Lin Siluriformes: Tao Qin Mystus pulcher: Tao Qin, Khin Yadanar Htay Ovalentaria: Tao Qin Beloniformes: Tao Qin Synbranchiformes: Tao Qin Anabantiformes: Tao Qin Channidae: Tao Qin Channa aurolineata: Tao Qin, Nay Htet Naing Channa shingon: Tao Qin, Khin Yadanar Htay Syngnathiformes: Tao Qin Scorphaeniformes: Tao Qin Tetraodontiformes: Tao Qin

Photo processing: Shu-sen Shu

Contents

Introduction	1
1. Notopterus notopterus (Pallas, 1769) 1:	3
2. Gudusia variegata (Day, 1870)	5
3. Psilorhynchus brachyrhynchus Conway and Britz, 2010 16	3
4. Acantopsis spectabilis (Blyth, 1860) 17	7
5. Lepidocephalichthys alkaia Havird and Page, 2010	3
6. Lepidocephalichthus berdmorei (Blvth, 1860) 19	9
7. Lepidocephalichthus eleios Kottelat, 2017a 22	1
8. Lepidocephalichthus goalparensis Pillai and Yazdani. 1976	2
9. Panajo panaja (Hamilton, 1822)	3
10. <i>Mustura celata</i> Kottelat. 2018	4
11. Paracanthocohitis linumha Singer and Page, 2015	6
12. Paracanthocobitis mandalauensis (Rendahl, 1948)	8
13. Schistura indawaniana Kottelat. 2017b	0
14. Schistura malaisei Kottelat. 1990	1
15. <i>Homalopteroides runicola</i> (Prashad and Mukerii, 1929)	3
16. Danio albolineatus (Blyth, 1860)	5
17. Danio choprae Hora, 1928	6
18. Danio kuathit Fang. 1998	7
19. Devario fangae Kullander. 2017	9
20. Devario muitkuinae Kullander. 2017	1
21. Esomus caudiocellatus Ahl, 1924	3
22. Esomus danrica (Hamilton, 1822)	4
23. Rasbora daniconius (Hamilton, 1822)	6
24. Rashora rashora (Hamilton, 1822)	ŝ
25. Opsarius barnoides (Vinciguerra, 1890)	0
26. Opsarius dogarsinghi (Hora, 1921)	1
27. Laubuka indawaniana Khin and Chen 55	2
28. Amhlumharunaodon atkinsonii (Blyth, 1860).	4
29. Osteobrama belangeri (Valenciennes, in Cuvier and Valenciennes, 1844). 5	ă
30 Osteobrama cunma (Day 1888) 5'	7
31. Osteobrama feae Vinciguerra, 1890	9
32. Anematichthys apogon (Valenciennes, in Cuvier and Valenciennes, 1842). 60	0

33.	Hypsibarbus myitkyinae (Prashad and Mukerji, 1929)	61
34.	Neolissochilus hexastichus (McClelland, 1839)	62
35.	Oreichthys cosuatis (Hamilton, 1822)	64
36.	Pethia didi (Kullander and Fang, 2005)	66
37.	Pethia erythromycter (Kullander, 2008)	68
38.	Pethia padamya (Kullander and Britz, 2008)	70
39.	Pethia pugio (Kullander, 2008)	72
40.	Pethia thelys (Kullander, 2008)	73
41.	Puntius chola (Hamilton, 1822)	75
42.	Puntius sophore (Hamilton, 1822)	77
43.	Systomus sewelli (Prashad and Mukerji, 1929)	78
44.	Bangana devdevi (Hora, 1936)	80
45.	Cirrhinus cirrhosus (Bloch, 1795)	81
46.	Garra giaojiensis (Wu and Yao, in Wu, 1977)	82
47.	Labeo boga (Hamilton, 1822)	84
48.	Labeo calbasu (Hamilton, 1822)	85
49.	Labeo catla (Hamilton, 1822)	87
50.	Labeo dyocheilus (McClelland, 1839)	88
51.	Labeo dussumieri (Valenciennes, in Cuvier and Valenciennes, 1842)	89
52.	Labeo nandina (Hamilton, 1822)	90
53.	Labeo porcellus (Heckel, 1844)	91
54.	Labeo rohita (Hamilton, 1822)	92
55.	Osteochilus rostellatus (Valenciennes, in Cuvier and Valenciennes, 1842).	93
56.	Ompok pabda (Hamilton, 1822)	95
57.	Ompok pabo (Hamilton, 1822)	97
58.	Pterocryptis berdmorei (Blvth, 1860)	98
59.	Wallago attu (Bloch and Schneider, 1801)	100
60.	Eutropiichthys burmannicus Day, 1877	101
61.	Batasio dayi (Vinciguerra, 1890)	102
62.	Hemibagrus microphthalmus (Day, 1877)	104
63.	Mystus cineraceus Ng and Kottelat, 2009	106
64.	Mystus falcarius Chakrabarty and Ng, 2005	108
65.	Mystus leucophasis (Blyth, 1860)	109
66.	Mystus pulcher (Chaudhuri, 1911)	110
67.	Mystus rufescens (Vinciguerra, 1890)	111
68.	Olyra horae (Prashad and Mukerii, 1929)	112
69.	Sperata acicularis Ferraris and Runge, 1999	113
70.	Akysis prashadi Hora, 1936	115
71.	Amblyceps improcerum Ng and Kottelat, 2018	116
72.	Hara longissima Ng and Kottelat, 2007	118
73.	Pseudolaguvia tuberculata (Prashad and Mukerji, 1929)	119
74.	Clarias magur (Hamilton, 1822)	121
75.	Heteropneustes fossilis (Bloch, 1794)	123
76.	Parambassis ranga (Hamilton, 1822)	124
77.	Parambassis robertsi Datta and Chaudhuri. 1993	126
78.	Xenentodon cancila (Hamilton, 1822)	128

Contents

79. Monopterus albus (Zuiew, 1793)	130
80. Chaudhuria caudata Annandale, 1918	131
81. Macrognathus aureus Britz, 2010	132
82. Macrognathus morehensis Arunkumar and Tombi Singh, 2000	133
83. Mastacembelus strigiventus Yang and Zhou, 2011	134
84. Mastacembelus pantherinus Britz, 2007	135
85. Anabas testudineus (Bloch, 1792)	136
86. Parasphaerichthys ocellatus Prashad and Mukerji, 1929	137
87. Trichogaster labiosa Day, 1877	139
88. Channa aurolineata (Day, 1870)	141
89. Channa panaw Musikasinthorn, 1998	142
90. Channa shingon Endruweit, 2017	143
91. Channa striata (Bloch, 1793)	145
92. Badis kyar Kullander and Britz, 2002	147
93. Badis corycaeus Kullander and Britz, 2002	148
94. Dario hysginon Kullander and Britz, 2002	149
95. Microphis dunckeri (Prashad and Mukerji, 1929)	150
96. Indostomus paradoxus Prashad and Mukerji, 1929	152
97. Leiodon cutcutia (Hamilton, 1822)	153
References	155
Acknowledgement	159
	1.04
Appendix. Check List of Fishes of Indawgyi Lake	161

Chapter 1

Introduction

Based on five times of surveys of fishes of Indawgyi Lake from 2018 to 2023, 4509 specimens of around one hundred species were collected by a fish team of Kunming Institute of Zoology and Southeast Asia Biodiversity Research Institute, Chinese Academy of Sciences (figure 1). By inventory of fishes of Indawgyi Lake, we understand the beauty of the amazing fish biodiversity of this great lake in Kachin State, North Myanmar. In this book, 97 species were briefly introduced about their diagnosis, biology, status, and distribution, as well as photographs of living or fresh specimens, except a poor known swamp eel, Monopterus cuchia, two unidentified species, Oryzia sp. and Microrasbora sp. (figure 1P), a localized alien species, tilapia, Oreochromis nilotica (figure 1M), and an imported cultured fish, common carp, Cyprinus carpio (figure 1N). Prashad and Mukerji (1929) recorded 65 species and Kottelat (2015) recorded 95 native fish species from the lake. 105 fish species were found in Indawgyi Lake by the fish survey implemented by the Department of Environment and Wildlife Conservation and the Friends of Wildlife-FOW from 2017 to 2018. By this study, we confirmed there are 102 species of fish in and around Indawgyi Lake including two alien species. Taxonomy of some fish species is still not clear for now and need serious taxonomic review, and the molecular phylogeny of the recently described species also need study to understand the phylogenetic relationship of Indawgyi fishes with its congeners. So, for now we are still far from truly understanding the actual baseline of fish biodiversity in this big lake, what we have shown in this small book will provide some basic information about fishes in this special fauna for researchers, students, fans, tourists, local communities and managers of natural resources.

The classification follows Nelson *et al.* (2016). Identification mainly follows Prashad and Mukerji (1929), Talwar and Jhingran (1991), Kottelat (2013, 2015), and recent publications on the taxonomy of fish species of Indawgyi Lake (Htay *et al.*, in reviewing; Kottelat, 1990, 2017a, 2017b, 2018; Ng and Kottelat, 2007, 2009, 2018; Endruweit, 2017; Kullander, 2008, 2017; Singer and Page, 2015; Yang and Zhou, 2011; Britz, 2007, 2010; Conway and Britz, 2010; Havird and Page, 2010; Kullander and Britz, 2002, 2008; Chakrabarty and Ng, 2005; Kullander and Fang, 2005; Arunkumar and Singh, 2000; Fang, 1998; Musikasinthorn, 1998; Datta and Chaudhuri, 1993). Some species were recorded from Namkawng Chaung at Kamaing

(Prashad and Mukerji, 1929), and no specimen were collected from Indawgyi Lake or its inlet streams till now. These species are not included in this book, *Raiamas* guttatus, Salmostoma sardinella, Chagunius nicholsi, Labeo angra, Proeutropiichthys macrophthalmos, Bagarius bagarius. English names, the English spelling of Myanmar names, Myanmar names, and Chinese names are given respectively if available. Synonym is applied based on our identification of the specimens from the lake, which limits our judgement on the relationship between the names in historical records (Kottelat, 2015; Prashad and Mukerji, 1929) in the lake and our identification, and has no general significance on the validity of those misapplied names of the species. For convenience, widely used English names of the river in Myanmar were applied, instead of the new ones used in Myanmar, such as Irrawaddy (=Ayeyarwady), and



FIG. 1 – Fieldwork activities (A) Nay Htet Naing, Thet Myat Oo and local fisherman are collecting fish in Yae Aye Stream; (B) local traditional fish trap; (C) using fish net to catch small fishes; (D) kicking and catching with dipnet; (E) selecting fish from boat; (F) roadside fish market; (G) preparing specimens; (H) La Min Ko Ko, Thinn Su Tin and Nay Htet Naing are cutting fin clips from fish; (I) Thinn Su Tin and Nay Htet Naing are cataloging and taking tissue samples; (J) Shu-sen Shu and Nay Htet Naing are taking photos on fish; (K) Thinn Su Tin, Nay Htet Naing and Ei Mon Kyaw are investigating fish in a morning market; (L) household on water; (M) alien tilapia on local market; (N) a cultured species, common carp, *Cyprinus carpio* on local market; (O) Thin Su Tin is dissecting and checking food in stomach of tilapia; (P) *Microrasbora* sp.

Introduction



Fig. 1 - (continued).



Ο

FIG. 1 - (continued).

Salween (=Thanlwin). The status of species refers to the most recent assessment of the IUCN Red List.

Country Background

Myanmar is one of the countries in mainland Southeast Asia, with a land area of 676,577 km² and bordered by China to the north and northeast, Laos and Thailand to the southeast, and India and Bangladesh to the northwest. There has the Bay of Bengal and the Andaman Sea to the south and west. Geographically, Myanmar is situated between 9°32′ N and 28°31′ N latitude and 92°10′ E and 101°11′ E longitude. Myanmar is in the Southeast Asian tropical monsoon region. There are three main seasons such as winter or northeast monsoon season (November–February), summer or hot weather season (March–mid-May), and rainy or southwest monsoon season (mid-May–October). Myanmar is endowed with abundant water resources, with eight major river basins that cover 90% of the country's territory as well as sizeable lakes. It processes 12% of the whole Asia's freshwater resources and 16% of

the freshwater of the ASEAN nations (Thang Sein, n.d.). Potential water resources volume is about 1082 km^3 for surface water and 495 km^3 for groundwater as well constitute national water resources annually (WEPA).

Introduction of Indawgyi Lake

Indawgyi Lake Wildlife Sanctuary is located in Monyin Township of Kachin State, Northern Myanmar. It is an Important Bird Area (IBA) and also an ASEAN Heritage site. Moreover, Indawgyi Lake and the forests of the adjacent mountains have been recognized as a UNESCO Biosphere Reserve since October 2017. Indawgyi Lake is established in 1999 and its area is one of the largest inland freshwater reservoirs, not only in Myanmar but also in central South East Asia (Zin Mar Than, 2011). It is located in the northwest part of Kachin State in Myanmar (figure 2). Its length is 22.5 km North to South and its width is 11.3 km East to West. And its area is 253.8 km^2 . The lake lies within the geographical coordinates of $25^{\circ}6''-25^{\circ}10''$ North and $96^{\circ}6''-96^{\circ}15''$ East. The lake is situated at an altitude of 175 m. Its maximum depth has been recorded at 18.3 m. Indawgyi Lake is surrounded by mountain ranges, 300 to 1300 m in elevation above sea level (Ministry of Forest Department, Myanmar, 2010). The lake lies inside the Indawgyi Wildlife Sanctuary. The climate is the sub-tropical region. Important habitats around the lake are extensive grasslands and rainforests on the surrounding mountain slopes (Kalender, 2022). The mountain ridges are mostly covered with broad-lead forests (Zin Mar Than, 2011). The Indawgyi Lake Biosphere Reserve has three key purposes, conservation of biodiversity and cultural diversity, promoting economically sustainable development in line with socio-cultural and ecological principles and facilitating logistical support for research, education, and training (Kalender, 2022).

The meaning of the Indawgyi Lake is taken by Burmese words, In means lake, Daw means royal and Gyi means honorific or the great. The literal meaning of the phrase is "the Great Royal Lake" (Bishnu et al., 2015). The nearest town is Hopin Town and around the Indawgyi Lake, there are 16 villages on the lake basin. They are 1) Lon Ton Village, 2) Mine Naung Village, 3) Lae Pon Lay Village, 4) Shwe Let Pan Village, 5) Nan Mun Village, 6) Nan Phoung Zin Village, 7) Nan Taung Sae Village, 8) Nan Pate Village, 9) Nyaung Bin Village, 10) Nan Mee Laung Village, 11) Ma Mon Kai Village, 12) Hepu Village, 13) Hapa Village, 14) Chaung Wa Village, 15) Loi Mon Village and 16) Lone Sant Village. There are small villages around Indawgyi Lake, while major villages are on the western and eastern sides. On the western side, Lon Ton and Nyaung Bin villages are the two major villages, while Nan Mun, Hepu and Lone Sant villages are on the eastern side. The major tribes are Shan Ni, Bamar, Katu and Kachin. Around lake, 50,375 people lived in about 7,620 households (Kalender, 2022). Furthermore, Indawgyi is the headwater of Irrawaddy River and there has also 30 streams of different sizes to support the Lake. The lake has major inflows and outflows. The major inflow streams are Nanyinkha Stream, Namsanda Stream, Nam Mon Stream/Laepon Lay Stream, Nan Phoung Zin Stream. And the outflow is Indaw Stream.



FIG. 2 – Map of Indawgyi Lake (prepared by Khin Yadnar Htay).

Introduction

7

Myanmar's fish production in 2008–2009 was 3,542,290 tons, with 26% from freshwater, primarily from Indawgyi Lake (Aung Htway Oo, 2010). The annual per capita fish consumption was 43 kg. Indawgyi Lake had 435 registered fishermen who used small boats and various nets, sometimes employing improper methods they set nets at 3 pm and collect fish in the early morning around 4 am (Zin Mar Than, 2011). Small-scale capture fishing required a license from the Department of Fishery. Local fishermen noted fish migrations between the lake, Irrawaddy River, and tributaries during the wet season (mid-May to late October) for spawning (Opperman *et al.*, 2021). To support conservation, eight protection zones were established, prioritizing specific areas. Unauthorized net setting in these zones resulted in penalties, including net confiscation and fines imposed by the Fishery Department.

Local economy of the Indawgyi Lake

The major income-generating activity is agriculture and fishing. Fishing is also a side occupation for the local community. Causal work is the third largest and followed by self-employed. Agricultural work and gold mining are predominant in this area (Kraas and Than, 2016).

Present threats to Lake

The population of fish in Indawgyi Lake has declined significantly over the past 10–20 years as the pressures of the increasing population around the lake, overfishing, and gold mining (Opperman *et al.*, 2021). Local residents noticed that water quality in the southern Indawgyi Lake has changed and some fish species are found to be declining (Tun Lin Aung, 2021). The lake can not support the local community demands on fish in recent years, communities on the southern lake have to buy fish from other sides of the lake, or even import frozen fish from Mandalay. Some current challenges for the local population and the lake are overfishing, poor land-use management, deforestation, pollution from mining, waste disposal, and migration-related issues (Kraas and Than, 2016).

Local transportation

Zin Mar Than (September 2011) described that two-lane dirt roads surrounding the lake and one connected Hopin with Nammon, Hepa, Hepu, and Losant villages. Dead end and side roads connected the various settlements on the west side of the lake. During the wet season, roads are in bad condition and sometimes blocked by landslides. The second important transportation way is by boat or motor boat.

Common economic fish species of Indawgyi Lake

According to local fishermen and fish sellers, common economic fish species are Gudusia variegata, Notopterus notopterus, Osteobrama belangeri, Osterobrama cunma, Systomus sewelli, Laubuka indawgyiana, Channa spp., Sperata acicularis and Hypsibarbus myitkyinae.

Habitat type of the Indawgyi Lake

Myanmar is rich in natural resources, including arable land, forests, minerals, natural gas, and freshwater and marine resources. Overall, eight ecosystems are recognized as forests, mountains, dry and sub-humid lands, estuarine mangroves, inland fresh water, grasslands, marine/coastal, and small islands (MECF, 2011). Habitat types are described as sandy stream, muddy stream, rocky stream, waterside, shallow stream with weed plants, and inside the lake. We have described the species of the lake with their habitat preference in this book. Rocky stream, sandy stream, inside the lake, and shallow stream with macrophytes are mostly found habitats for fish species in Indawgyi Lake (figure 3).



С

FIG. 3 – Habitat types around Lake Indawgyi. (A) Indawgyi Lake; (B) Mote Soe Stream, a sandy stream, Lone Sat Village, East side of Indawgyi Lake; (C) pogoda in the lake; (D) school of *Rasbora* and *Pethia* on shore; (E) local fishing; (F) fishes swimming in macrophytes in the lake; (G) shallow water in Indawgyi Lake; (H) Mote Soe Stream, a rocky stream, Lone Sat Village, East side of Indawgyi Lake; (I) Nant Taung Sal Stream, a muddy stream, west side of Indawgyi Lake; (J) Nant Yim Khar Stream, Lone Tone Village, west side of Indawgyi Lake; (K) Shallow water lakeshore on the east side of Indawgyi Lake; (L) view from West side of Indawgyi Lake; (M) long-distance view from a hill in the north-west of the lake; (N) Lwe Aim Stream, Lone Sant Village. (A–M) photo by Shu-sen Shu, (N) photo by Naing Htet Naing.

D

Introduction



Е

F





G











L

Fig. 3 - (continued).



FIG. 3 -(continued).

Sandy stream

Μ

Sandy stream is always wet on the waterside, its ground is sandy, and the water is shallow and clear. The vegetation type is every forest and there are grass plants on the bank and big trees near the stream. On the way to upstream of Nanyinkha Stream, the road is good in summer but becomes inaccessible for motorbikes in rainy season. It took one and a half hour to reach there, but in rainy season we went there on foot. At that place the following species can be seen, Acantopsis spectabilis, Xenentodon cancila, Puntius chola, Mustus ruferscens, Macroganthus morehensis, Rasbora daniconius. Rasbora rasbora. Pethia thelys. Microrasbora sp., Homalopteroides rupicola, Mustura celata, Paracanthocobitis linypha, Psilorhynchus brachyrhynchus, Oreichthys cosuatis, Dario hysginon. Lepidicephalichthys, Macrognathus, Parambassis and Channa species are common in sandy stream.

Muddy stream

It is a muddy stream at the ground and there is weed on the surface, and the water is mostly green and a little brown. In the lake, there are only weeds, grass and no big trees around the lake. We went there by boat and can walk in the water in warm season and then the water level is low, but in rainy season, water level is too high to catch fish. Species in this type of stream are Pangio pangia, Indostomus paradoxus, Badis kyar, Leiodon cutcutia, Trichogaster labiosa, Oreichthys cosuatis, Lepidocephalichthys goalparensis, Dario hysginon, Pethia erythromycter, Lepidocephalichthys berdmorei, Channa shingon. Danio hysigon, Anabas testudineus, Parasphaerichthys ocellatus, Trichogaster labiosa, and Channa striata are common in muddy stream.

Rocky stream

The stream is with rocky ground and shallow water, and the ground has a little sand, but the bank of the stream is brown-color sand, and there are no grass near the

Introduction

stream, but there are bamboos around the stream. The vegetation type is wet and dry vegetation. The water is mostly clear, but in some places near the road, the water is becoming reddish because of gold mining. Common species are *Pseudolaguvia tuberculata*, *Lepidocephalichthys berdmorei*, *Opsarius barnoides*, *Badis kyar*, *Mustura celata*, *Amblyceps improcerum*. *Mustura*, *Clarias*, *Badis* spp., *Heteropneutes fossils*, and *Homalopteroides rupicola* are common in rocky streams.

Inside the Lake

In the lake, there are only weeds, grass and no big trees around the lake. Species richness inside the lake is high. The common species can be found in the lake are *Rasbora* spp., *Wallago attu, Sperata acicularis, Hypsibarbus myitkyinae, Labeo calbasu* and *Labeo rohita. Microphis dunckeri, Indostomus paradoxus* and *Monopterus cuchia* are rare and only found in steady water in the lake. There are seasonally flooded grasslands in the lake, and it is important habitat for breeding sites of fishes that migrate all the way up from Irrawaddy River during monsoon season. The breeding season is raining season for most fish species in the lake.

Shallow stream with weeds

The habitat type of the stream is with a sandy bottom and it is by the waterside side of the lake, there is watercress on the water's surface. It is the conservation area and also a breeding area for fishes. It is also high species-richness area. The common species are *Lepidocephalichthys alkaia*, *Lepidocephalichthys berdmorei*, *Mustura celata*, *Pethia didi*, *Danio albolineatus*, *Channa shingon*, *Schistura malaisei*. *Ore-ichthys cosuatis*, *Pethia* and *Esomus* species are common, and *Devario* species and *Rasbora rasbora* are also found in this type of habitat.

Shallow water lakshore

The confluence area of Nan Phoung Zin Stream and the lake is a suitable habitat for fishes and it is a conservation area of the lake for fish. There is no fishing over there and it is a prevention area for fish breeding. It is included as one of the fish zones in the lake according to the Wildlife Department under Forestry Department and Fishery Department. The stream is very large and has weeds and grass on the waterside, and there are big trees near the stream. Small fishes are mostly living in that stream. The water level is high and we went there by boat through the Indawgyi Lake. Trichogaster labiosa, Heteropneustes fossilis, Leiodon cutcutia, Anabas testudineus, Esomus danrica, Laubuka indawgyiana, Channa shingon are common species in that area.

Diversity of fishes in the lake

Based on five times of field surveys, over 100 fish species were collected from the Indawgyi lake basin from 2018 October to 2023 February. For the species diversity, 10 orders and 32 families are recorded from the lake and most species are Cypriniformes and followed by Siluriformes and Perciformes, Cyprinidae is dominant in the basin. The fish fauna of Indawgyi Lake is mostly composed of native species, and tilapia (*Oreochromis nilotica*) is the major exotic species in the lake. Although some species are listed as nearly threatened (NT) in IUCN Red List, they are common in Indawgyi Lake. They are *Labeo nandina*, *Neolissochilus hexastichus*, *Ompok pabda*, *Ompok pabo*, *Osteobrama belangeri* and *Wallago attu*. Local fishermen noted that *Opsarius barnoides*, *Labeo catla* and *Anematichthys* species are rare in the lake, and *Notopterus notopterus* and *Puntius chola* could be caught everywhere in the lake and stream.

There are six endemic species to Indawgyi Lake, *Lepidocephalichthys eleios*, *Schistura indawgyiana*, *Laubuka indawgyiana*, *Mastacembelus pantherinus*, *Microphis dunckeri* and *Indostomus paradoxus*. The status of these endemic species are not clear and should be assessed according to IUCN criteria, and more study on ecology and conservation should be done.

The taxonomic status of those under name of widely spread species in Indawgyi Lake should be systematically reviewed in the future, *Pangio pangia*, *Anematichthys apogon*, *Oreichthys cosuatis*, *Osteochilus rostellatus*, *Clarias magur*, and *Chaudhuria caudata*, and some species in Indian names also need taxonomic review, such as *Neolissochilus hexastichus*.

1. Notopterus notopterus (Pallas, 1769)

Order: OSTEOGLOSSIFORMES (Bony tongues) Family: Notopteridae

Common names: Bronze featherback; Nga-Phe; cl:vuS; 弓背鱼; 驼背鱼



Adult, photo by Nay Htet Naing



Subadult, photo by Nay Htet Naing



Juvinile, photo by Lamin Ko Ko

Diagnosis:

Head and body compressed; dorsal head convex or slightly concave; preopercular scale rows 6–8; dorsal fin small, dorsal soft rays 7–9; anal-fin base long, anal soft rays 97–111; adult with plain brown coloration, silvery-white with numerous fine grey spots on body and head; juveniles (<5 cm SL) with dark bars on the whole body; size up to 600 mm SL.

Biology:

Inhabits clear streams, large rivers, and brackish waters. Feeds mainly on insects, fish, and crustaceans. Spawning occurs at night during the rainy season.

Status:

Commonly found in Indawgyi Lake. Common on local markets as a food fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy, Salween, Mekong River basins, Myanmar. Thailand, Malaysia, southern India, Sumatra, and Java.

2. Gudusia variegata (Day, 1870)

Order: CLUPEIFORMS Family: Clupeidae Common names: Burmese river shad; Nga-La-Bi; cl:co分; 杂色小鳞鲥



Photo by Nay Htet Naing

Diagnosis:

Body deep and distinctly compressed; abdomen without keel; 20–30 scutes along belly; dorsal fin short, and its distal end not reaching anal-fin origin; caudal fin deeply forked; body silvery gray, back grayish; some dark blotches along upper flanks; fins transparent; caudal fin with dark margin; size up to 160 mm SL.

Biology:

Inhabits rivers. An herbivorous and omnivorous fish, feeds mainly on algae.

Status:

A dominant species in Indawgyi Lake. Common food fish on local market. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy River, endemic to Myanmar.

3. Psilorhynchus brachyrhynchus Conway and Britz, 2010

Order: CYPRINIFORMES

Family: Psilorhynchidae

Common names: Short-snout river stone carp; Nga-Kyaut-Cat; cl:compかかる; 短吻裸吻鱼



Photo by Nay Htet Naing

Diagnosis:

Body deep, cylindrical, head slightly compressed; dorsal margin slightly hump, greatest depth at the origin of dorsal-fin; ventral profile curved; mouth inferior; snout rounded and short; barbels absent; eyes large; dorsal fin high; anal-fin base short, tip pointed; caudal fin deeply forked; lateral line incomplete, lateral-scales 32–34; body and head yellowish; 5–7 round or squarish dark blotches on flank; a black vertical bar at caudal-fin base; fins yellowish; size up to 51 mm SL.

Biology:

Inhabits streams and rivers with fast-flowing waters. Found on water with bottom of cobblestone. Feeds on plant debris and algae.

Status:

Common. A small-sized fish with no economic value. IUCN: Data Deficient.

Distribution:

Streams and rivers around Indawgyi Lake; Irrawaddy, endemic to Myanmar.

4. Acantopsis spectabilis (Blyth, 1860)

Order: CYPRINIFORMES

Family: Cobitidae

Common names: Spectacular horseface loach, long-nosed loach, banana-root fish; Nga-Pyaw-Myit; **ப்பைத்தி**; 眼刺马头鳅; 纤细小刺眼鳅



Photo by Shu-sen Shu



Photo by Nay Htet Naing

Diagnosis:

Head and snout long; bifid suborbital spine present, erectile, approximately midway between eye and snout tip; 2–3 pairs of labial barbels; 9½ branched dorsal rays, 10 pectoral rays; 2–3 rows of large dark spots on side of head; 9–12 dark saddles along dorsal midline; 9–15 black spots along side of body; 1–2 bands on anal and paired fins; 3–4 black spots along upper lobe, 2–3 larger and darker spots on lower lobe of caudal fin; size up to 300 mm SL.

Biology:

Mostly inhabit inflow streams of the lake with flowing water and substrates of sand, fine gravel, or mud. Feeds mainly on insect larvae and small crustaceans.

Status:

Common, non-economic fish and be sold in the aquarium trade. IUCN: Data Deficient.

Distribution:

Tributaries of Indawgyi Lake; Irrawaddy, Salween, Ataran, Dawei river basins, Myanmar; India and Thailand.

5. Lepidocephalichthys alkaia Havird and Page, 2010

Order: CYPRINIFORMES

Family: Cobitidae

Common names: Lion's tail loach; Nga-Tha-Lae-Htoe; cl:いいぬ; 狮尾似鳞头鳅 Synonyms: Lepidocephalichthy guntea



Photo by Shu-sen Shu

Diagnosis:

Body elongate; mouth inferior; three pairs of barbels; dorsal-fin origin slightly posterior to pelvic-fin origin; caudal fin truncated or rounded; scales absent on top of head; yellowish body; a dark band extending up to anterior margin of eyes; a thin dark stripe extending from posterior margin of gill cover to caudal-fin base; 16–20 dark saddles on dorsum; dark spots on side sometimes; usually, a black blotch on upper edge of caudal-fin base; size up to 38 mm SL.

Biology:

Inhabits sluggish streams and lakes. Feed on insect larvae.

Status:

Common, a small-sized fish without economic value. Not evaluated by IUCN.

Distribution:

Indawgyi Lake and its surrounding streams; Irrawaddy, Salween river basins, Myanmar. Yunnan Province, China.

6. Lepidocephalichthys berdmorei (Blyth, 1860)

Order: CYPRINIFORMES

Family: Cobitidae

Common names: Burmese loach, Myanmar loach; Nga-Tha-Lae-Htoe; cl:いいぬ; 伯氏似鳞头鳅



Photo by Shu-sen Shu



Photo by Lamin Ko Ko

Diagnosis:

Body elongate, body depth nearly equal from head to caudal base; mouth inferior; three pairs of barbels; dorsal-fin origin slightly posterior to pelvic-fin origin; truncated or rounded caudal fin; scales absent on top of head; body yellowish to brown; a dark band extending from snout tip up to anterior margin of eyes; a midlateral row of irregular small black blotches or spots on side; usually, a black blotch on anterior edge of dorsal-fin base and upper edge of caudal-fin base; 3–6 dark bands on caudal fin; size up to 80 mm SL.

Biology:

Inhabits hill streams and lakes with sandy, pebble, and stone bottom. Often feeds on plant debris, insect larvae, and small crustaceans.

Status:

20

Most common, a low-value food fish and potential ornamental fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake and its drainages; Sittaung, Irrawaddy, Salween, Mekong, Tanin-tharyi basins, Myanmar; India, Thailand, Laos, China, and peninsular Malaysia.

7. Lepidocephalichthys eleios Kottelat, 2017a

Order: CYPRINIFORMES

Family: Cobitidae

Common names: Marsh loach; Nga-Tha-Lae-Htoe; cl:いいぬ:; 沼泽似鳞头鳅



Photo by Maurice Kottelat

Diagnosis:

Body moderately elongate, moderately compressed; dorsal profile slightly straight, ventral profile distinctly curved from snout to base of anal-fin; body entirely covered scales except head; lateral line absent; head compressed; mouth inferior, U-shaped; lips smooth and thick; eyes small; barbels three pairs, maxillary barbels reaching beyond posterior margin of eye; the last two rays of pectoral-fin adjacent without membrane in male; caudal fin slightly emarginated; a row of 9–12 irregular saddles on middorsal; caudal fin with 2–3 very irregular bars; body slightly purplish brown and translucent in life; a small-sized species, size up to 23 mm SL.

Biology:

Inhabits on bottom of the mud or clay covered by dense vegetation and vegetal debris in slow and deep water of tributaries and outlet of the lake.

Status:

Not common in Indawgyi Lake Basin. A small-sized loach and no interest in fishery. Not evaluated by IUCN.

Distribution:

Only from Indawgyi Lake and its drainage; endemic to Myanmar.

8. Lepidocephalichthys goalparensis Pillai and Yazdani, 1976

Order: CYPRINIFORMES

Family: Cobitidae

Common names: Goalpara loach; Nga-Tha-Lae-Htoe; cl:いいのに; 斑尾似鳞头鳅



Photo by Nay Htet Naing

Diagnosis:

Body elongate, moderately compressed; dorsal profile slightly hump, highest at origin of dorsal-fin; ventral profile distinctly curved from snout to origin of pelvic-fin; lateral line complete; head compressed; mouth inferior; lips smooth and thick; eyes moderately large; barbels three pairs, short; dorsal-fin slightly anterior of pelvic-fin origin; scales small; caudal fin strongly forked; body with 10–12 irregular dark blotches on flank; a black spot on upper half of base of caudal-fin; caudal fin with four to five dark, broad, regularly spaced V-shaped bands; belly grayish white; size up to 44 mm SL.

Biology:

Inhabits slow-flowing streams and rivers, lakes. Feed on vegetable debris, aquatic insects, and small shrimp.

Status:

Commonly found in Indawgyi Lake and streams around Indawgyi Lake. A small-sized fish without economic value. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy, Myanmar. Upper Brahmaputra basin, Nepal, Bangladesh, India.

9. Pangio pangia (Hamilton, 1822)

Order: CYPRINIFORMES Family: Cobitidae Common names: Eel-like loach; Nga-Chaw; cl:cap;真潘鳅 Synonyms: Acanthophthalmus panqia



Photo by Nay Htet Naing

Diagnosis:

Body worm-like, elongate and laterally compressed; head short and somewhat cylindrical; eyes small; mouth inferior; lips thick; suborbital spine biforked; barbels three pairs; scales minute; pelvic fin closer to caudal-fin base than to pectoral-fin base, pelvic-fin rays 6 or 7; caudal fin truncate, other fins round and small; body reddish brown, abdomen pale; size up to 65 mm SL.

Biology:

Inhabits in ponds and rivers. It is found in slow-moving waters with sandy or mud bottom and feeds on vegetable debris and crustaceans.

Status:

Commonly found in streams around Indawgyi Lake. A small-sized fish and it's no economic value. IUCN: Least Concern.

Distribution:

Streams around Indawgyi Lake, Irrawaddy, Myanmar; India, Bangladesh.

10. Mustura celata Kottelat, 2018

Order: Cypriniformes Family: Nemacheilidae Common names: Mystery loach; Nga-Zin-Sat; cl:@εοδ; 迷鳅



Photo by Paing Zaw



Photo by Nay Htet Naing

Introduction

Diagnosis:

Body moderately elongate, slightly compressed; head cylindrical in cross-section; snout rounded, cheeks not swollen; lateral line complete; no median notch on upper lip; 6–10 very irregular bars along with irregular saddles on flank; a vertically elongated black blotch at caudal-fin base, 9 + 8 branched caudal-fin rays; $8^1/_2$ branched dorsal-fin rays; caudal-peduncle length 1.3–1.7 times its depth; size up to 50 mm SL.

Biology:

Inhabits streams of Indawgyi Lake with bottom of sand and mud. Feeds on plant debris, insect larvae, and small crustaceans.

Status:

Rare, a small-sized fish with no economic value. Not evaluated by IUCN.

Distribution:

Only found in Nam Sa Pe and Yae Aye streams flowing to Indawgyi Lake, and a small tributary of Irrawaddy River between Myitkyina and Bhamo, endemic to Myanmar.

11. Paracanthocobitis linypha Singer and Page, 2015

Order: CYPRINIFORMES

Family: Nemacheilidae

Common names: Sewing needle zipper loach; Nga-Tha-Lae-Htoe; රාකාර්ති:; 细斑副棘鳅



Photo by Shu-sen Shu



Photo by Shu-sen Shu

Introduction



Photo by Nay Htet Naing

Diagnosis:

Body moderately elongate, slightly compressed; dorsal profile rising evenly, deepest at origin of dorsal-fin; ventral profile roughly straight; head conical and undepressed; barbels three pairs; caudal fin emarginated; lateral line incomplete, ending near pelvic-fin origin; axillary pelvic lobe absent; 10–14 dark saddles on flank, alternating short and long bars; 5–7 dark bands on caudal-fin; 6–10 very irregular bars on back; a roundish black spot near dorsal margin of caudal-peduncle; size up to 43 mm SL.

Biology:

Inhabits streams of Indawgyi Lake with bottom of sand and mud. Feeds on plant debris, insect larvae, and crustaceans.

Status:

Common. A small-sized fish with no economic value. Not evaluated by IUCN.

Distribution:

Found in Nao Kuang and Nant Yim Khar streams flowing to Indawgyi Lake, and its basin. Irrawaddy and Sittaung, endemic to Myanmar.

12. Paracanthocobitis mandalayensis (Rendahl, 1948)

Order: CYPRINIFORMES **Family:** Nemacheilidae

Common names: Mandalay zipper loach; Nga-Tha-Lae-Htoe; cl:いいので: ; 曼徳勒副棘鳅 Synonyms: Acanthocobitis mandalayensis



Photo by Lamin Ko Ko





Photo by Nay Htet Naing
Introduction

Diagnosis:

Body moderately elongate, slightly compressed; dorsal profile slightly hump, deepest at origin of dorsal-fin; ventral profile slightly curved; head conical; barbels three pairs; suborbital groove in adult male; caudal fin emarginated; lateral line complete; axillary pelvic lobe present; 10–11 small oval or squarish dark blotches on flank of body; 7–11 dark bands on caudal-fin; a roundish black spot near dorsal margin of caudal-peduncle; size up to 88 mm SL.

Biology:

Inhabits streams of Indawgyi Lake and rivers. Feeds on plant debris, insect larvae, and small crustaceans.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. A small loach and no interest in fishery. Not evaluated by IUCN.

Distribution:

Streams flowing to Indawgyi Lake and its drainage. Irrawaddy, Sittaung, endemic to Myanmar.

13. Schistura indawgyiana Kottelat, 2017b

Order: CYPRINIFORMES

Family: Nemacheilidae

Common names: Indawgyi loach; Nga-Tha-Lae-Htoe; cl:いいぬ: ; 因道支南鳅



Photo by Shu-sen Shu

Diagnosis:

Body elongate, moderately compressed; dorsal profile slightly straight, ventral profile distinctly curved from snout to base of anal-fin; lateral line incomplete, ending anterior of pelvic-fin, with 16–23 pores; head compressed; mouth terminal; lips smooth and thick; eyes small; barbels three pairs, maxillary barbel reaching middle of head; suborbital flap absent; branched pectoral-fin rays 8–9; pelvic-fin origin in front of origin of dorsal-fin; caudal fin emarginated; body with a blackish mid-lateral stripe on flank; a small oval dark blotch at base of caudal fin; belly grayish; size up to 30 mm SL.

Biology:

Inhabits streams and lakes. Feeds on small shrimp, vegetable debris and aquatic insects.

Status:

Commonly found in Indawgyi Lake and streams around Indawgyi Lake. A small-sized loach and no interest in fishery. Not evaluated by IUCN.

Distribution:

Indawgyi Lake and streams around Indawgyi Lake, endemic to Myanmar.

14. Schistura malaisei Kottelat, 1990

Order: CYPRINIFORMES

Family: Nemacheilidae

Common names: Malaise's stone loach; Nga-Tha-Lae-Htoe; cl:ລວດວິຊີ: ;云纹南鳅



Photo by Shu-sen Shu



Photo by Nay Htet Naing



Photo by Nay Htet Naing

Diagnosis:

Body elongate, moderately compressed; dorsal profile slightly hump, highest at origin of dorsal-fin; ventral profile distinctly curved from snout to origin of pelvic-fin; lateral line incomplete, reaching origin of pelvic-fin; head compressed; mouth terminal and slightly arched; lips smooth and thick; eyes moderately large; barbels three pairs, maxillary barbel reaching behind eye; suborbital flap absent in male; 10–11 branched rays of pectoral-fin; 7 branched rays of pelvic-fin; caudal fin emarginated; body with 10–13 irregular dark bars on flank; a vertical dark blotch on base of caudal-fin; belly grayish; size up to 45 mm SL.

Biology:

Inhabits in streams rivers and lakes. Feeds on vegetable debris and aquatic insects.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. A small loach and no interest in fishery. IUCN: Least Concern.

Distribution:

Indawgyi Lake and its drainages, Irrawaddy, Myanmar. China.

15. Homalopteroides rupicola (Prashad and Mukerji, 1929)

Order: CYPRINIFORMES **Family:** Balitoridae

Common names: Hillstream loach; Kyauk-Kat-Nga; cmpからからに :岩栖似平鳍鳅 Synonyms: Chopraia rupicola, Homaloptera rupicola



Photo by Shu-sen Shu



Photo by Nay Htet Naing

Diagnosis:

Head and greater part of body depressed; dorsal profile moderately arched; snout narrowly rounded; mouth inferior and semicircular; 3 pairs barbels; dorsal-fin origin posterior to pelvic-fin origin; pectoral fins with fleshy peduncle, almost reach pelvic-fin origin; caudal fin forked, lower lobe slightly longer than upper lobe; lateral-line complete, lateral-line scales 33–52; body ground colour yellowish; five large chocolate to black saddles across body, and a black longitudinal stripe along lateral line; some black spots or bands on fins; size up to 25 mm SL.

Biology:

Inhabits rocky and hilly streams, riffles with gravel, rocks, and boulders bottom. Feeds on small crustaceans, insect larvae and invertebrates.

Status:

Common, an ornamental fish. IUCN: Least Concern.

Distribution:

Streams surrounding Indawgyi Lake; Irrawaddy River, Myitkyna District, Myanmar. Thailand.

16. Danio albolineatus (Blyth, 1860)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Pearl danio; Nga-Yae-Paw; cl:cရcol : 珍珠魚



Photo by Nay Htet Naing

Diagnosis:

Body slender and compressed; lower jaw projecting beyond upper jaw; two pairs of long barbels, maxillary barbel reaching pectoral-fin base; anal-fin base much longer than dorsal-fin base; lateral line incomplete; iridescent blue or pink body; a yellow or orange stripe on body side; a rosy orange stripe on anal fin and caudal fin; color varies with habitat; size up to 65 mm SL.

Biology:

Inhabits streams and slow-flowing rivers. Feeds on insects and zooplankton.

Status:

A popular ornamental fish. IUCN: Least Concern.

Distribution:

Streams surrounding Indawgyi Lake; Irrawaddy, Sittaung, Salween, and Tanintharyi drainages, Myanmar. Mekong and Mae Khlong drainages, Thailand, Cambodia. Irrawaddy drainage, China.

17. Danio choprae Hora, 1928

Order: CYPRINIFORMES **Family:** Cyprinidae

Common names: Glowlight danio; Nga-Mi-Sone; பில்லை; 市氏鲥; 乔氏斑马鱼 Synonyms: Celestichthys choprae, Danio (Brachydanio) choprae



Photo by Lamin Ko Ko

Diagnosis:

Body slightly elongated and deep, laterally compressed; eye large; lower jaw projecting beyond upper jaw; two pairs of long barbels; anal-fin base longer than dorsal-fin base; lateral line almost always absent; body yellowish, with 5–8 vertical dark bars on flanks; a brilliant red lateral stripe from caudal-fin base to anterior side, gradually narrow and blurred; caudal fin lobes, anal-fin, and dorsal-fin with a yellow and black margin; size up to 31 mm SL.

Biology:

Inhabits mainly clear streams with substrates of gravel and rocks. They are omnivorous fish, feed mainly on insects.

Status:

Most popular small ornamental fish in the aquarium. Very rare in Indawgyi Lake. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy, endemic to Myanmar.

Introduction

18. Danio kyathit Fang, 1998

Order: CYPRINIFORMES

Family: Cyprinidae Common names: Leopard danio; Nga-Kyar-Thit; ငါးကျားသစ်; 豹纹魚 Synonyms: Danio (Brachydanio) rerio



Photo by Shu-sen Shu





Photo by Nay Htet Naing

Diagnosis:

Body slender and laterally compressed; lower jaw projecting beyond upper jaw; two pairs of long barbels; anal-fin base longer than dorsal-fin base; lateral line incomplete; 5–7 bluish dark, with irregular spots or horizontal stripes along side of body; blue and rosy orange stripes on translucent fins; dorsal fin and caudal fin with rosy orange margin; size up to 50 mm SL.

Biology:

Inhabits fast-flowing, clear streams, with substrates of mud and small stones. Feeds on insects and zooplankton.

Status:

A popular ornamental fish. IUCN: Near Threatened.

Distribution:

Streams surrounding Indawgyi Lake; Irrawaddy drainage near Myitkyina; the Hpa-Lap Chaung, Mogaung, and Chindwin rivers, endemic to Myanmar.

19. Devario fangae Kullander, 2017

Order: CYPRINIFORMES Family: Cyprinidae Common names: Fang's danio; Nga-Khayan; cl:อฤษ์: ;方氏神၏ Synonyms: Danio aequipinnatus



Photo by Nay Htet Naing



Juvinile, photo by Lamin Ko Ko

Diagnosis:

Body laterally compressed, predorsal contour gradually rising; mouth terminal, obliquely directed upwards, lower jaw projecting beyond upper jaw; indistinct barbels two pairs; pelvic axillary scale present; branched anal-fin rays $9-11\frac{1}{2}$; caudal fin forked; lateral line complete; lateral line scales 30-32, predorsal scales 13-14; body olive green, abdomen silvery, with three horizontal blue stripes alongside, the middle stripe widen anteriorly, much wider than adjacent inter stripes; size up to 61 mm SL.

Biology:

Usually inhabits on surface to middle layer of swift-flowing and clear streams, with mud, stones, or leaf litter bottom. Feeds mainly on insects.

Status:

Uncommon, usually not as a food fish local, which could be a potential ornamental fish. Not evaluated by IUCN.

Distribution:

Streams surrounding Indawgyi Lake; upper Irrawaddy drainage, endemic to Myanmar.

20. Devario myitkyinae Kullander, 2017

Order: CYPRINIFORMES

Family: Cyprinidae Common names: Myitkyina danio; Nga-Khayan; cl:อฤอ์: ; 密支那神師 Synonyms: Danio aequipinnatus



Photo by Shu-Sen Shu



Photo by Nay Htet Naing

Diagnosis:

Body laterally compressed, predorsal contour gradually rising; mouth terminal, obliquely directed upwards, jaws equal anteriorly; indistinct barbels two pairs; pelvic axillary scale present; branched anal-fin rays $11-14\frac{1}{2}$; caudal fin forked; lateral line complete; lateral line scales 30-33, predorsal scales 13-15; body olive green, abdomen silvery, with five horizontal blue stripes alongside, a little wider than adjacent interstripes, the middle stripe not obviously widen anteriorly; size up to 78 mm SL.

Biology:

Usually inhabits on surface to middle layer of swift-flowing and clear streams, with mud, stones, or leaf litter bottom. Feeds mainly on insects.

Status:

42

Uncommon, usually not as a food fish in local, which could be a potential ornamental fish. Not evaluated by IUCN.

Distribution:

Streams surrounding Indawgyi Lake; upper Irrawaddy drainage, endemic to Myanmar.

21. Esomus caudiocellatus Ahl, 1924

Order: CYPRINIFORMES

Family: Cyprinidae

Common names: Spotted tail fly barb; Nga-Yae-Paw; ch:eqeoif; 眼尾长须餅



Photo by Xiao-yong Chen

Diagnosis:

Body elongate and compressed laterally; head pointed; mouth small, lower jaw longer; barbels two pairs, maxillary pair extremely long, extending beyond pectoral-fin origin; lateral line incomplete; body olive-green and slightly translucent; a prominent dark round blotch on caudal-fin base; size up to 40 mm SL.

Biology:

Prefers to inhabit shallow, slow-moving, and standing waters. Feeds on terrestrial and aquatic invertebrates.

Status:

Common, usually not as a food fish local, which could be an ornamental fish. IUCN: Least Concern.

Distribution:

Streams surrounding Indawgyi Lake; Irrawaddy, Salween, Sittaung River basins in Myanmar. Thailand and Malaysia.

22. Esomus danrica (Hamilton, 1822)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Flying barb; Nga-Lone; ch:や: ; 长须断 Synonyms: Esomus altus



Photo by Shu-sen Shu



Photo by Nay Htet Naing



Photo by Nay Htet Naing

Diagnosis:

Body elongate and compressed laterally; head pointed; mouth small, lower jaw longer; barbels two pairs, maxillary pair extremely long, reaching middle of body; pectoral-fins long and pointed; lateral line incomplete; body olive-green to gray-green; a black medio-lateral band from mouth to caudal-fin base, which bordered on dorsal side by a gold stripe in juvenile; size up to 130 mm TL.

Biology:

Inhabits small streams, ponds, ditches, and inundated fields. Commonly found at shallow stream with micro plant around Indawgyi Lake. Feeds on terrestrial and aquatic invertebrates.

Status:

Common, usually not as a food fish, a potential ornamental fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake and surrounding streams; Irrawaddy drainage, Myanmar. Pakistan, India, Nepal, Bangladesh, Afghanistan, and Sri Lanka.

23. Rasbora daniconius (Hamilton, 1822)

Order: CYPRINIFORMES

Family: Cyprinidae



Photo by Shu-sen Shu



Photo by Lamin Ko Ko

Diagnosis:

Body elongate, laterally compressed; dorsal profile rising evenly from snout to origin of dorsal-fin, ventral profile slightly curved from snout to anus; scales large; mouth sub-superior; eyes very large, diameter nearly a half of head depth; mouth large and gape wide; barbels absent; lateral line incomplete, 18–22 lateral-line scales; caudal fin deeply forked; body and head olive on back; abdomen silvery; a distinct black lateral stripe from eye to base of caudal-fin; fins hyaline and yellow; size up to 100 mm SL.

Biology:

Inhabits rivers, ponds, and lakes. Feeds on vegetable debris and aquatic insects.

Status:

Commonly found in Indawgyi Lake and around streams. A small-size fish with no value as food fish. It has high commercial value in aquariums. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy and Salween, Myanmar. India, Bangladesh, Malaysia, Thailand, and Sri Lanka.

24. Rasbora rasbora (Hamilton, 1822)

Order: CYPRINIFORMES

Family: Cyprinidae

Common names: Gangetic scissortail rasbora; Nga-Byat, Nga-Lone; ငါးဗျက်၊ ငါးလုံး ; 波鱼



Photo by Nay Htet Naing



Photo by Xiao-yong Chen

Introduction

Diagnosis:

Body elongate and slender, laterally compressed; dorsal margin rising slightly hump, peak at origin of dorsal-fin, ventral profile symmetrically curved; scales large; mouth sub-superior; eyes large, diameter greater than snout length; mouth large and gape wide; barbels absent; lateral line complete; caudal fin deeply forked; body and head silvery, brownon back; a distinct dark hind margin on caudal fin; other fins hyaline and yellowish; size up to 130 mm SL.

Biology:

Inhabits on surface of rivers, streams, and lakes. Feed on vegetable debris and aquatic insects.

Status:

Commonly found in Indawgyi Lake and around streams. A small-size fish and important ornamental fish in aquarium. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy, Myanmar. India, Pakistan, Bangladesh, and Thailand.

25. Opsarius barnoides (Vinciguerra, 1890)

Order: CYPRINIFORMES

Family: Cyprinidae

Common names: Myanmar baril; Nga-Aim-Ma; **cl:認旨:** ; 似巴纳真马口波鱼 Synonyms: *Barilius barnoides*



Photo by Nay Htet Naing

Diagnosis:

Body elongate and compressed; head short and compressed; dorsal profile slightly hump, ventral outline almost symmetrically curved; scales moderate sized; mouth terminal; eyes large; interorbital distinctly convex; barbels absent; lateral line complete; caudal fin deeply forked and tips pointed; lateral-line scales 42–45; predorsal scales 19–21; branched anal-fin rays 9; body silvery, back brownish, with 9–10 vertical bars on flank; abdomen silvery; size up to 80 mm SL.

Biology:

Inhabits flowing rivers and streams. Feed on algae, vegetable debris, and aquatic invertebrates.

Status:

Commonly found in Yae Aye stream, a creek entering Indawgyi Lake and rare in the lake. A small-sized fish with as an ornamental fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake and its drainage; Irrawaddy, Myanmar, and China.

26. Opsarius dogarsinghi (Hora, 1921)

Order: CYPRINIFORMES

Family: Cyprinidae

Common names: Manipur baril; Nga-Aim-Ma; **cl:** 翁氏真马口波鱼 Synonyms: *Barilius dogarsinghi*



Photo by Xiao-yong Chen

Diagnosis:

Body and head elongate, compressed; body deep; dorsal outline slightly curved, ventral outline more curved; scales moderate sized; mouth terminal; eyes large; interorbital distinctly convex; rostral barbels two pairs, very short; caudal fin deeply forked and tips pointed; lateral line complete, lateral-line scales 38 or 39; predorsal scales 20; back of head and body dark, belly and flanks silvery; a prominent black blotch on caudal-fin base; caudal fin black, dorsal fin with a black band on base and a wide black band across middle, anal fin with a wide orange band; size up to 85 mm SL.

Biology:

Inhabits flowing rivers and hill streams with sandy or gravelly. Feed on algae, vegetable debris, and aquatic invertebrates.

Status:

Commonly found in Myithar and Saw River, two tributaries of Irrawaddy drainage. A small-sized fish with as an ornamental fish. IUCN: Vulnerable.

Distribution:

Irrawaddy River, Myanmar. Manipur River, India.

27. Laubuka indawgyiana Khin and Chen

Order: CYPRINIFORMES

Family: Cyprinidae Common names: Indawgyi glass barb; Indawgyi-Nga-Yin-Baung-Sar; ったにのうのための 因道支宝鳊 Synonyms: Laubuka (laubuca) laubuca, Perilampus fulvescens, Laubuka fulvescens





Photo by Nay Htet Naing

Diagnosis:

Body elongate, dorsal profile convex, slightly incurved between dorsal-fin origin and caudal fin origin, ventral profile more curved; head small, dorsal profile almost straight; eyes large and placed laterally; mouth sub-superior; lower jaw smooth, tubercles absent; dorsal-fin origin slightly posterior to anal-fin base; pectoral fin falcate, long; absence of any marking except a roundish humeral blotch behind operculum; body olive brown, translucent, covered with minute dots, abdomen white with a black edge in middle; caudal-fin yellow, lobes subequal; lateral line complete, with 24–27 scales; predorsal scales 14–16; size up to 49 mm SL.

Biology:

Inhabits in ponds, streams, and lakes. Feeds on insects and plants.

Status:

Commonly found in Indawgyi Lake and its around streams. A small-sized fish with as popular ornamental fish. Not evaluated by IUCN.

Distribution:

Indawgyi Lake, Streams around Indawgyi Lake, endemic to Myanmar.

28. Amblypharyngodon atkinsonii (Blyth, 1860)

Order: CYPRINIFORMES

Family: Cyprinidae

Common names: Burmese carplet; Nga-Byet, Nga-Salon-Phyu; cາເບຼາກາເລີ່ອວິດີ ເຊິ່ງ ເ



Photo by Shu-Sen Shu

Diagnosis:

Head compressed; eyes large; mouth slightly upward; upper lip and barbels absent; body fusiform; abdomen rounded; dorsal-fin with seven branched rays; anal-fin with five to six branched rays; caudal fin forked; lateral line incomplete; scales small, 55–65 scales on lateral row; body silvery, head and dorsum with golden sheen; fins yellow with dark edges; size up to 150 mm TL.

Biology:

Inhabits the middle and bottom waters of various water bodies. Feeds predominantly on phytoplankton and algae. Spawning many times from April to October.

Status:

Popular food fish on local markets, also as ornamental fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake and its basin, Irrawaddy, Salween, Tanintharyi rivers, central to southern Myanmar; India.

29. Osteobrama belangeri (Valenciennes, in Cuvier and Valenciennes, 1844)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Manipur osteobrama; Nga-Phae-Aung, Nga-Phan-Ma; ငါးဖယ်အောင်း၊ ငါးဖမ်းမ; 比氏骨鳊 Synonyms: Rohtee belangeri



A juvenile, Photo by Nay Htet Naing

Diagnosis:

Body deep, laterally compressed; dorsal profile obviously arched from occiput to base of dorsal-fin, ventral profile distinctly curved from snout to base of anal-fin; scales small; mouth terminal; eyes large, greater than snout length; snout oval and blunt; barbels absent; dorsal spine strong and serrated; 17 branched anal-fin rays; caudal fin forked, caudal peduncle longer than its depth; abdominal edge entire, sharply keeled; lateral line complete; body and head silvery gray, with regular darker grayish bands on flank in young; a dark basal caudal blotch present in juviniles and faded away in adult; belly silvery; size up to 380 mm SL.

Biology:

Inhabits rivers and lakes. Feeds on small shrimp, vegetable debris and aquatic insects.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. A large-sized fish and an interest food-fish in Myanmar and India, common on local markets around Indawgyi Lake as a food fish. It is being cultured in Manipur, India. IUCN: Near Threatened.

Distribution:

Indawgyi Lake; Irrawaddy basin in Myanmar. India.

30. Osteobrama cunma (Day, 1888)

Order: CYPRINIFORMES

Family: Cyprinidae

Common names: Cunma osteobrama; Nga-Salon-Phyu; cl:කの義:[9]; 印度骨鳊 Synonyms: Rohtee alfrediana



Photo by Nay Htet Naing

Diagnosis:

Body deep, considerably compressed; dorsal profile and ventral margin distinctly curved; scales small; mouth terminal; eyes large, nearly a half of head length; barbels absent; dorsal spine weak with serrated posterior edge; abdominal edge sharp, from base of pelvic-fin to anal-fin; lateral line complete; caudal fin forked, caudal peduncle longer than its depth; body and head silvery, dark on back; fins yellow with dark edge; size up to 150 mm SL.

Biology:

Inhabits rivers and lakes. Feeds on vegetable debris, aquatic insects, and small shrimp.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. A medium-sized fish and a commercial fishery in Myanmar, common on local markets around Indawgyi Lake as a food fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy basin in Myanmar. India.

31. Osteobrama feae Vinciguerra, 1890

Order: CYPRINIFORMES Family: Cyprinidae Common names: Myanmar osteobrama; Nga-Phae-Aung, Nga-Phan-Ma; ငါးဖယ်အောင်းເငါးဖစ်းမ; 缅甸骨鳊; 费氏骨鳊 Synonyms: Rohtee feae



Photo by Shu-sen Shu

Diagnosis:

Body deep, trapezoid, and laterally compressed; dorsal profile obviously arched from occiput to dorsal-fin base; ventral profile rounded in front of anal fin; head conical and compressed, mouth terminal, eyes large; barbels two pairs; dorsal spine weak and serrated; caudal fin forked, caudal peduncle shorter than its depth; lateral line complete; body silvery, fins hyaline with light dark edge; size up to 150 mm SL.

Biology:

Inhabits rivers and lakes. Feeds on vegetable debris, aquatic insects, and small shrimp.

Status:

Rare. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy basin in Myanmar. Manipur River in India.

32. Anematichthys apogon (Valenciennes, in Cuvier and Valenciennes, 1842)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Beardless barb, Indian river barb, Red-eyed barb; Nga-Jyi; についた: 天竺圆唇鱼; 无须圆唇鱼 Synonyms: Cyclocheilichthys apogon



Photo by Shu-Sen Shu

Diagnosis:

Body deeply compressed; head triangular; eyes large; snout conical; mouth subterminal; barbels absent; posterior edge of dorsal-fin spine serrated, branched dorsal-fin rays 8; branched anal-fin rays 5; caudal-fin forked; body silver; dark spots on insertion of lateral scales, forming discontinuous stripe; a large dark blotch on caudal fin base; size up to 287 mm TL.

Biology:

Inhabits slow-moving or standing rivers, streams, reservoirs, lakes, and canals. Feeds on small plankton, benthic organism, and crustaceans.

Status:

Rare in Indawgyi Lake. Uncommon food fish on local market. IUCN: Least Concern.

Distribution:

Indawgyi Lake and surrounding streams; Irrawaddy, Tanintharyi river basins, Myanmar. Mainland of Southeast Asia and Malaysia.

33. Hypsibarbus myitkyinae (Prashad and Mukerji, 1929)

Order: CYPRINIFORMES

Family: Cyprinidae

Common names: Myitkyina barb; Nga-Khone-Ma-Kyi; cl:ؤ::6次: 密支那高须鱼 Synonyms: Barbus myitkyinae



Photo by Nay Htet Naing

Diagnosis:

Body deep, compressed; mouth terminal and oblique; two pairs of barbels; body deepest at dorsal-fin origin; dorsal spine serrated posteriorly; branched pelvic-fin rays 8; scales large; upper transverse scales $5^{1}/_{2}$; 16 scale rows around caudal peduncle; caudal fin deeply forked; body silvery and back gray; fins gray, paired fins with orange; a black vertical band behind gill-opening; scales with black margins; size up to 232 mm SL.

Biology:

Inhabits flowing larger rivers and tributaries. Found in deep water of Indawgyi Lake. Feeds on organic detritus and aquatic invertebrates.

Status:

Commonly found in Indawgyi Lake. A common food fish on local markets around the lake. IUCN: Least Concern.

Distribution:

Indawgyi Lake and surrounding streams; Irrawaddy River, endemic to Myanmar.

34. Neolissochilus hexastichus (McClelland, 1839)

Order: Cypriniformes Family: Cyprinidae Common names: Copper mahseer; Nga-Mi-Kya; chorne;萨尔温江新光唇鱼; 六线新光唇鱼 Synonyms: Barbus hexastichus



Photo by Nay Htet Naing

Diagnosis:

Body elongate, moderately deep, compressed; dorsal profile and ventral margins on body gently curved; scales large; head relatively short; mouth subterminal, rounded; lips moderately thick; eyes large; barbels two pairs, moderately long; dorsal fin origin closer to snout tip than caudal-fin base; last unbranched ray of dorsal-fin soft and smooth; lateral-line complete; body slivery, dark on upper half, with three

Introduction

longitudinal stripes along side of body, and the upper and mid-lateral two more prominent; fins with dark edge, more prominent on caudal fin; size up to 900 mm SL.

Biology:

Inhabits slow-moving waters of rivers and lakes; feeds on algae, vegetable debris, and aquatic insects.

Status:

Commonly found in Indawgyi Lake and its drainage. A large and medium-sized fish, with high economic value. IUCN: Near threatened.

Distribution:

Indawgyi Lake and its drainage; Salween, Irrawaddy, Myanmar; Assam, India.

35. Oreichthys cosuatis (Hamilton, 1822)

Order: CYPRINIFORMES

Family: Cyprinidae

Common names: Indian Hifin Barb, Cosuatis barb; Nga-Aim-Ma, Nga-Khone-Ma-Taungshay; cາເລີຍິເອເດກາດ ເຊີ້ອີເພດເມີເປັນເປັ້ອີເພດເມີ້ອີເພດເມີ້ອີເພດເມີ້ອີເພດເມີ້ອີເພດເມີ້ອີເພດເມີ້ອີເພດເມີ້ອີເພດເມີ້ອີເພດເມີ້ອີເພດເມີ້ອີເພດເມີ້ອີເພດເມີ້ອີເພດເມີ້ອີເພດເມີ້ອີເພີເພີເມີນເປັນເປັເມີຍີເພດເມີາເປັນເປັນເປັນເ



Male, photo by Lamin Ko Ko



Female, photo by Shu-sen Shu

Diagnosis:

Body elongate, moderately compressed; body deep; dorsal profile distinctly hump from snout to origin of dorsal-fin, ventral outline slightly convex; scales large; mouth terminal; eyes very large, diameter nearly half of head height; interorbital distinctly convex; lateral line complete, 18–21 lateral-line scales; barbels absent; last unbranched ray of dorsal-fin soft and smooth; caudal fin deeply forked; predorsal scales 8–9; body yellow to brown, back of head and body dark, abdomen silvery white; a distinctly large dark blotch at middle of caudal-fin base; a wide black blotch
Introduction

on dorsal fin and anal fin; fins light red, more prominent on caudal-fin lobes; males more colorful than females; size up to 45 mm SL.

Biology:

Inhabits flowing rivers and hill streams with sandy or gravelly. Feed on algae, vegetable debris, and aquatic invertebrates.

Status:

Commonly found in Yin Kha stream, a tributary of Lake Indawgyi. A small-sized fish with as an ornamental fish. IUCN: Least Concern.

Distribution:

Found in Yin Kha stream and flows to Indawgyi Lake, Myanmar. Bangladesh, India, Thailand.

36. Pethia didi (Kullander and Fang, 2005)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Didi pethia; Nga-Khone-Ma; cl:จุ้ะอ;地地佩西鲃 Synonyms: Barbus phutunio



Photo by Shu-Sen Shu



Photo by Nay Htet Naing

Introduction

Diagnosis:

Body small, moderately deep, and laterally compressed; dorsal profile rising evenly from tip of snout to origin of dorsal-fin; ventral profile gently convex; lateral line incomplete, lateral-line scales 6–8; head small and short; mouth small, terminal; snout rounded, shorter than eye diameter; lips thick; barbels one pair, rostral barbels absent, maxillary barbels rudimentary; last unbranched ray of dorsal-fin strong and serrated; caudal-fin deeply emarginate; circumpeduncular scales 12; two prominent dark blotches on flank, the first one above pectoral fin, vertical elongated, the second one behind anal-fin base, smaller and round; body and head dark grayish brown on back; siver on belly; fins hyaline, dorsal and anal fins with black marks in the middle, dorsal fin with a distal margin; size up to 40 mm SL.

Biology:

Inhabits streams and rivers. It is found in fast-moving rivers with bottom substrates consisting of mud, sand, and stone. Feeds on vegetable debris, algae, and crustaceans.

Status:

Commonly found in Nam and Nao Kuang stream around Indawgyi Lake. A small-sized fish and it's no economic value. IUCN: Least Concern.

Distribution:

Streams around Indawgyi Lake, Irrawaddy, Myanmar.

37. Pethia erythromycter (Kullander, 2008)

Order: CYPRINIFORMES

Family: Cyprinidae

Common names: Lipstick barb; Nga-Khone-Ma; பில்: 红吻佩西鲃



Photo by Shu-sen Shu



Photo by Lamin Ko Ko

Diagnosis:

Body small, moderately deep, and laterally compressed; dorsal profile distinctly hump; ventral profile gently convex; lateral line incomplete, lateral-line scales 5–7; head small and short; eyes large; mouth terminal; snout rounded, shorter than eye diameter; lips moderately thick; barbels absent; last unbranched ray of dorsal-fin strong and serrated; caudal-fin deeply forked; circumpeduncular scales 10–11; an obvious red spot on upper lip; a distinctly black blotch on caudal-peduncle; scales with dark margin; body olive-green, with minute dots, b, abdomen silver; size up to 33 mm SL.

Introduction

Biology:

Inhabits in ponds, streams, and lakes. Feeds on vegetable debris, algae, and crustaceans.

Status:

Commonly found in Indawgyi Lake and its around streams. A small-sized fish and it's no economic value. IUCN: Least Concern.

Distribution:

Indawgyi Lake, Streams around Indawgyi Lake. Irrawaddy, endemic to Myanmar.

38. Pethia padamya (Kullander and Britz, 2008)

Order: CYPRINIFORMES

Family: Cyprinidae

Common names: Ruby barb, Odessa barb; Nga-Khone-Ma; cl:จุ้ะย ; 红宝石佩西鲃



Photo by Nay Htet Naing



Photo by Xiao-yong Chen

Diagnosis:

Body small, moderately deep, and laterally compressed; dorsal profile distinctly hump; ventral profile gently convex; lateral line incomplete, lateral-line scales 5–8; head small and short; eyes large; mouth terminal; snout rounded, shorter than eye diameter; lips moderately thick; maxillary barbels present, minute; last unbranched ray of dorsal-fin strong and serrated; caudal-fin deeply forked; circumpeduncular scales 12; two prominent dark blotches on flank, the first one above pectoral fin, vertical elongated, the second one behind anal-fin base, smaller and round; males with a rosy red wide stripe from eye to caudal fin across middle of body; scales with dark margin; body olive-brown, dark on back, silver on abdomen; fins hyaline and yellow with two or three rows of dark marks, except caudal-fin; size up to 46 mm SL.

Biology:

Inhabits ponds, streams, and lakes. Feeds on plant debris, algae, and crustaceans.

Status:

Commonly found in Indawgyi Lake and its around streams. A small-sized fish with as popular ornamental fish. IUCN: Data Deficient.

Distribution:

Indawgyi Lake, Streams around Indawgyi Lake. Irrawaddy, endemic to Myanmar.

39. Pethia pugio (Kullander, 2008)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Spine-like barb; Nga-Khone-Ma; cl:จ:い: 长刺佩西鲃



Photo by Chavalit Vidthayanon

Diagnosis:

Body moderately deep, laterally compressed; dorsal profile distinctly hump, ventral profile slightly convex; lateral line complete, lateral-line scales 21–22; mouth terminal; snout rounded; eyes big; lips moderately thick, curved; barbels absent; caudal-fin moderately forked; last unbranched dorsal-fin ray smooth and long, almost as long as first branched ray; gill rakers 13–16; body and head light brown on back; silver on belly; fins hyaline; scales with dark margin; humeral marking absent, a black blotch on caudal peduncle; size up to 39 mm SL.

Biology:

Inhabits in rivers and lakes. Found in slow-moving rivers with muddy or sandy substrate. Feeds on vegetable debris, algae, and crustaceans.

Status:

Common in Indawgyi Lake and Southeast Asia. Being used as ornamental fish in local area. Not evaluated by IUCN.

Distribution:

Indawgyi Lake and its drainage; Bago, Sittaung, endemic to Myanmar.

40. Pethia thelys (Kullander, 2008)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Feminine barb; Nga-Khone-Ma; cl:จุ้ะษ; 众雌佩西鲃



Photo by Nay Htet Naing



Juvinile, photo by Lamin Ko Ko



Juvinile, photo by Lamin Ko Ko

Diagnosis:

Body small, moderately deep, laterally compressed; dorsal margin and ventral profile distinctly hump; nape slightly elevated; lateral line incomplete, lateral-line scales 6–11; mouth subterminal; snout rounded; eyes big; lips exposed, upper lip curved; barbels absent; last unbranched ray of dorsal-fin strong and serrated; caudal-fin deeply forked; a prominent black blotch on anterior caudal-peduncle in adult, and a broad black band encircling caudal peduncle in juveniles; dorsal, anal and pelvic fins with dark blotches; body and headlight brownish on back, sliver on flank and abdomen; scales with dark margin; size up to 42 mm SL.

Biology:

Inhabits rivers and lakes. Found in upper of slow-moving rivers substrate with muddy or sandy. Feeds on vegetable debris, algae, and crustaceans.

Status:

Common in Indawgyi Lake and northern Myanmar. Being used as ornamental fish in local area. IUCN: Least Concern.

Distribution:

Indawgyi Lake and its drainage; Irrawaddy, endemic to Myanmar.

41. Puntius chola (Hamilton, 1822)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Swamp barb; Nga-Khone-Ma; cl:จุ้ะย ; 沼泽小鲃 Synonyms: Barbus chola



Photo by Shu-sen Shu



Photo by Lamin Ko Ko



Photo by Lamin Ko Ko

Diagnosis:

Body strongly deep, laterally compressed; dorsal profile obviously arched from snout to origin of dorsal-fin, ventral profile distinctly curved from snout to base of caudal-fin; scales moderately large; mouth terminal; eyes large, diameter greater than snout length; snout rounded and blunt; maxillary barbels present, short; last unbranched ray of dorsal-fin strong and smooth; lateral line complete, 22–24 lateral-line scales; caudal fin deeply forked, caudal peduncle length nearly equal its height; body and head olive greenish on back, with silvery yellowish on flank; abdomen silvery; a distinctly dark blotch at base of dorsal-fin and middle of caudal-peduncle, respectively; size up to 120 mm SL.

Biology:

Inhabits rivers, ponds, and lakes. Feeds on vegetable debris, worms, shrimp, and aquatic insects.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. It has high commercial value as a food fish in local market. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy, Myanmar. India, Nepal, Bhutan, Bangladesh, Pakistan, and Sri Lanka.

42. Puntius sophore (Hamilton, 1822)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Pool barb; Nga-Khone-Ma; cl:จุ้:ย; 斑尾小鲃 Synonyms: Barbus sophore



Photo by Nay Htet Naing

Diagnosis:

Body deep, moderately elongate, laterally compressed; dorsal margin distinctly humped, a peak at origin of dorsal-fin; ventral profile strongly convex from snout to base of caudal-fin; scales medium large; head short; mouth terminal; eyes large, diameter greater than snout length; snout rounded and blunt; barbels absent; last unbranched ray of dorsal-fin strong and smooth; lateral line complete, lateral-line scales 22–27; caudal fin deeply forked; body and head olive on back, with bluish gloss on flank; belly silvery; a dark black round blotch at base of dorsal-fin and end of caudal peduncle; pelvic and anal fins red, and body with a mid-lateral pink stripe in mature males; size up to 130 mm SL.

Biology:

Inhabits in streams, rivers, ponds, and lakes. Found on supper waters of sluggish and standing with sand, mud, cobble, and boulder. Feeds on vegetable debris, worms, shrimp, and aquatic insects.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. A small-sized fish with no food-fish value, and as an aquarium fish in Southeast Asia. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy, Myanmar. India, Pakistan, Bangladesh, Nepal, Sri Lanka, Bhutan, Afghanistan, and China.

43. Systomus sewelli (Prashad and Mukerji, 1929)

Order: CYPRINIFORMES

Family: Cyprinidae

Common names: Sewelli barb; Nga-Khone-Ma-Kyi-Kyan; ငါးခုံးမကြီးကြမ်း;

西氏窄口鲃

Synonyms: Barbus sewelli, Barbus sarana caudimarginatus



Photo by Lamin Ko Ko





Photo by Nay Htet Naing Photo by Shu-sen Shu



Photo by Nay Htet Naing

Diagnosis:

Body deep, considerably compressed; dorsal profile and ventral margin distinctly curved; scales moderately large; mouth subterminal; eyes large, nearly a half of head depth; barbels two pairs; maxillary barbel reaching posterior edge of eye; last unbranched ray of dorsal-fin strong and serrated; lateral line complete, with 28–30 lateral-line scales; caudal fin forked; body golden brown, abdomen silvery; a distinct vertical black blotch behind operculum, scales with dark edge and formed rows of streaks on flank; a dark spot below base of dorsal-fin origin and a dark blotch on caudal-peduncle in juvenile; fins hyaline, yellowish or reddish; size up to 250 mm SL.

Biology:

Inhabits in streams, rivers, and lakes. Feeds on vegetable debris, aquatic insects, and small shrimp.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. A medium-sized fish and a commercial fishery in Myanmar, common on local markets around Indawgyi Lake as a food fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy, Sittaung, and Tanintharyi rivers, endemic to Myanmar.

44. Bangana devdevi (Hora, 1936)

Order: CYPRINIFORMES

Family: Cyprinidae Common names: Malihka labeo; Nga-Gyin-Phyu, Kyauk-Nga-Lone; にでたいのにのつかにいい; 戴氏孟加拉鲮



Photo by Nay Htet Naing

Diagnosis:

Body oblong; head with deep transverse groove across top of snout; mouth inferior, large; lips thick and fleshy, margin of upper lip smooth, lower lip papillated, post-labial grooves interrupted; a pair of maxillary barbels present, very small, concealed; dorsal spine smooth, dorsal-fin rays 13–14, outer margin concave; lateral line scales 37–40; 5–6½ scale rows between lateral line and dorsal-fin origin; circumpeduncular scales 20; body olive green with pinkish tint, dark on back, silvery ventrally; blurred dark humeral spot above pectoral fin; an apparent dark blotch on caudal peduncle; caudal fin deeply forked and upper lobe larger; size up to 500 mm SL.

Biology:

Inhabits flowing rivers and its larger tributaries. Feeds mainly on epiphytes and algae. Seasonal migration.

Status:

Common food on local markets. IUCN: Least Concern.

Distribution:

Indawgyi Lake and surrounding larger streams; Irrawaddy, Salween, Chindwin, Tanintharyi river basins, Myanmar. China and Thailand.

45. Cirrhinus cirrhosus (Bloch, 1795)

Order: CYPRINIFORMES

Family: Cyprinidae

Common names: Mrigal carp; white carp; Nga-Gyin-Phyu; cl:றć:ୱ); 卷须鲮 Synonyms: Cirrhina mrigala



Photo by Xiao-yong Chen

Diagnosis:

Body cylindrical and compressed laterally; snout obtusely rounded; mouth subterminal; lower jaw with a small post-symphysial knob; upper lip entire, not continuous with lower lip; barbels two well-developed pairs; last unbranched dorsal-fin ray soft, branched dorsal-fin rays 13–15; caudal fin deeply forked; lateral line complete, with 36–46 scales; body olive-green, silvery on lower part; dorsal-fin and caudal-fin gray, other fins slightly orange; size up to 1000 mm SL.

Biology:

Inhabits rivers, lake, and other various types of water. Feeds on plankton and algae.

Status:

Common, a fish of high fishery value. IUCN: Vulnerable.

Distribution:

Indawgyi Lake; Irrawaddy basin, Myanmar. Native to the Indian subcontinent including Myanmar; Introduced elsewhere.

46. Garra qiaojiensis (Wu and Yao, in Wu, 1977)

Order: CYPRINIFORMES

Family: Cyprinidae

Common names: Qiaojie garra; Kyaut-Thalae-Htoe, Kyaut-Nga-Tha-Lae-Htoe; cmpからにいいぬ:; 桥街墨头鱼

Synonyms: Garra lamta



Photo by Shu-Sen Shu



Introduction



Photo by Nay Htet Naing

Diagnosis:

Body elongate, cylindrical anteriorly and slightly compressed posteriorly; dorsal profile slightly arched, ventral profile almost straight; scales moderately large; head moderately large and depressed; mouth inferior; snout with a developed transverse lobe and proboscis with large tubercles on; eyes moderately large; barbels two pairs, all shorter than eye diameter; caudal fin forked; circumpeduncular scales 12; lateral-line scales 33–36; body olive to dark gray, with transverse streaks on flank, abdomen silvery; fins hyaline, dark on rays; size up to 160 mm TL.

Biology:

Inhabits on bed streams or rivers. Feeds on vegetable debris, algae and aquatic insects.

Status:

Commonly found in streams and rivers belong to Irrawaddy drainages. IUCN: Data Deficient.

Distribution:

Irrawaddy drainage, Myanmar and Yunnan, China.

47. Labeo boga (Hamilton, 1822)

Order: CYPRINIFORMS Family: Cyprinidae Common names: Boga labeo; Kyaut-Nga-Lu; cのpのたいい: 波加野鯵



Photo by Khin Yadnar Htay

Diagnosis:

Body elongated, its dorsal profile more protruding than ventral side; snout moderately projecting beyond mouth, without lateral lobe; eyes big, invisible from ventral view; mouth rather narrow, crescent-shaped; lips quite thick; a pair of minute maxillary barbels; caudal fin forked; dorsal fin 12; pectoral fin rays 16; lateral line scales 37–39; body gray; a vague pinkish-grey tint on gill covers; a dark spot or stripe often above pectoral fin; size up to 300 mm TL.

Biology:

Inhabits mainstream and tributaries of large rivers; spawning in flooded rivers.

Status:

An ornamental and common food fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy, Salween, Myanmar. India, Pakistan, Bangladesh, and Nepal.

48. Labeo calbasu (Hamilton, 1822)

Order: CYPRINIFORMS Family: Cyprinidae Common names: Orange fin labeo, Karnataka labeo; Nga-Nat-Pyar; ငါးနက်ပြာ; 橙鳍野鲮; 蓝野鲮 Synonyms: Morulius calbasu



Photo by Nay Htet Naing



Photo by Lamin Ko Ko

Diagnosis:

Body elongate, moderately compressed; dorsal body profile convex, ventral profile rounded; lateral line complete; head conical, its length slightly larger than depth; mouth subterminal and surrounded by fleshy lips; caudal deeply forked; dorsal fin orange, other fins dark grayish; scales golden yellowish, except grey white on belly; size up to 900 mm SL.

Biology:

Inhabits rivers, ponds, and lakes. It is found in slow-moving waters of rivers and feeds on algae and vegetable debris.

Status:

Common in Indawgyi Lake and Southeast Asia. Important in fisheries, with high commercial value. IUCN: Least Concern.

Distribution:

Indawgyi Lake and its drainage; Irrawaddy, Myanmar; Nepal, Pakistan, India, Bangladesh, and Thailand.

49. Labeo catla (Hamilton, 1822)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Catla; Nga-Thaing, Nga-Gaung-Pwa; に没た: ににこうた:g;卡特拉野鲮; 真卡特拉鲃 Synonyms: Catla catla, Gibelion catla



Photo by Nay Htet Naing

Diagnosis:

Body deep, robust; head large; mouth large and upturned; lower jaw projecting, free upper lip absent; pectoral fins long; caudal fin forked; scales large, lateral-line scales 40–43; body grayish, paler below; abdomen silvery white; fins dark; size up to 1820 mm TL.

Biology:

Inhabits rivers, lakes, and ponds. Surface and mid-water, omnivorous fish. Feeds on aquatic, terrestrial insects, detritus, and phytoplankton.

Status:

Rare in Indawgyi Lake. Cultured by local people for food. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy drainage, Myanmar. Pakistan, India, Bangladesh and Nepal. Introduced elsewhere.

50. Labeo dyocheilus (McClelland, 1839)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Brahmaputra labeo; Kyaut-Nga-Lu-Meekwat; coppのたにいいいでのか; 花颊野鲮



Photo by Nay Htet Naing

Diagnosis:

Body elongated; head conical; blunt snout projecting beyond mouth, with a distinct lateral lobe; eyes small; mouth wide; lips thick, fringed; two pair of short maxillary barbels; caudal deeply forked; lateral-line scales 40–42; laurel-green on back side, paler ventrally; juveniles with a dark spot present at the base of caudal-peduncle; size up to 900 mm TL.

Biology:

Inhabits river, lakes, and ponds with bottom of rocks. An omnivorous fish. Spawning season extends from August to September.

Status:

Uncommon economic fish. IUCN: Least Concern.

Distribution:

Indawgyi lake; Irrawaddy, Salween, Tenasserim, Chindwin Rivers basin, Myanmar; Pakistan, India, Bangladesh, and Nepal to southeastern Asia.

51. Labeo dussumieri (Valenciennes, in Cuvier and Valenciennes, 1842)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Malabar labeo; Nga-Dain; cl:3系; 杜氏野鲮 Synonyms: Labeo gonius



Photo by Nay Htet Naing

Diagnosis:

Body elongate and compressed; mouth moderately wide; lips moderately thick, fringed; snout rather obtuse, without any lateral lobe; eyes moderate; caudal fin deeply forked; scales small; lateral-line scales 53–60; circumpeduncular scales 25; $5\frac{1}{2}$ rows between lateral line and pelvic fin base, $9\frac{1}{2} + 1 + 8$ scales in transverse series, scales with dark edges forming longitudinal stripes on side; presence of numerous pores on snout; two pairs of minute barbels; dorsal fin with concave edge; grayish-white dorsal side, white abdomen; size up to 500 mm TL.

Biology:

Inhabits relatively calm water of larger rivers and reservoirs. Feeds mainly on algae. Spawning season extends from June to August.

Status:

Common food fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake, Myanmar. India and Sri Lanka.

52. Labeo nandina (Hamilton, 1822)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Nandi labeo; Nga-Ohn-Done, Nga-Nat-Tane; ငါးအံုံး ငါးနက်တိန်း ; 恒河野鲮



Photo by Shu-Sen Shu

Diagnosis:

Body elongated and compressed; mouth moderately wide; lips moderately thick, fringed; snout rather obtuse, without any lateral lobe; eyes moderate; two pairs of prominent barbels; caudal fin deeply forked; lateral-line scales 42–44; dark greenish above, gradually lighter down; center of most scales reddish; dark longitudinal stripes on lateral side of body and a dark spot at caudal peduncle (juveniles); size up to 812 mm SL.

Biology:

Inhabits large rivers. Feed primarily on diatoms, algae, microscopic animals, and other detritus.

Status:

Uncommon fish on markets. IUCN: Near Threatened.

Distribution:

Indawgyi Lake; Irrawaddy River, Myanmar. India and Bangladesh.

53. Labeo porcellus (Heckel, 1844)

Order: CYPRINIFORMS **Family:** Cyprinidae

Common names: Bombay labeo; Nga-Nat-Poke; ငါးနက်ပုတ်; 蠕野鲮



Photo by Shu-sen Shu

Diagnosis:

Body elongate and compressed; mouth moderately wide; lips thick, snout projecting over mouth; without any lateral lobe; eyes moderate; caudal fin deeply forked; lateral-line scales 36-37; circumpeduncular scales 20; $7\frac{1}{2}$ scales between the origin of the dorsal fin and lateral line; a single pair of barbel; 15-16 dorsal fin rays; dark grayish dorsal side; scales darker at their edges; size up to 350 mm TL.

Biology:

Inhabits relatively calm water of larger rivers and reservoirs. Feeds mainly on algae. Spawning season extends from June to August.

Status:

Common food fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake, Myanmar. India and Sri Lanka.

54. Labeo rohita (Hamilton, 1822)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Rohu; Nga-Myit-Chin, Nga-Gyin-Myatsan-Ni; ငါးမြစ်ချင်း၊ ငါးကြင်းမျက်ဆံနီ : 露斯塔野鲮



Photo by Nay Htet Naing

Diagnosis:

Body spindle-shaped and laterally compressed; dorsal profile more convex than the abdomen; snout depressed, short and obtuse, absence of lateral lobe; eyes prominent, lidless; subterminal mouth; lips think, fringed; caudal fin deeply forked; lobes subequal; a short maxillary barbel pair; 12–16 predorsal scales; lateral line scales 33; 13 dorsal fin-rays, 4–6 anal fin rays; 9 pelvic fin-rays; 19 pectoral fin-rays; blackish dorsal side; slivery ventrolateral side; abdomen white; size up to 2000 mm TL.

Biology:

Inhabits freshwater in ponds, lakes, rivers, and reservoirs. Feeds mainly on algae and zooplankton. It breeds in June and July.

Status:

Common food fish. IUCN: Least Concern.

Distribution:

Pakistan, Nepal, India, Bangladesh, and Myanmar.

55. Osteochilus rostellatus (Valenciennes, in Cuvier and Valenciennes, 1842)

Order: CYPRINIFORMES Family: Cyprinidae Common names: Bonylip barb; Nga-Khone-Ma; ดิเจ้ะอ ; 突吻纹唇鱼



Photo by Nay Htet Naing

Diagnosis:

Body elongate, compressed, dorsal profile hump, ventral profile slightly convex; lateral line complete, lateral-line scales 27, mouth terminal, snout blunt and rounded; lips thick; barbels two pairs; rostral barbels very short, caudal-fin deeply forked and lobes are pointed, 3 or 4 black spots below and above of later-line, body and head dark grayish on back; gray white on belly; fins brown-yellowish or hyaline; size up to 320 mm SL.

Biology:

Inhabits rivers and lakes. It is found in slow-moving rivers with muddy to sandy substrate. Feeds on vegetable debris, algae, and crustaceans.

Status:

Common in Indawgyi Lake and Southeast Asia. Important in fisheries with high commercial value. Being made into fish prohoc on local market. Not evaluated by IUCN.

Distribution:

Indawgyi Lake and its drainage; Irrawaddy, Salween, Myanmar; Malay Peninsula, Sumatra, Java, and Borneo.

56. Ompok pabda (Hamilton, 1822)

Order: SILURIFORMES Family: Siluridae Common names: Pabdah catfish; Nga-Nu-Than; ငါးနသန်း; 帕达绚鲇 Synonyms: Callichrous pabda



Photo by Shu-Sen Shu



Photo by Nay Htet Naing



Photo by Nay Htet Naing

Diagnosis:

Body elongate, laterally compressed; dorsal profile gently humped, ventral profile distinctly convex; head strongly compressed; mouth superior, gape large and horizontal; snout rounded and blunt; barbels two pairs, maxillary barbels long, reaching tip of pectoral fin; eyes large, lower edge of eye below level of cleft of mouth; dorsal fin short, pectoral fin with a spine, smooth and sharp, pelvic fin below dorsal fin and reaching anal fin origin, anal-fin base very long, separated from caudal fin by a notch; caudal fin forked; body sliver with golden and purple sheen, with a large dark shoulder blotch above pectoral fin and two lateral stripes alongside, maculated with irregular darker brown patches and minute spots on flank; size up to 300 mm SL.

Biology:

Inhabits rivers, ponds, and lakes. Feeds on small fish, shrimp, and aquatic insects.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. A small- to medium-sized catfish, it is an esteemed food fish. IUCN: Near Threatened.

Distribution:

Indawgyi Lake; Irrawaddy basin in Myanmar. India, Pakistan, and Bangladesh.

57. Ompok pabo (Hamilton, 1822)

Order: SILURIFORMES Family: Siluridae Common names: Pabo catfish; Nga-Nu-Than; ငါးနုသန်း ; 帕布绚鲇 Synonyms: Callichrous pabo



Photo by Shu-Sen Shu

Diagnosis:

Body and head strongly compressed, body elongate; dorsal profile gently humped, ventral margin distinctly convex; mouth superior, gape large and oblique; snout rounded and blunt; eyes moderate sized; dorsal fin short, anal-fin base very long; caudal fin deeply forked; barbels two pairs; mandibular barbels extremely short, nearly equal to diameter of eyes; maxillary barbels short, slightly beyond posterior edge of eyes; lateral line complete; body silvery grayish on flank and back, with a dark shoulder blotch; size up to 250 mm SL.

Biology:

Inhabits rivers, ponds, and lakes. Feeds on small fish, shrimp, and aquatic invertebrates.

Status:

Common. A small catfish and as a food fish in local markets. IUCN: Near Threatened.

Distribution:

Indawgyi Lake and its drainage, Irrawaddy, Myanmar. India and Bangladesh.

58. Pterocryptis berdmorei (Blyth, 1860)

Order: SILURIFORMES

Family: Siluridae

Common names: Burmese silurus; Nga-Nu-Than-Chaw; cl:දいにないで、 Synonyms: Silurus cochinchinensis



Photo by Nay Htet Naing



Photo by Shu-Sen Shu

Diagnosis:

Body elongate, laterally compressed; dorsal profile gently humped, ventral profile distinctly convex; head slightly compressed; mouth subterminal, gape large and horizontal; snout rounded and blunt; upper jaw slightly longer than lower; barbels two pairs, maxillary barbels long, extending to origin of pelvic-fin; eyes large; dorsal fin very short, anal-fin base very long; caudal fin slightly emarginated; lateral line complete, extending to base of caudal-fin; body and head brown, with minute dark dots on flank; belly silvery gray; size up to 214 mm SL.

Introduction

Biology:

Inhabits rivers, ponds, and lakes. Found in slow-flowing waters. Feeds on small fish, shrimp, and aquatic insects.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. A medium-sized catfish and an interest food fish in Myanmar. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy, Myanmar. India and Thailand.

59. Wallago attu (Bloch and Schneider, 1801)

Order: SILURIFORMES

Family: Siluridae

Common names: Wallago, Helicopter catfish; Nga-Bat; cl:のの; 叉尾鮎



Photo by Nay Htet Naing

Diagnosis:

Body elongate, laterally compressed; dorsal profile almost straight; ventral profile distinctly convex from snout to origin of caudal-fin; head broad, strongly compressed; eyes small; mouth superior, gape large and extended beyond eyes; barbels two pairs, maxillary barbels extend to origin of anal-fin; dorsal fin short, anal-fin base very long; caudal fin deeply forked; lateral line complete, extending to base of caudal-fin; body olive, with golden gloss and irregular bars on upper part, with dull white patches on lower part, anal and caudal fins dusky; size up to 2400 mm SL.

Biology:

Inhabits rivers, ponds, and lakes. Found in slow-flowing waters and mostly hides under holes. Feeds on small fish, shrimp, mollusks, and aquatic insects.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. Found in deep water of Indawgyi Lake. A medium-sized catfish and an interest food-fish in Myanmar. IUCN: Vulnerable.

Distribution:

Indawgyi Lake; Irrawaddy, Myanmar. India, Pakistan, Thailand, Vietnam, Cambodia, Indonesia, and China.
60. Eutropiichthys burmannicus Day, 1877

Order: SILURIFORMES Family: Ailiidae Common names: Burmese River catfish; Nga-Ka-Laung; cl:nccocc ; 缅甸真热带鲇 Synonyms: Eutropiichthys vacha



Photo by Nay Htet Naing

Diagnosis:

Body elongated and compressed; head slightly compressed; snout distinctly pointed; mouth large, terminal, gape extending through middle of pupil; barbels in four long pairs; abdomen without keel; branched pectoral-fin rays 15–17; anal fin base long, branched rays 46–54; adipose fin minute; caudal fin deeply forked; lateral line complete; body silvery gray, backside olive-brown; fins translucent; dorsal, pectoral and caudal fins with dark margin; size up to 350 mm SL.

Biology:

Inhabit rivers, streams, and canals. Feeds on small fishes, invertebrates, crustaceans, and aquatic insects.

Status:

Uncommon, a high-value food fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake and surrounding streams; Irrawaddy, Salween, Sittaung river basins, Myanmar. Salween basin in western Thailand.

61. Batasio dayi (Vinciguerra, 1890)

Order: SILURIFORMES Family: Bagridae Common names: Day's batasio; Nga-Sue-Koat, Kyaut-Nga; cl:ಫ಼:ෆੵゔ゙וෛpゔcl:; 戴氏巴塔鲿 Synonyms: Aoria (Macronoides) dayi, Macrones dayi



Photo by Nay Htet Naing

Diagnosis:

Body laterally compressed; mouth inferior with villiform tooth; barbels in four short pairs; posterior margin of dorsal fin spine serrated; adipose-fin long; caudal fin deeply forked; body brownish yellow; distal four-fifths of dorsal fin dark brown with a narrow hyaline distal margin; dark oblique saddles across body, the two before dorsal-fin more prominent; size up to 86 mm SL.

Biology:

Inhabits fast-flowing streams and rivers. Feeds mainly on insects, invertebrates, and bloodworms.

102

Status:

Uncommon fish on local markets. IUCN: Data Deficient.

Distribution:

Indawgyi Lake and streams surrounding; Irrawaddy and Salween drainages, endemic to Myanmar.

62. Hemibagrus microphthalmus (Day, 1877)

Order: SILURIFORMES

Family: Bagridae

Common names: Irrawaddy mystus; Nga-Jaung; cl:cィット訳半鲿 Synonyms: Aoria gulio



Lateral view, photo by Shu-sen Shu



Doral view, photo by Lamin Ko Ko

Diagnosis:

Body oblong and compressed posteriorly; head depressed; snout rounded in dorsal view; mouth subterminal; barbels 4 pairs, maxillary barbel long, extending to anal fin; body deepest at dorsal-fin insertion; adipose-fin base almost equal to anal-fin base in length; upper lobe of caudal fin extended to a filament; body gray, purplish; abdomen and barbels milky white or white; size up to 1500 mm SL.

Biology:

Inhabits rivers and rocky streams. Feeds on aquatic insect larvae, crustaceans, and fishes.

Status:

Seasonally common, a high fishery value fish and highly-priced a quarium fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy and Sittaung drainages, Myanmar. Manipur drainage in India, Salween River in Thailand.

63. Mystus cineraceus Ng and Kottelat, 2009

Order: SILURIFORMES Family: Bagridae Common names: Gray mystus; Nga-Zin-Yine; ငါးစင်ရိုင်း ; 灰礴



Photo by Shu-Sen Shu



Photo by Nay Htet Naing

Diagnosis:

Body elongate and compressed; dorsal profile slightly convex, ventral profile almost straight; head depressed, mouth subterminal, upper lip fleshy; eyes ovoid, gill openings wide; dorsal spine weak; 4 pairs barbels, maxillary barbel extending to

Introduction

middle of anal-fin base, or even to caudal-fin base; adipose-fin base long; body color uniform brownish-gray, abdomen silvery, a dark humpral spot present; size up to 103 mm SL.

Biology:

Inhabits on bed in rivers and lakes; Feed on small fish, shrimp, and aquatic insect.

Status:

Most commonly found in Indawgyi Lake and Irrawaddy drainage. A small- to medium-sized catfish and as an important economic fish in Myanmar. IUCN: Data Deficient.

Distribution:

Indawgyi Lake and its drainage; Irrawaddy, endemic to Myanmar.

64. Mystus falcarius Chakrabarty and Ng, 2005

Order: SILURIFORMES

Family: Bagridae

Common names: Gangetic mystus; Nga-Zin-Yine; cl:@čရč: ; 镰鳍鳠



Photo by Nay Htet Naing

Diagnosis:

Body moderately compressed; dorsal profile hump evenly on top at origin of dorsal fin, ventral profile slightly convex on top at base of the anal fin; lateral line complete and skin smooth; head depressed, mouth subterminal, upper lip fleshy; eyes ovoid; caudal fin deeply forked; 4 pairs barbels, maxillary barbels extend to base of caudal fin; dorsal fin long, with short spine and weak serration and concave margin; adipose-fin base long; body silvery and purplish, a black spot at base of dorsal fin and a vertical elongated dark humeral mark prominent; size up to 170 mm SL.

Biology:

Inhabits in rushing and slow-flowing rivers and streams; feed on small fish, shrimp, and aquatic invertebrates.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. A small- to medium-sized catfish and an important economic fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake and its drainage; Irrawaddy, Salween River, and drainages in south Myanmar, endemic to Myanmar.

65. Mystus leucophasis (Blyth, 1860)

Order: SILURIFORMES Family: Bagridae Common names: Upside-down catfish, Sittaung mystus; Nga-Pat-Lat, Nga-Naut-Thwar; ເລີເບດົາດາວິເລີຍອາດາວິເລີຍອາດາວິເລີຍອາດາວິເລີຍອີ Synonyms: Aoria leucophasis



Photo by Shu-Sen Shu

Diagnosis:

Body elongated and compressed; dorsal profile hump and ventral profile slightly convex; skin smooth, lateral line complete; head depressed, occipital process extending to basal bone of dorsal fin; median longitudinal groove on head extending to base of occipital process; mouth subterminal; eyes large and ovoid; barbels 4 pairs, maxillary barbel extending to end of anal fin; adipose fin long and high, inserted after a short interspace behind dorsal-fin base; caudal fin forked, upper lobe formed a filamentation; body olive-green to grayish black, with whitish dots, fins dark; size up to 125 mm SL.

Biology:

Inhabits in rivers and lakes; feed on small fish, shrimp, aquatic invertebrates.

Status:

Rare. A small catfish, but also an interest fishery. IUCN: Least Concern.

Distribution:

Indawgyi Lake and its drainage; Irrawaddy, Salween, and Sittaung River, endemic to Myanmar.

66. Mystus pulcher (Chaudhuri, 1911)

Order: Siluriformes

Family: Bagridae

Common names: Beautiful mystus, Pulcher mystus; Nga-Zin-Yine; cl:eを約と: ; 美鳠 Synonyms: Aoria pulcher, Macrones pulcher



Photo by Nay Htet Naing

Diagnosis:

Body short and compressed; dorsal profile hump and ventral profile slightly convex; skin smooth, lateral line complete; head depressed, occipital process reaching basal bone of dorsal fin; median longitudinal groove on head not extending to base occipital process; mouth terminal, eyes large and ovoid; barbels 4 pairs, maxillary barbels extending to anal fin origin; dorsal spine weak and serrated, adipose fin high, inserted a short distance behind dorsal-fin base, caudal fin forked; body golden to brown, upper part dark brown, lower part light; side with two lighter whitish brown stripes parallel to lateral line, one above it and one below it, two similar sized black spots above pectoral fin and at base of caudal fin; size up to 85 mm SL.

Biology:

Inhabits on bottom in streams, rivers and lakes; feed on small fish, shrimp, aquatic insect.

Status:

Commonly found in Indawgyi Lake and its drainage. A small- to medium-sized catfish and as an important economic fish in Myanmar. IUCN: Least Concern.

Distribution:

Indawgyi Lake and its drainage; Irrawaddy, Salween and Sittaung River, endemic to Myanmar.

67. Mystus rufescens (Vinciguerra, 1890)

Order: SILURIFORMES

Family: Bagridae

Common names: Meetan mystus; Nga-Zin-Yine; cl:e と 新た; 浅红鳠



Photo by Nay Htet Naing

Diagnosis:

Body elongate and compressed; dorsal profile hump and ventral profile slightly convex; skin smooth, lateral line complete; head depressed, mouth terminal, fleshy upper lip; eyes large and ovoid;4 pairs barbels, maxillary barbels extending to anal fin origin; dorsal spine serrated, adipose fin long, inserted just behind dorsal-fin base; caudal fin forked; body grayish black to rufescent, side with two narrow longitudinal pale stripes parallel to lateral line, one above it and one below it, lower stripe wider than upper one; a dark triangular spot at base of caudal fin; fins dark, dorsal and caudal with yellowish light margins; size up to 146 mm SL.

Biology:

Inhabits on bottom of streams, rivers, and lakes; feed on small fish, shrimp, aquatic insect.

Status:

Commonly found in Indawgyi Lake and its drainage. A small- to medium-sized catfish, and is an important economic fish in Myanmar. IUCN: Least Concern.

Distribution:

Indawgyi Lake and its drainage; Irrawaddy, Salween, and Sittaung River, endemic to Myanmar.

68. Olyra horae (Prashad and Mukerji, 1929)

Order: SILURIFORMES

Family: Bagridae

Common names: Longtail catfish, Hora olyra; Nga-Chaw; cl:cəp; 霍氏独焰鲇 Synonyms: Amblyceps horae



Photo by Shu-Sen Shu



Photo by Nay Htet Naing

Diagnosis:

Body elongate and slender; dorsal profile slightly convex, ventral profile almost straight; mouth terminal and small; eyes small; barbels four pairs, maxillary barbels reaching pectoral fin; dorsal fin small, inserted anterior of pelvic fin, adipose fin short and low, not confluent with caudal fin; dorsal, pelvic and anal fins soft; anal-fin base long; pectoral spine serrated on both edges; caudal fin deeply forked, upper lobe distinctly longer than lower; lateral line complete and distinct; body dark brown, fins dark; size up to 70 mm SL.

Biology:

Inhabits on bed in rivers and lakes. Feed on small fish, shrimp, and aquatic insect.

Status:

Commonly found in Indawgyi Lake and its drainage. A small catfish, but also an interest fishery. IUCN: Data Deficient.

Distribution:

Indawgyi Lake and its drainage; Irrawaddy River, Myanmar; India.

69. Sperata acicularis Ferraris and Runge, 1999

Order: SILURIFORMES

Family: Bagridae

Common names: Burmese shovelnose catfish; Nga-Gaung-Shae, Nga-Gyaung; ເມີເຣຈີໂະຖຸည໌၊ ເມີະດຸງວຣະ; 尖刺诺鲿

Synonyms: Aoria aor



Photo by Shu-sen Shu



Photo by Nay Htet Naing

Diagnosis:

Body elongate, slender, and compressed; dorsal profile rising evenly with deepest at origin of dorsal-fin; ventral profile distinctly convex; lateral line complete with numerous pores; head depressed, triangular in lateral view; supraoccipital spine long and slender, pointed at tip, interneural shield slender and narrow; mouth inferior, lips fleshy and thick; snout long, lateral margins nearly parallel in dorsal view; gill opening wide; eyes large, ovoid; 4 pairs barbels, maxillary barbel slender and long, extending to middle of adipose fin or base of caudal-peduncle; caudal fin deeply forked, lobes pointed and long, upper lobe longer; body silvery to brown, x'; all fins grayish; a distinct black spot close to posterior end of adipose fin; size up to 1800 mm SL.

Biology:

Inhabits on bed in rivers and lakes. Found in deep water of Indawgyi Lake. Feed on small fish, shrimp, and aquatic insect.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. A large-sized catfish and an important economic fish in Myanmar, common in local markets around Indawgyi Lake. IUCN: Least Concern.

Distribution:

Indawgyi Lake and its drainages; Irrawaddy, Myanmar. Manipur, India.

70. Akysis prashadi Hora, 1936

Order: SILURIFORMES

Family: Akysidae

Common names: Indawgyi stream catfish, Prashad's Catfish; Ta-Nga-Ngo; がに く た 脂粒鮎 ; 普氏粒鯰

Synonyms: Akysis variegatus variegatus



Photo by Nay Htet Naing

Diagnosis:

Head depressed; snout broadly rounded; mouth subinferior; four pairs of barbels, maxillary barbel extending to middle of pectoral fin; body relatively deep, skin covered with small prominent tubercles, arranged in rows; dorsal fin spine strong, with visible indentation on anterior margin; posterior edge of pectoral spine smooth; caudal fin deeply emarginate, with lower lobe longer than upper; caudal peduncle short; head brown, speckled with black dots; body brown, covered with three wide black patches, the first between head and pelvic fin, spreading to dorsal fin, the second behind pelvic fin and above anal fin, spreading to adipose fin, the third on base of caudal fin; caudal fin with a black wide patch on each lobe; typically, not larger than 60 mm SL.

Biology:

Inhabit lake and adjacent streams with substrates of sand, gravel, and rocks. Feeds on small aquatic crustaceans, insect larvae, worms, and zooplankton. Nocturnal fish.

Status:

Not common, an ornamental fish in aquarium. IUCN: Least Concern.

Distribution:

Indawgyi Lake (type locality) and Irrawaddy drainage, Myanmar. Manipur, India.

71. Amblyceps improcerum Ng and Kottelat, 2018

Order: SILURIFORMES

Family: Amblycipitidae

Common names: Short tail torrent catfish; Nga-Chaw; cheap; 短鳍钝头鮠



Photo by Shu-sen Shu



Photo by Nay Htet Naing

Diagnosis:

Body slender, anterior body rounded, compressed behind pelvic fin, depth of body and caudal peduncle even; head, rounded and depressed; mouth terminal, lower jaw slightly longer; barbels four pairs, maxillary barbel extending beyond pectoral fin; lateral line very short, ended under dorsal-fin base; dorsal fin origin above middle of pectoral fin, dorsal spine weak; pectoral spine smooth; adipose-fin base short, on the opposite above anal-fin base; caudal fin weakly forked with large lobes; all fins rounded; typically, not larger than 60 mm SL.

Biology:

Inhabits swift streams which bottom of large boulders, cobbles, and gravels; usually, hides under stones.

Introduction

Status:

Maybe as food, but rarely seen on markets. IUCN: Not evaluated.

Distribution:

Only found in tributaries of Indawgyi Lake, Kachin State, endemic to Myanmar.

72. Hara longissima Ng and Kottelat, 2007

Order: SILURIFORMES Family: Erethistidae Common names: Long tail hara; Ta-Nga-Ngo; づにそ; 长尾兔鮡 Synonyms: Erethistes conta



Photo by Tao Qin

Diagnosis:

Head and body moderately compressed; mouth inferior, with villiform teeth; eyes small; barbels in four pairs, annulated; dorsal spine strong, serrated on posterior margin; pectoral spines strong and serrated; caudal peduncle long; caudal fin deeply forked, upper caudal-fin lobe extended into a filament; occipital, cleithral and scapular processes exposed, coracoid processes developed, extending to midway between pectoral-fin base and pelvic-fin origin; head and body light chocolate brown; covered with numerous smaller, irregular darker brown patches or spots; fin hyaline, with brown bands; size up to 55 mm SL.

Biology:

Inhabits fast flowing river, with stones and sand bottom. Feeds on aquatic insect larvae.

Status:

Uncommon, usually not as a food fish in local. IUCN: Data Deficient.

Distribution:

Streams surrounding Indawgyi Lake; endemic to Irrawaddy River drainage in northern Myanmar.

73. Pseudolaguvia tuberculata (Prashad and Mukerji, 1929)

Order: SILURIFORMES Family: Erethistidae Common names: Tuberculatus catfish; Ta-Nga-Ngo; かにそ ;瘤拟拉格鮡 Synonyms: *Glyptothorax tuberculatus*







Photo by Nay Htet Naing

Diagnosis:

Body elongate, moderately compressed; dorsal profile rising evenly with highest at origin of dorsal-fin; ventral profile almost horizontal from snout to origin of anal-fin; body and head rough, covered by minute tubercles; adhesive apparatus developed on thorax, with a elongated depression in the middle; head compressed; occipital, humero-cubital and scapular processes exposed; mouth inferior; lips thick and fleshy; eyes small; barbels four pairs, strong and flattened on base, annulated; dorsal spine strong; adipose-fin originated as a low ridge just behind dorsal-fin base; pectoral fin strong and posteriorly serrated; caudal fin deeply forked; body brown, with three or four wide dark brown patches on flank; belly yellowish; fins light brownish with wide dark bands; size up to 33 mm SL.

Biology:

Inhabits hill streams and rivers with fast-flowing waters. Feeds on small worms and aquatic invertebrates.

Status:

Rare. A small catfish with no interest in fishery. IUCN: Data Deficient.

Distribution:

Streams and rivers around Indawgyi Lake; Irrawaddy, endemic to Myanmar.

120

74. Clarias magur (Hamilton, 1822)

Order: SILURIFORMES

Family: Clariidae

Common names: Walking catfish, magur, wagur; Nga-Khoo; cl:a ; 砂栖胡鲇 Synonyms: Clarias batrachus



Lateral view, photo by Nay Htet Naing



Dorsal view, photo by Lamin Ko Ko

Diagnosis:

Body compressed posteriorly; head depressed, broad and flattened; snout broad and rounded; eye small; barbels 4 pairs, maxillary barbel extending beyond pectoral-fin base; mouth terminal, upper jaw slightly projecting; occipital process rounded; dorsal and anal fin bases very long; dorsal fin inserted anterior of tip of pectoral fin; pectoral-fin spine strong and serrated on both edges; caudal fin rounded; body brown to olive-green, scattered light spots on flanks; size up to 460 mm TL.

Biology:

Inhabits shallow water of lake, river canals, swamps, pools, rice paddies, and ditches. Usually stay in stagnant water, and can leave water and move to other water bodies using its auxiliary breathing organs. Benthic omnivores, feeds on insect larvae, earthworms, shells, shrimps, small fish, aquatic plants, and debris. Breeding in raining season.

Status:

Common, an important food fish. IUCN: Endangered.

Distribution:

Indawgyi Lake and its surrounding streams; Irrawaddy, Salween, Sittaung river basins, Myanmar. India, Nepal, and Bangladesh.

75. Heteropneustes fossilis (Bloch, 1794)

Order: SILURIFORMES

Family: Heteropneustidae

Common names: Stinging catfish; Liver Catfish; Nga-Gyee; ch:എ近; ;印度囊鳃鲇 Synonyms: Saccobranchus fossilis



Photo by Lamin Ko Ko

Diagnosis:

Body oblong and compressed posteriorly; head depressed, occipital process not extending to dorsal-fin base; mouth terminal and small; eyes small; 4 pairs of long barbels; pectoral spine strong and serrated on both edges; dorsal fin small, inserted slight anterior of pelvic fin; anal-fin base long, beyond half of body, and separated from caudal fin by a distinct notch; caudal fin rounded; body yellow to olive brown, paler ventrally, with two lateral yellow stripes above and below lateral line; size up to 412 mm TL.

Biology:

Often inhabits sluggish rivers, swamps, ditches, and ponds. Feeds on aquatic insect larvae, shrimps, crustaceans, and fishes.

Status:

Common food fish on local market. IUCN: Least Concern.

Distribution:

Indawgyi Lake surrounding swamps, ditches, and ponds; Irrawaddy, Salween, Sittaung river basins, Myanmar. Pakistan and Sri Lanka to Thailand. Introduced elsewhere.

76. Parambassis ranga (Hamilton, 1822)

Order: Ovalentaria

Family: Ambassidae

Common names: Indian glassy perch, Siamese glassfish; Nga-Zin-Sat, Nga-Min-Tha-Me; cl:ເວໂຍປີເພຣີະເວນີຣີ: ; 兰副双边鱼 Synonyms: Ambassis ranga



Photo by Shu-sen Shu



Photo by Lamin Ko Ko

Introduction

Diagnosis:

Body oval, deep, compressed; dorsal profile distinctly humped, peaking at origin of dorsal-fin; ventral profile strongly convex; head strongly compressed, posterior edge of preopercular smooth; mouth sub-superior, gape large; eyes large; body and cheek covered with scales, except another part of head; lateral line complete, lateral-line scales 56–70; dorsal fin long, first dorsal fin with seven spines; caudal fin forked; body olive green, yellowish-brown, translucent, with faint vertical streak on flank; belly silver; size up to 60 mm SL.

Biology:

Inhabits streams of Indawgyi Lake and rivers, found in sluggish and standing waters. Feeds on invertebrates, worms and small crustaceans.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. A small to medium-sized fish and an aquarium fish in Southeast Asia. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy basin in Myanmar. India, Pakistan, Bangladesh, Nepal, Thailand, and Malaysia.

77. Parambassis robertsi Datta and Chaudhuri, 1993

Order: OVALENTARIA Family: Ambassidae Common names: Asiatic glassy perch; Nga-Zin-Sat, Nga-Min-Tha-Me; ငါးခင်စပ်၊ငါးမင်းသင်း ; 罗氏副双边鱼 Synonyms: Ambassis baculis



Adult, photo by Lamin Ko Ko



Juvinile, photo by Lamin Ko Ko

Introduction

Diagnosis:

Body deep and strongly compressed; dorsal profile rising evenly with deepest at origin of dorsal-fin; ventral margin strongly convex; head compressed; mouth sub-superior, gape large and oblique; eyes large; body covered with scales, except head; lateral line complete, lateral-line scales 56–70; dorsal fin long, first dorsal elongate; caudal fin forked; body and head yellowish-brown, operculum and belly silver, fins yellow with dark edge; size up to 60 mm SL.

Biology:

Inhabits in lakes, streams, and rivers. Found in sluggish and standing waters. Feeds on invertebrates, worms, and small crustaceans.

Status:

Rare. Found in Indawgyi Lake and around streams. A small to medium-sized fish without economic value. IUCN: Data Deficient.

Distribution:

Only found in Indawgyi Lake and its basin; endemic to Myanmar.

78. Xenentodon cancila (Hamilton, 1822)

Order: BELONIFORMES

Family: Belonidae

Common names: Asian needlefish, freshwater needlefish, freshwater garfish; Nga-Phaung-Yoe; ch:coກčຊ:;异齿颌针鱼



Photo by Nay Htet Naing

Diagnosis:

Body elongate, slender, moderately compressed; dorsal profile almost straight; ventral profile slightly curved from origin of pectoral-fin to origin of anal-fin; scales small; mouth terminal, long jaws with large and numerous canine teeth alternating each other; eyes moderately large; barbels absent; dorsal and anal fins nearly opposite to each other; caudal fin truncate, caudal peduncle longer than its height; scales very small; lateral line very low; body and head greenish on upper part, silver on lower part, a silver wide lateral band on flank, a green narrow stripe along mid-lateral line, more prominent on posterior half; 4–5 regular greenish dark blotches on flank in adult; size up to 350 mm SL.

Introduction

Biology:

Inhabits in streams, rivers, and lakes. Found on upper of freshwater and feeds on aquatic insects, small fish, and shrimp.

Status:

Commonly found in Indawgyi Lake, Irrawaddy, and Mekong drainage in Myanmar. A medium-sized fish, is an interest food-fish and ornamental fish in Southeast Asia. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy and Mekong in Myanmar. Pakistan, India, Bangladesh, Sri Lanka, Thailand, Laos, and China.

79. Monopterus albus (Zuiew, 1793)

Order: SYNBRANCHIFORMES

Family: Synbranchidae

Common names: Asian swamp eel; rice swamp eel; Nga-Shint; cါးရှ၌; 黄鳝



Photo by Nay Htet Naing

Diagnosis:

Body snake-like, very elongate, oval in cross-section; no scales on body; pectoral and pelvic fins absent; dorsal and anal fins confluent and reduced to a skin fold, caudal fin small or vestigial; mouth large; eyes small; gill slit 'V' shape; body red or brown with a sprinkling of dark spots; size up to 1000 mm SL.

Biology:

Inhabits on bottom from hill streams to lowland wetlands. Often found in holes in large rivers, lake, flooded fields, and stagnant waters. Feeds on small fishes, worms, crustaceans, and aquatic insects.

Status:

Common in Southeast Asia. Important in fisheries with high commercial value. IUCN: Least Concern.

Distribution:

Indawgyi Lake and its drainage; Irrawaddy, Salween, Sittaung, Mekong, Myanmar; India, Bangladesh, Pakistan, Sri Lanka, China, Thailand, Laos, Vietnam, Indonesia, Japan, and other parts of Asia.

80. Chaudhuria caudata Annandale, 1918

Order: SYNBRANCHIFORMES

Family: Chaudhuriidae

Common names: Burmese spineless eel; Inle swamp eel; Nga-Shint; பிஷ் 🤅 鳗鳅



Photo by Maurice Kottelat

Diagnosis:

Slender body; eyes small; the posterior angle of the lips reaching vertically through anterior margin of eye; dorsal fin and anal fin not continuous with caudal fin; caudal fin rounded; body usually yellowish-pink; numerous dots densely distributed on body; size up to 60 mm SL.

Biology:

Prefer to inhabit shallow streams and lowland wetlands.

Status:

A popular ornamental fish for the aquarium trade. IUCN: Data Deficient.

Distribution:

Indawgyi Lake and surrounding streams; Irrawaddy drainage, Inle Lake, Myanmar. Thailand, Cambodia, Laos, Vietnam, and Malay Peninsula.

81. Macrognathus aureus Britz, 2010

Order: SYNBRANCHIFORMES

Family: Mastacembelidae

Common names: Golden spiny eel; Nga-Mwe-Htoe; cl:cliclic 公式 : 金色吻棘鳅



Photo by Lamin Ko Ko

Diagnosis:

Body compressed, elongate, oval in cross-section; rostral pointed and lip fleshy; golden brown background with a yellowish golden belly; 8–10 paired rostral tooth plates covering the long rostral tentacle ventrally, 20–22 dorsal-fin spines. Black blotches along lateral line, a series of around 20 irregularly shaped black blotches along dorsum from nape to caudal-fin base extending anteriorly as a black stripe to vertical through eye, of which some confluent with lateral blotches. Dorsal, caudal, and anal fins show a series of dark brown striations, more or less horizontally arranged on dorsal and anal fins and vertically on the caudal fin; size up to 216 mm SL.

Biology:

Inhabits sluggish streams and lake with bottom of mud and sand. Generally, lives in underwater caves. Feed on small fish, shrimp, aquatic insect.

Status:

Commonly found in Indawgyi Lake. With high economic value. Not evaluated by IUCN.

Distribution:

Only known from Lake Indawgyi and an unnamed small hill stream south of Mogaung, Kachin State, endemic to Myanmar.

82. Macrognathus morehensis Arunkumar and Tombi Singh, 2000

Order: SYNBRANCHIFORMES Family: Mastacembelidae Common names: Moreh spiny eel; Ngamu-Tup; Nga-Mwe-Htoe; ငါးမူးတက်၊ ငါးမြွေထိုး ; 莫雷吻棘鳅



Photo by Shu-sen Shu



Photo by Nay Htet Naing

Diagnosis:

Body slightly compressed, elongate; rostra rounded and lip thin; head pointed; 76 vertebrae; 8–11 rostral tooth plates; 11–16 dorsal fin spines; body light yellowish to ashy; 20–25 black broad transverse bars on the body, 12–14 black spots at the base of dorsal fin rays, 10–13 distinct black spots at the base of anal fin rays, 6 black oval spots at the base of dorsal spines, 7–10 black lines of striations formed by dots at the caudal fin, a single ocellus at the base of caudal fin; size up to 155 TL mm.

Biology:

Inhabits of actively burrowing in the swampy and vegetated stream bed. It hides under pebbles, stones, gravel, sandy beds of clear torrential stream; or lives in holes in the swampy and vegetated beds. Feed on small fish, shrimp, aquatic insect.

Status:

Most commonly found in Indawgyi Lake, Chindwin River, and its basins. It is high economic value. IUCN: Least Concern.

Distribution:

Indawgyi Lake, Chindwin River in Myanmar and India.

83. Mastacembelus strigiventus Yang and Zhou, 2011

Order: SYNBRANCHIFORMES

Family: Mastacembelidae

Common names: Belly striped spiny eel; Nga-Mwe-Htoe; cl:clg炎: ; 腹纹刺鳅 Synonyms: Mastacembelus armatus



Photo by Lamin Ko Ko

Diagnosis:

Body anguilliform, elongate, oval in cross-section, compressed; body slightly compressed; head pointed; without pelvic fin; lips thick; mouth slightly concave ventrally; scale small; 36–37 dorsal fin spines; dorsal, anal, and caudal fins almost entirely joined, but with distinct notches among outline of dorsal, anal and caudal fins; scale small. Body sides and back with 4–5 zig-zag longitudinal dark brown lines forming a reticulate pattern from front of anal-fin origin to caudal-fin base; a narrow longitudinal black stripe running from rostral, across eye to upper angle of gill cover, a longitudinal brown line from the isthmus to anus on the abdomen or sometimes the line becoming reticulate pattern; size up to 516 mm SL.

Biology:

Inhabits on bottom from lowland wetlands to highland streams. Often lives in holes in the swampy and vegetated beds, or hides under pebbles, stones, gravel, sandy beds of clear torrential stream. Feed on small fish, shrimp, aquatic insect.

Status:

Marketed fresh and frequently seen in the aquarium trade, with high economic value. Not evaluated by IUCN.

Distribution:

Indawgyi Lake and its drainage; Irrawaddy, Myanmar, and China.

84. Mastacembelus pantherinus Britz, 2007

Order: SYNBRANCHIFORMES

Family: Mastacembelidae

Common names: Leopard spiny eel; Nga-Mwe-Htoe; cheleotte ; 豹纹刺鳅



Photo by Nay Htet Naing

Diagnosis:

Body anguilliform, slightly compressed, elongate; head pointed; lips fleshy, jaws slightly pointed; mouth slightly concave ventrally; without pelvic fin; caudal fin outline merged with dorsal and anal fins; scale small; lateral line extending end of caudal region; 37–40 dorsal fin spines; vertebrae 43–45; unique color spots with numerous and irregular marks on body, body colour brown becoming lighter from dorsum to abdomen; size up to 334 mm SL.

Biology:

Inhabits on bottom of mud and sand. Often lives in underwater holes. Feed on small fish, shrimp, aquatic insect.

Status:

Rarely found in Indawgyi Lake and high economic value. IUCN: Data Deficient.

Distribution:

Only from Indawgyi Lake and its drainage; endemic to Myanmar.

85. Anabas testudineus (Bloch, 1792)

Order: ANABANTIFORMES Family: Anabantidae Common names: Climbing perch; Nga-Bye-Ma; cl:cQo; 攀鲈



Photo by Lamin Ko Ko

Diagnosis:

Body oblong, moderately deep, laterally compressed; head large, two large spines on posterior edge of operculum; mouth terminal, lower jaw slightly longer, jaws with villiform teeth; bpectorals and caudal fin rounded; dorsal fin with 16–18 strong spines and 8–10 rays; lateral line interrupted into a high and a low one; ctenoid scales; olive or brownish gray body, fading to pale yellowish on belly; a dark spot on caudal fin base; size up to 250 mm TL.

Biology:

Inhabits various water bodies, but found mostly in swamps. Predatory fish, mainly feeds on invertebrates, mollusks, shrimps, and small fishes. Breeding from April to July, floating egg.

Status:

Very common on the markets, but not popular in aquarium trade. IUCN: Least Concern.

Distribution:

Indawgyi Lake and surrounding streams; Irrawaddy, Salween, Sittaung, Mekong, Tanintharyi rivers, Myanmar. Widely distributed in Indian subcontinent, Southeast Asia, and southern China.
86. Parasphaerichthys ocellatus Prashad and Mukerji, 1929

Order: ANABANTIFORMES Family: Osphronemidae Common names: Eyespot gourami; Nga-Mi-Kup; ငါးမီးကွက် ; 眼斑副棘鲷



Photo by Chavalit Vidthayanon



Photo by Nay Htet Naing



Photo by Nay Htet Naing

Diagnosis:

Body elongate and moderately compressed; dorsal profile slightly convex, ventral margin distinctly convex; scales large; lateral line absent; caudal fin rounded; mouth terminal, small; lips fleshy; eyes ovoid, large; snout blunt; barbels absent; dorsal fin short; anal fin long with 11–16 spines; pelvic fin inserted slightly behind pectoral-fin base, the first ray elongate; caudal fin rounded; body light brown to dark brown, an indistinct lateral wide band on lateral head and body; a distinct large dark ocellus on flank under dorsal fin; size up to 50 mm SL.

Biology:

Inhabits in Indawgyi Lake, streams, and rivers. Found on upper part of waters with mud substrate. Feeds on plant debris, insect larvae, and crustaceans. Builds a bubble nest to lay eggs.

Status:

Common. A small-sized fish with no value as food, and as an aquarium fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake; Irrawaddy in north Kachin, endemic to Myanmar.

87. Trichogaster labiosa Day, 1877

Order: ANABANTIFORMES

Family: Osphronemidae

Common names: Thick-lipped gourami; Nga-Phyin-Thalat; ငါးဖျဉ်းသလက်;厚唇线足鲈 Synonyms: Trichogaster fasciatus, Colisa fasciata



Photo by Nay Htet Naing



Photo by Lamin Ko Ko

Diagnosis:

140

Body deep, laterally compressed; dorsal profile obviously arched from snout to base of caudal-fin, ventral profile distinctly curved from snout to base of caudal-fin; scales small; mouth superior, small; eyes large; snout oval and blunt; barbels absent; dorsal spine strong and serrated; caudal fin emarginated; pelvic-fins thread-like, long, with nearly more than body length; body and head dark grayish on back; 7–8 vertical light olive bars on flank, belly slivery or grayish; fins dark, with yellowish outer edge on dorsal and anal fins; size up to 90 mm SL.

Biology:

Inhabits rivers and lakes. Prefers shady habitat in slow-moving rivers and ponds. Feeds on vegetable debris and aquatic insects. Builds bubble-nest.

Status:

Commonly found in Indawgyi Lake and Irrawaddy drainage. A small-sized fish with no food-fish value, and high commercial value as an aquarium fish in Southeast Asia. IUCN: Least Concern.

Distribution:

Indawgyi Lake and streams around Indawgyi Lake; Irrawaddy, Myanmar, and India.

88. Channa aurolineata (Day, 1870)

Order: ANABANTIFORMES

Family: Channidae Common names: Golden-line snakehead; Nga-Yant; 记读; 金线鳢 Synonyms: Ophicephalus marulius, Channa marulius



Juvinile, photo by Tao Qin

Diagnosis:

Body elongate, almost cylindrical in cross-section; largemouth fully with villiform teeth; lower jaw with several canines; base of dorsal and anal fins long; dorsal fin rays 55–58; anal fin rays 35–38; caudal fin rounded; lateral-line scales 65–71; dark brown body with 3–4 large black blotches, usually 2–3 scale rows wide and with white posterior margin on the black scales; a black eye-like blotch on upper edge of caudal-fin base; color of body varies with age and habitat. Size up to 700 mm SL.

Biology:

Inhabits rivers, lakes, and canals. Feed on smaller fish, frogs, insects, earthworms and tadpoles. Spawning from April to June. Parental rearing, males hatch eggs in their mouth, and parents guard the fry.

Status:

Common food fish on local market; Not evaluated by IUCN.

Distribution:

Indawgyi Lake, Naung Khaung Inn in the north of the lake, and surrounding streams, Irrawaddy, Salween, Sittaung river basins, Myanmar, Western Thailand.

89. Channa panaw Musikasinthorn, 1998

Order: ANABANTIFORMES

Family: Channidae

Common names: Panaw snakehead; Nga-Panaw; cl:ບເຄち; 伊洛瓦底江鳢 Synonyms: Ophicephalus punctatus



Photo by Nay Htet Naing

Diagnosis:

Body elongate, almost cylindrical in cross-section; largemouth fully with villiform teeth; lower jaw with several canines; base of dorsal and anal fins long; dorsal-fin rays 32–35; anal-fin rays 23–24; caudal fin rounded; lateral line scales 39–41; upper half of body with 7–12 irregular black blotches, lower lateral and ventral sides of body white; a large scale on each side of lower jaw; size up to 171 mm SL.

Biology:

Inhabits rivers, ponds, swamps, and stagnant waters in muddy streams. Feeds mainly on smaller fish, insects, shrimps, and bloodworms. Parental rearing.

Status:

Common food fish on local markets and in the aquarium trade. IUCN: Least Concern.

Distribution:

Indawgyi Lake and surrounding streams; Irrawaddy and Sittaung river basins, endemic to Myanmar.

90. Channa shingon Endruweit, 2017

Order: ANABANTIFORMES

Family: Channidae

Common names: Dwarf snakehead; Nga-Yant-Pu-Tat; cl:ရံပုတの; 驼背鳢 Synonyms: Ophicephalus gachua



Lateral view, photo by Nay Htet Naing



Dorsal view, photo by Lamin Ko Ko



Photo by Shu-Sen Shu

Diagnosis:

Body elongated, head pointed laterally; fairly rounded in cross-section; mouth large fully with villiform teeth; lower jaw with several canines; base of dorsal and anal fins long, dorsal rays 35–36, anal rays 24–26; pelvic fin rays 6; caudal fin rounded; lateral line scales 42–44, transverse scales to dorsal fin origin 4½; to anal fin origin 8; brown-yellow head and body; pectoral fins with a broad black basal bloch followed

by three or four narrow dark bands; dorsal, anal and caudal fins with white margins; size up to 99 mm TL.

Biology:

Inhabit rivers, rapid-running mountain creeks, streams, brooks, and slow-flowing canals. Feed mainly on insects, crustaceans, and smaller fishes. Parental rearing, males hatch eggs in their mouths.

Status:

Commonly found in Indawgyi Lake. Common food fish on local market, and occasionally found in the aquarium trade. Not evaluated by IUCN.

Distribution:

Indawgyi Lake; Irrawaddy drainages of Myanmar; Irrawaddy and Salween drainages of Yunnan, China.

91. Channa striata (Bloch, 1793)

Order: ANABANTIFORMES

Family: Channidae

Common names: Striped snakehead; banded snakehead; Nga-Yant-Wanphyu, Nga-Yant-Auk; ငါးရံ့ဝမ်းဖြူ၊ ငါးရံ့အောက် ; 线鳢 Synonyms: Ophicephalus striata



Juvinile, lateral view, photo by Lamin Ko Ko



Juvinile, dorsal view, photo by Lamin Ko Ko

Diagnosis:

Body sub-cylindrical; head cylindrical and depressed; large mouth with fully villiform teeth; lower jaw with several canines; dorsal fin and anal fin long; dorsal fin rays 38–73; anal rays 23–27; caudal fin rounded; lateral line scales 42–57; dark black-brown or brownish gray on upper half of body, abdomen white; diagonal stripes on body side; dorsal fin of young with a black blotch at hind end; size up to 1000 mm SL.

Biology:

Inhabit slow-flowing multiple freshwater bodies. Feeds mainly on smaller fish, insects, earthworms, frog, and tadpoles. Parental rearing.

Status:

Common food fish on market. IUCN: Least Concern.

Distribution:

Indawgyi Lake and surrounding streams; Irrawaddy and Tanintharyi river drainages, Myanmar. Pakistan to southern China, and most southeastern Asia countries.

92. Badis kyar Kullander and Britz, 2002

Order: ANABANTIFORMES Family: Badidae Common names: Tiger badis; Nga-Phyn-Ma-thalat-Khout, Nga-Mee-Laung; ငါးဖျဉ်းမသလင်ခေါက်၊ ငါးမီးလောင် ; 虎斑棕鲈 Synonyms: Badis badis



Photo by Nay Htet Naing

Diagnosis:

Head rounded; body oblong; caudal fin rounded; lateral line with tube-bearing scales; body dusky orange-brown; a dark band along snout to gill plate; ten dark-brown broad bars across body side; a wide dark curved bar across caudal-fin base; dorsal, anal and caudal fins with red-yellow iridescence; size up to 38 mm SL.

Biology:

Inhabits small streams with abundant vegetation. Micro-predators feeds on zoo-plankton, insect larvae, and small aquatic crustaceans.

Status:

An ornamental fish in aquarium. Not evaluated by IUCN.

Distribution:

Indawgyi Lake surrounding streams; Irrawaddy and Chindwin drainages, endemic to Myanmar.

93. Badis corycaeus Kullander and Britz, 2002

Order: ANABANTIFORMES

Family: Badidae

Common names: Spying eye badis; Nga-Phyn-Ma-Thalat-Khout; பிழைப்பில் ; 眼斑椋鲈

Synonyms: Badis badis



Photo by Shu-sen Shu

Diagnosis:

Head rounded; body deep, oblong; caudal fin rounded; lateral line with tube-bearing scales, 25–26 scales; a dark band along snout to gill plate; body dusky orange-brown; some vertical bars more obvious on above anal fin base and caudal base; a distinct dark spot on middle of caudal-fin base; size up to 35 mm SL.

Biology:

Inhabits shallow, slow-flowing streams, and shore of lake with abundant vegetation, substrates consisting of sand and pebbles.

Status:

An ornamental fish in aquarium. IUCN: Data Deficient.

Distribution:

Indawgyi Lake and surrounding streams; Irrawaddy and Chindwin drainages, endemic to Myanmar.

94. Dario hysginon Kullander and Britz, 2002

Order: ANABANTIFORMES

Family: Badidae

Common names: Red dario; Nga-Pyin-Ma, Nga-Mee-Taut; பிழைப்பில் ; 棕红黛鲈

Synonyms: Badis dario



Male, photo by Nay Htet Naing

Diagnosis:

Head rounded; body deep, oblong; pelvic fin reaching anal fin in male; caudal fin truncated or rounded; lateral-line scales usually 23; body uniformly deep red to red; scale margins dark; dorsal, anal, and caudal fins red, anterior pelvic fin black and anterior dorsal fin with black blotch in males; size up to 30 mm SL.

Biology:

Prefers to inhabit pools and shallow streams with sand and pebble bottom and aquatic plants around. Feeds on zooplankton, insect larvae, and small aquatic crustaceans.

Status:

Uncommon, the most popular fish in aquarium trade. IUCN: Least Concern.

Distribution:

Indawgyi Lake and surrounding streams; Irrawaddy drainage, endemic to Myanmar.

95. Microphis dunckeri (Prashad and Mukerji, 1929)

Order: SYNGNATHIFORMES Family: Syngnathidae Common names: Myanmar pipe fish; Michaung-Thwargyar-Htoe; မိချောင်းသွားကြားထိုး; 缅甸腹囊海龙 Synonyms: Doryichthys dunckeri



Photo by Shu-sen Shu



Photo by Shu-sen Shu



Ventral view, photo by Lamin Ko Ko

Introduction

Diagnosis:

Body elongated, slender, and as high as broad, protected by ring-like arranged dermal plates; tail, trunk region is tetragonal and heptagonal, respectively; snout long; mouth long and turned upward, small and terminal, lower jaw more protruded than upper jaw; two eyes prominent; tail rings 23; trunk rings 21; superior and inferior trunk ridges discontinuous with tail ridges, lateral trunk ridge confluent with inferior tail ridge; caudal fin well developed; mail brood area under trunk; bright brown on whole body, one off-white line from snout to tail, passing through orbit, disappeared on trunk, operculum freckled; size up to 120 mm SL.

Biology:

Inhabits in Indawgyi Lake. Ovoviviparous; The male carries the eggs in a brood pouch under the tail.

Status:

Rare. An ornamental fish has a peculiar shape of body. IUCN: Data Deficient.

Distribution:

Only found in Indawgyi Lake, endemic to Myanmar.

96. Indostomus paradoxus Prashad and Mukerji, 1929

Order: SCORPHAENIFORMES

Family: Indostomidae

Common names: Pipe fish; armored stickleback; Burmese dwarf stickleback; paradox fish; Yay-Nayar; Gရない; 甲刺鱼



Photo by Xiao-yong Chen

Diagnosis:

Body slender, covered with bony plates; mouth small and terminal, tubular, lower jaw longer; eyes large; 5 tiny independent dorsal spines; soft dorsal-fin origin opposite to anal-fin origin; pelvic absent; caudal peduncle very slender, caudal fin rounded, fan-like; body brown to olive brown, with dark spots and vertical bands; belly pale yellow or white; fin membrane hyaline, fin rays dark; size up to 30 mm SL.

Biology:

Inhabits slow-moving or standing waters, with clay, green algae, and rotten vegetation bottom. Live among algae and plants. Benthic fish. Feeds mainly on benthic invertebrates, worms, insect larvae, and zooplankton. Spawning in small caves or crevices.

Status:

Uncommon, an ornamental fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake and surrounding streams; tributaries of Irrawaddy River, endemic to Myanmar.

152

97. Leiodon cutcutia (Hamilton, 1822)

Order: TETRAODONTIFORMES

Family: Tetraodontidae

Common names: Ocellated pufferfish; Nga-Pu-Si; Nga-Pu-Tin; cl:ບູອິເ cl:ບຼອາຣ໌ະ; 睛斑鲀

Synonyms: Tetraodon cutcutia, Monotrete cutcutia



Photo by Shu-Sen Shu



Photo by Nay Htet Naing



Dorsal view, photo by Nay Htet Naing

Diagnosis:

Slightly conical body; mouth terminal, small; two large teeth on each jaw; eyes large; dorsal-fin above origin of anal-fin; all fins rounded; body olive to olive-green, white on abdomen; a large black eye-like blotch on body side anterior to dorsal fin and anal fin; caudal fin dusky, with red margin; size up to 150 mm TL.

Biology:

Inhabits rivers, lakes, streams, canals, and ponds. Feed on benthic animals.

Status:

Common, a popular ornamental fish. IUCN: Least Concern.

Distribution:

Indawgyi Lake and surrounding streams; Irrawaddy, Sittaung river basins, Myanmar. India, Pakistan, Bangladesh, Sri Lanka, Bhutan, Thailand, Laos, and Malay Archipelago.

References

- Ahl E. (1924) Eine Revision der Cypriniden-Gattung Esomus. In: Ichthyologische Mitteilungen, Mitteilungen aus dem Zoologischen Museum in Berlin 11(1), 38–43.
- Annandale N. (1918) Fish and fisheries of the Inlé Lake, Rec. Indian Mus. (Calcutta) 14, 33–64, Pls. 31–37.
- Arunkumar L., Singh H.T. (2000) Spiny eels of the genus Macrognathus Lacepède from Manipur, with description of a new species, J. Bombay Nat. Hist. Soc. 97, 117–122.
- Aung Htay Oo. (2010) Inland fisheries resources enhancement and conservation practices in Myanmar, *Inland fisheries resource enhancement and conservation in Asia* (M. Weimin, S. De Silva, B. Davy, Eds). Food and Agriculture Organization of the United Nations regional office for Asia and the Pacific, Bangkok, RAP publication 2010/22, pp. 93–100.
- Bishnu B., Nakamura H., Suzuki S. (2015) Indawgyi Lake: The One and Only Tectonic Lake in Myanmar-Experimental report of reconnaissance survey on 4–13 January 2015. Ramsar Center Japan, Tokyo.
- Bloch M.E. (1792) Naturgeschichte der ausländischen Fische. Berlin. v. 6: i-xii + 1–126, Pls. 289–323.
- Bloch M.E. (1793) Naturgeschichte der ausländischen Fische. Berlin. v. 7: i-xiv + 1–144, Pls. 325–360.
- Bloch M.E. (1794) Naturgeschichte der ausländischen Fische. Berlin. v. 8: i-iv + 1-174, Pls. 361–396.
- Bloch M.E. (1795) Naturgeschichte der ausländischen Fische. Berlin. v. 9: i–ii + 1–192, Pls. 397–429.
- Bloch M.E., Schneider J.G. (1801) M.E. Blochii, Systema Ichthyologiae Iconibus cx Ilustratum. Post obitum auctoris opus inchoatum absolvit, correxit, interpolavit Jo. Gottlob Schneider, Saxo. Berolini. Sumtibus Auctoris Impressum et Bibliopolio Sanderiano Commissum. i–lx + 1– 584, Pls. 1–110.
- Blyth E. (1860) Report on some fishes received chiefly from the Sitang River and its tributary streams, Tenasserim Provinces, J. Asia. Soc. Bengal 29(2), 138–174.
- Britz R. (2007) Two new species of Mastacembelus from Myanmar (Teleostei: Synbranchiformes: Mastacembelidae), *Ichthyol. Explor. Freshw.* 18(3), 257–268.

- Britz R. (2010) Macrognathus aureus, a new spiny eel of the M. aculeatus species group from the Upper Ayeyarwaddy River Drainage, Myanmar (Teleostei: Synbranchiformes: Mastacembelidae), Zootaxa 2514, 55–60.
- Chakrabarty P., Ng H.H. (2005) The identity of catfishes identified as Mystus cavasius (Hamilton, 1822) (Teleostei: Bagridae), with a description of a new species from Myanmar, Zootaxa 1093, 1–24.
- Chaudhuri B.L. (1911) Contributions to the fauna of Yunnan based on collections made by J. Coggin Brown, B.Sc., 1909–1910. Part II. – Fishes, *Rec. Indian Mus. (Calcutta)*, 6 (pt 1) (art. 3), 13–24, Pl. 11.
- Conway K.W., Britz R. (2010) Three new species of Psilorhynchus from the Ayeyarwaddy River drainage, Myanmar (Teleostei: Psilorhynchidae), Zootaxa 2616, 31–47.
- Cuvier G., Valenciennes A. (1842) Histoire naturelle des poissons. Tome seizième. Livre dix-huitième. Les Cyprinoïdes. v. 16: i–xx + 1–472, Pls. 456–487.
- Cuvier G., Valenciennes A. (1844) Histoire naturelle des poissons. Tome dix-septième. Suite du livre dix-huitième. Cyprinoïdes. v. 17: i–xxiii + 1–497 + 2 pp., Pls. 487–519.
- Datta N.C., Chaudhuri S. (1993) Two new glassfishes from Myanmar (Burma) (Perciformes: Ambassidae), Indian Biol. 25(1), 1–4.
- Day F. (1870) On the freshwater fishes of Burma, Part I. Proc. Zool. Soc. London 1869(3), 614–623.
- Day F. (1877) The fishes of India; being a natural history of the fishes known to inhabit the seas and fresh waters of India, Burma, and Ceylon. Part 3. B. Quaritch.
- Day F. (1888) The fishes of India; being a natural history of the fishes known to Inhabit the seas and fresh waters of India, Burma, and Ceylon. Suppl., 779–816.
- Endruweit M. (2017) Description of a new dwarf snakehead (Perciformes: Channidae) from western Yunnan, Vertebr. Zool. 67(2), 173–178.
- Fang F. (1998) Danio kyathit, a new species of cyprinid fish from Myitkyina, northern Myanmar, *Ichthyol. Explor. Freshw.* 8(3), 273–280.
- Ferraris C.J. Jr., Runge K.E. (1999) Revision of the South Asian bagrid catfish genus Sperata, with the description of a new species from Myanmar, Proc. Calif. Acad. Sci. 51(10), 397–424.
- Global New Light of Myanmar (2018) 105 fish species found in Indawgyi Lake. Myanmar Digital News. https://flyinmyanmar.wordpress.com/2018/02/20/105-fish-species-found-in-indawgyilake/.
- Hamilton F. (1822) An account of the fishes found in the river Ganges and its branches. Edinburgh & London.
- Havird J.C., Page L.M. (2010) A revision of Lepidocephalichthys (Teleostei: Cobitidae) with descriptions of two new species from Thailand, Laos, Vietnam, and Myanmar, *Copeia* 2010(1), 137–159.
- Heckel J.J. (1844) Fische Kaschmir's, nebst einem Anhang von drei neuen Arten aus Indien, gesammelt von Freiherrn Carl v. Hügel, Kaschmir und das Reich der Siek (C.A. von Hügel, Ed.). v. 4 (pt. 2). Hallberger'sche Verlagshandlung, Stuttgart, pp. 351–392.
- Hora S.L. (1921) Fish and fisheries of Manipur with some observations on those of the Naga hills, *Rec. Indian Mus.* 22(3, no. 19), 165–214, Pls. 169–112.
- Hora S.L. (1928) Notes on fishes in the Indian Museum. XV. Notes on Burmese fishes, Rec. Indian Mus. (Calcutta) 30(1), 37–40.
- Hora S.L. (1936) On a further collection of fish from the Naga Hills, *Rec. Indian Mus. (Calcutta)* 38 (3), 317–331.

- Htay K.Y., Song X.-Y., Oo S.M.M., Chen X.-Y. A review of genus Laubuka (Cypriniformes: Cyprinidae) in Myanmar with description of two new species, *Zootaxa* (in reviewing).
- Kalender (2022) Indawgyi Lake. Chance for Nature [Online]. Available at https://chancesfornature. org/indawgyi/?lang=en (Accessed 29 September, 2022).
- Kottelat M. (1990) Indochinese nemacheilines: A revision of nemacheiline loaches (Pisces: Cypriniformes) of Thailand, Burma, Laos, Cambria and southern Vietnam. Indochinese nemacheilines: A revision of nemacheiline loaches (Pisces: Cypriniformes) of Thailand, Burma, Laos, Cambria and southern Vietnam. Verlag Dr. Friedrich Pfeil, Munich, pp. 1–262.
- Kottelat M. (2013) The fishes of the inland waters of Southeast Asia: A catalogue and core bibliography of the fishes known to occur in freshwaters, mangroves and estuaries, *Raffles Bull. Zool.* Supplement (27), 1–663.
- Kottelat M. (2015) Fish species observed in Lake Indawgyi and its basin; December 14 Update, Fauna and Flora International, Myanmar Conservation and Development Programme.
- Kottelat M. (2017a) Lepidocephalichthys eleios, a new loach from Lake Indawgyi basin, Kachin State, Myanmar (Teleostei: Cobitidae), Raffles Bull. Zool. 65, 707–714.
- Kottelat M. (2017b) Schistura indawgyiana, a new loach from Lake Indawgyi basin, Myanmar (Teleostei: Nemacheilidae), *Ichthyol. Explor. Freshw.* 28(1), 1–8.
- Kottelat M. (2018) Mustura celata, a new genus and species of loaches from northern Myanmar, and an overview of Physoschistura and related taxa (Teleostei: Nemacheilidae), *Ichthyol. Explor. Freshw.* 1080, 1–26.
- Kraas F., Than Z.M. (2016) Socio-economic developments in the Indawgyi Lake Area, Kachin State, Myanmar, J. Myanmar Acad. Arts Sci. (MAAS) (Geol. Geogr.) XIV(5), 281–299.
- Kullander S.O. (2008) Five new species of Puntius from Myanmar (Teleostei: Cyprinidae), Ichthyol. Explor. Freshw. 19(1), 59–83.
- Kullander S.O. (2017) Devario fangae and Devario myitkyinae, two new species of danionin cyprinids from northern Myanmar (Teleostei: Cyprinidae: Danioninae), Zootaxa 4227(3), 407– 421.
- Kullander S.O., Britz R. (2002) Revision of the family Badidae (Teleostei: Perciformes), with description of a new genus and ten new species, *Ichthyol. Explor. Freshw.* 13(4), 295–372.
- Kullander S.O., Britz R. (2008) Puntius padamya, a new species of cyprinid fish from Myanmar (Teleostei: Cyprinidae), *Electron. J. Ichthyol.* 4(2), 56–66.
- Kullander S.O., Fang F. (2005) Two new species of Puntius from northern Myanmar (Teleostei: Cyprinidae), Copeia (2), 290–302.
- McClelland J. (1839) Indian Cyprinidae, Asia. Res. 19 (Part 2), 217–471, Pls. 237–261.
- MECF (2011) National biodiversity strategy and action plan, Myanmar, Myanmar Ministry of Environmental Conservation and Forestry, Yangon; United Nations Environment Programme, Nairobi & Global Environment Facility, Washington, DC.
- Ministry of Forest Department, Myanmar (2010) National Biodiversity Strategy and Action Plan, Ministry of Environment Conservation and Forestry, Naypyidaw.
- Musikasinthorn P. (1998) Channa panaw, a new channid fish from the Irrawaddy and Sittang River basins, Myanmar, *Ichthyol. Res.* 45(4), 355–362.
- Nelson J.S., Grande T.C., Wilson M.V.H. (2016) Fishes of the world, 5th edn. John Wiley & Sons, Inc., Hoboken, New Jersey.
- Ng H.H., Kottelat M. (2007) A review of the catfish genus Hara, with the description of four new species (Siluriformes: Erethistidae), *Rev. Suisse Zool.* **114**(3), 471–505.

- Ng H.H., Kottelat M. (2009) A new species of Mystus from Myanmar (Siluriformes: Bagridae), Copeia 2009(2), 245–250.
- Ng H.H., Kottelat M. (2018) Amblyceps improcerum, a new sisoroid catfish from Kachin State, Myanmar (Teleostei: Siluriformes: Amblycipitidae), *Environ. Biol. Fishes* 101(3), 459–467.
- Opperman L., Connalin J., Opperman A.W., Lunn Z., Naing Tun H. (2021) Assessment of the status of the fishery of Indwagyi Lake, Myanmar using traditional ecological knowledge, Asian J. Fish. Aquat. Res. 15(1), 27–35.
- Pallas P.S. (1769) Spicilegia Zoologica quibus novae imprimis et obscurae animalium species iconibus, descriptionibus atque commentariis illustrantur. Berolini, Gottl. August. Lange., 1 (fasc. 7), 1–42, Pls. 41–46.
- Pillai R.S., Yazdani G.M. (1976) Two new species and two records of Lepidocephalichthys Bleeker [Pisces: Cobitidae] from Assam and Meghalaya, India, with a key to the known species, J. Zool. Soc. India 26 (1–2 [for 1974]), 11–17.
- Prashad B., Mukerji D.D. (1929) The fish of the Indawgyi Lake and the streams of the Myitkyina District (Upper Burma), *Rec. Indian Mus. (Calcutta)* 31(3), 161–223, Pls. 7–10.
- Rendahl H. (1948) Die Süßwasserfische Birmas. I. Die Familie Cobitidae, Ark. Zool. 40A(7), 1–116.
- Singer R.A., Page L.M. (2015) Revision of the zipper loaches, Acanthocobitis and Paracantho cobitis (Teleostei: Nemacheilidae), with descriptions of five new species, *Copeia* 103(2), 378–401.
- Talwar P.K., Jhingran A.G. (1991) Inland fishes of India and adjacent countries, 2 vols. New Delhi, Bombay, Calcutta, Oxford & IBH Publishing Co.
- Thang Sein, Aung (n.d.) Assessment of the National Water Management Policy of Myanmar [Online]. Available at https://www.gwp.org/ globalassets/ global/ gwp-sea_files/assessmenton-the-national-water-policy-of-myanmar.pdf (Accessed 23 April, 2020).
- Thin Su Tin (2020) Species diversity of Fishes in Indawgyi Lake, Northern Myanmar, Master thesis of University of Chinese Academy of Sciences.
- Tun Lin Aung (2021) Water quality changes in Indawgyi Lake, some fish species found dead [Online]. Available at https://elevenmyanmar.com/news/water-quality-changes-in-indawgyilake-some-fish-species-found-dead.
- Vinciguerra D. (1890) Viaggio di Leonardo Fea in Birmania e regioni vicine. XXIV, Pesci. Ann. Mus. Civ. Stor. Nat. Genova (Serie 2) 9, 129–362, Pls. 127–111.
- WEPA. General description of the Country [Online]. Available at http://www.wepa-db.net/ policies/state/myanmar/myanmar.htm (Accessed 4 October, 2022).
- Wu H.W. (1977) The cyprinid fishes of China. Volume 2. Shanghai Science & Technology Press.
- Yang L.-P., Zhou W. (2011) A review of the genus Mastacembelus (Perciformes, Mastacembe loidae) in China with descriptions of two new species and one new record, Acta Zootaxonomica Sinica 36(2), 325–331.
- Zin Mar Than (2011) Socio-economic analysis in the Indawgyi Lake Area, Mohnyin Township. A Thesis submitted to Cologne University, Germany.
- Zuiew B. (1793) Biga Mvraenarvm, novae species descriptae, Nova Acta Acad. Sci. Imp. Petropolitanae, 7 (for 1789), 296–301, Pl. 297.

Acknowledgement

This book is the outcome of years of study by a team in our lab. The key members of the field team are Thinn Su Tin, Nay Htet Naing, and La Min Ko Ko. Shu-sen Shu, Nay Htet Naing, Thinn Su Tin, Ei Mon Kyaw, Thet Myat Oo, and Ye Yint Tun participated the survey in October 2018. Nay Htet Naing and Thinn Su Tin participated in the survey in February 2019. La Min Ko Ko and Thinn Su Tin participated in the survey in April 2019. Thinn Su Tin, Nay Htet Naing, and La Min Ko Ko participated in the survey in October 2019. Nay Htet Naing made the survey in January and February 2023. Tao Qin and Feng Lin prepared the first draft of the introduction of species based on publications, Nay Htet Naing and Thinn Su Tin added information on ecology and status based on field data. Most parts of the Introduction were edited based on Thinn Su Tin's thesis for a master's degree of University of Chinese Academy of Sciences surpervised by Xiao-yong Chen. Shu-sen Shu, Nay Htet Naing, and La Min Ko Ko took photos in the field. Shu-sen Shu edited photos. Khin Yadnar Htay checked specimens and confirmed identifications of most of the questionable species. You Liang, Zhi-bang Wang, and Ling Wu contributed to the improvement of several species in this book. We sincerely thank Mr. Arkar Moe Htet, Mr. Thet Myat Oo, Mr. Kyaw Moe and Mr. Kyaw Htet Naing for their help during fieldwork. We especially thank Dr. Jing Chen, Dr. Rui-chang Quan, Dr. Ren Li, the Southeast Asia Biodiversity Research Institute, CAS, and Dr. Thaung Naing Oo, Director General of Forest Department (former director of Forest Research Institute), Ministry of Natural Resources and Environmental Conservation, Nav Pvi Taw for their help on lots of aspects for our lab, without their supports, this book will never be published. Indawgyi Lake Wildlife Sanctuary Department gave us a lot of help and support during field works. Dr. Chavalit Vidthayanon and Dr. Maurice Kottelat generously provided several photos of Indawgyi fishes we don't have.

Fieldwork, research and publication of this book were supported by the Southeast Asia Biodiversity Research Institute, CAS (Y4ZK111B01), National Natural Science Foundation of China (31872202), and Langcang-Mekong Cooperation (LMC) Special Fund (Biodiversity Monitoring and Network Construction along Lancang-Mekong River Basin Project).

Appendix. Check List of Fishes of Indawgyi Lake (* indicate alien species)

	Order	Family	Species	Local name
1.	Osteoglossiformes	Notopteridae	Notopterus notopterus (Pallas, 1769)	Nga-Phe
2.	Clupeiformes	Clupeidae	Gudusia variegata (Day, 1870)	Nga-La-Bi
3.	Cypriniformes	Psilorhynchidae	Psilorhynchus brachyrhynchus Conway and Britz, 2010	Nga-Kyaut-Cat
4.		Cobitidae	Acantopsis spectabilis (Blyth, 1860)	Nga-Pyaw-Myit
5.			Lepidocephalichthys alkaia Havird and Page, 2010	Nga-Tha-Lae-Htoe
6.			Lepidocephalichthys berdmorei (Blyth, 1860)	Nga-Tha-Lae-Htoe
7.			$Lepidocephalichthys\ eleios\ Kottelat,\ 2017a$	Nga-Tha-Lae-Htoe
8.			Lepidocephalichthys goalparensis Pillai and Yazdani, 1976	Nga-Tha-Lae-Htoe
9.			Pangio pangia (Hamilton, 1822)	Nga-Chaw
10.		Nemacheilidae	Mustura celata Kottelat, 2018	Nga-zin-sat
11.			Paracanthocobitis linypha Singer and Page, 2015	Nga-Tha-Lae-Htoe
12.			Paracanthocobitis mandalayensis (Rendahl, 1948)	Nga-Tha-Lae-Htoe
13.			Schistura indawgyiana Kottelat, 2017b	Nga-Tha-Lae-Htoe
14.			Schistura malaisei Kottelat, 1990	Nga-Tha-Lae-Htoe
15.		Balitoridae	Homalopteroides rupicola (Prashad and Mukerji, 1929)	Kyauk-Kat-Nga
16.		Cyprinidae	Danio albolineatus (Blyth, 1860)	Nga-Yae-Paw
17.			Danio choprae (Hora, 1928)	Nga-Mi-Sone
18.			Danio kyathit Fang, 1998	Nga-Kyar-thit
19.			Devario fangae Kullander, 2017	Nga-Khayan
20.			Devario myitkyinae Kullander, 2017	Nga-Khayan
21.			Esomus caudiocellatus Ahl, 1924	Nga-Yae-Paw
22.			Esomus danrica (Hamilton, 1822)	Nga-Lone
23.			Microrasbora sp.	

			(continued).	
	Order	Family	Species	Local name
24.			Rasbora daniconius (Hamilton, 1822)	Nga-Byat-Kyawesein,
				Nga-Daung-Sin
25.			Rasbora rasbora (Hamilton, 1822)	Nga-Byat, Nga-Lone
26.			Opsarius barnoides (Vinciguerra, 1890)	Nga-Aim-Ma
27.			Opsarius dogarsinghi (Hora, 1921)	Nga-Aim-Ma
28.			Laubuka indawgyiana Khin and Chen	Indawgyi-Nga-Yin-Baung-Sar
29.			Amblypharyngodon atkinsonii (Blyth, 1860)	Nga-Byet, Nga-Salon-Phyu
30.			Osteobrama belangeri (Valenciennes, in Cuvier and Valenciennes, 1844)	Nga-Phae-Aung, Nga-Phan-Ma
31.			Osteobrama cunma (Day, 1888)	Nga-Salon-Phyu
32.			Osteobrama feae Vinciguerra, 1890	Nga-Phae-Aung, Nga-Phan-Ma
33.			Anematichthys apogon (Valenciennes, in Cuvier and Valenciennes, 1842)	Nga-Jyi
34.			Hypsibarbus myitkyinae (Prashad and Mukerji, 1929)	Nga-Khone-Ma-Kyi
35.			Neolissochilus hexastichus (McClelland, 1839)	Nga-Mi-Kya
36.			Oreichthys cosuatis (Hamilton, 1822)	Nga-Aim-Ma,
				Nga-Khone-Ma-Taungshay
37.			Pethia didi (Kullander and Fang, 2005)	Nga-Khone-Ma
38.			Pethia erythromycter (Kullander, 2008)	Nga-Khone-Ma
39.			Pethia padamya (Kullander and Britz, 2008)	Nga-Khone-Ma
40.			Pethia pugio (Kullander, 2008)	Nga-Khone-Ma
41.			Pethia thelys (Kullander, 2008)	Nga-Khone-Ma
42.			Puntius chola (Hamilton, 1822)	Nga-Khone-Ma
43.			Puntius sophore (Hamilton, 1822)	Nga-Khone-Ma
44.			Systomus sewelli (Prashad and Mukerji, 1929)	Nga-Khone-Ma-Kyi-Kyan
45.			Bangana devdevi (Hora, 1936)	Nga-Gyin-phyu,
				Kyauk-Nga-Lone
46.			Cirrhinus cirrhosus (Bloch, 1795)	Nga-Gyin-Phyu
47.			Garra qiaojiensis (Wu and Yao, in Wu, 1977)	Kyaut-Nga-Tha-Lae-Htoe
48.			Labeo boga (Hamilton, 1822)	Kyaut-Nga-Lu
49.			Labeo calbasu (Hamilton, 1822)	Nga-Nat-Pyar

			(continued).	
50.			Labeo catla (Hamilton, 1822)	Nga-Thaing, Nga-Gaung-Pwa
51.			Labeo dyocheilus (McClelland, 1839)	Kyaut-Nga-Lu-Meekwat
52.			Labeo dussumieri (Valenciennes, in Cuvier	Nga-Dain
			and Valenciennes, 1842)	
53.			Labeo nandina (Hamilton, 1822)	Nga-Ohn-Done, Nga-Nat-Tane
54.			Labeo porcellus (Heckel, 1844)	Nga-Nat-Poke
55.			Labeo rohita (Hamilton, 1822)	Nga-Myit-Chin,
				Nga-Gyin-Myatsan-Ni
56.			Osteochilus rostellatus (Valenciennes, in Cuvier and Valenciennes, 1842)	Nga-Khone-Ma
57.			Cyprinus carpio Linnaeus 1758*	Nga Gyin Phyu
58.	Siluriformes	Siluridae	Ompok pabda (Hamilton, 1822)	Nga-Nu-Than
59.			Ompok pabo Britz, 2010	Nga-Nu-Than
60.			Pterocryptis berdmorei (Blyth, 1860)	Nga-Nu-Than-Chaw
61.			Wallago attu (Bloch and Schneider, 1801)	Nga-Bat
62.		Ailiidae	Eutropiichthys burmannicus Day, 1877	Nga-Ka-Laung
63.		Bagridae	Batasio dayi (Vinciguerra, 1890)	Nga-Sue-Koat, Kyaut-Nga
64.			Hemibagrus microphthalmus (Day, 1877)	Nga-Jaung
65.			$Mystus\ cineraceus\ Ng\ and\ Kottelat,\ 2009$	Nga-Zin-Yine
66.			$Mystus \ falcarius$ Chakrabarty and Ng, 2005	Nga-Zin-Yine
67.			Mystus leucophasis (Blyth, 1860)	Nga-Pat-Lat, Nga-Naut-Thwar
68.			Mystus pulcher (Chaudhuri, 1911)	Nga-Zin-Yine
69.			Mystus rufescens (Vinciguerra, 1890)	Nga-sin-zat
70.			Olyra horae (Prashad and Mukerji, 1929)	Nga-Chaw
71.			Sperata acicularis Ferraris and Runge, 1999	Nga-Gaung-Shae, Nga-Gyaung
72.		Akysidae	Akysis prashadi Hora, 1936	Ta-Nga-Ngo
73.		Amblycipitidae	Amblyceps improcerum Ng and Kottelat, 2018	Nga-Chaw
74.		Erethistidae	Hara longissima Ng and Kottelat, 2007	Ta-Nga-Ngo
75.			Pseudolaguvia tuberculata (Prashad and Mukerji, 1929)	Ta-Nga-Ngo
76.		Clariidae	Clarias magur (Hamilton, 1822)	Nga-Khoo
77.		Heteropneustidae	Heteropneustes fossilis (Bloch, 1794)	Nga-Gyee

	(continued).			
	Order	Family	Species	Local name
78.	Ovalentaria	Ambassidae	Parabamssis ranga (Hamilton, 1822)	Nga-Zin-Sat, Nga-Min-Tha-Me
79.			Parambassis robertsi Datta and Chaudhuri, 1993	Nga-Zin-Sat, Nga-Min-Tha-Me
80.	Beloniformes	Adrianichthyidae	<i>Oryzias</i> sp.	Nga-Pyat
81.		Belonidae	Xenentodon cancila (Hamilton, 1822)	Nga-Phaung-Yoe
82.	Synbranchiformes	Synbranchidae	Monopterus albus (Zuiew, 1793)	Nga-Shint
83.			Monopterus cuchia (Hamilton, 1822)	Nga-Shint
84.		Chaudhuriidae	Chaudhuria caudata Annandale, 1918	Nga-Shint
85.		Mastacembelidae	Macrognathus aureus Britz, 2010	Nga-Mwe-Htoe
86.			Macrognathus morehensis Arunkumar and Tombi Singh, 2000	Ngamu-Tup, Nga-Mwe-Htoe
87.			Mastacembelus strigiventus Yang and Zhou, 2011	Nga-Mwe-Htoe
88.			Mastacembelus pantherinus Britz, 2007	Nga-Mwe-Htoe
89.	Anabantiformes	Anabantidae	Anabas testudineus (Bloch, 1792)	Nga-Bye-Ma
90.		Osphronemidae	Parasphaerichthys ocellatus Prashad and Mukerji, 1929	Nga-Mi-Kup
91.			Trichogaster labiosa Day, 1877	Nga-Phyin-Thalat
92.		Channidae	Channa aurolineata (Day, 1870)	Nga-Yant
93.			Channa panaw Musikasinthorn, 1998	Nga-Panaw
94.			Channa shingon Endruweit, 2017	Nga-Yant-Pu-Tat
95.			Channa striata (Bloch, 1793)	Nga-Yant-Wanphyu,
				Nga-Yant-Auk
96.		Badidae	Badis kyar Kullander and Britz, 2002	Nga-Phyn-Ma-thalat-Khout,
				Nga-Mee-Laung
97.			Badis corycaeus Kullander and Britz, 2002	Nga-Phyn-Ma-Thalat-Khout
98.			Dario hysginon Kullander and Britz, 2002	Nga-Pyin-Ma, Nga-Mee-Taut
99.		Cichlidae	Oreochromis nilotica (Linnaeus) 1758*	Sa-Lar-Via
100.	Syngnathiformes	Syngnathidae	Microphis dunckeri (Prashad and Mukerji, 1929)	Michaung-Thwargyar-Htoe
101.	Scorphaeniformes	Indostomidae	Indostomus paradoxus Prashad and Mukerji, 1929	Yay-Nayar
102.	Tetraodontiformes	Tetraodontidae	Leiodon cutcutia (Hamilton, 1822)	Nga-Pu-Si; Nga-Pu-Tin