A Handbook on

The Fishes of Assam

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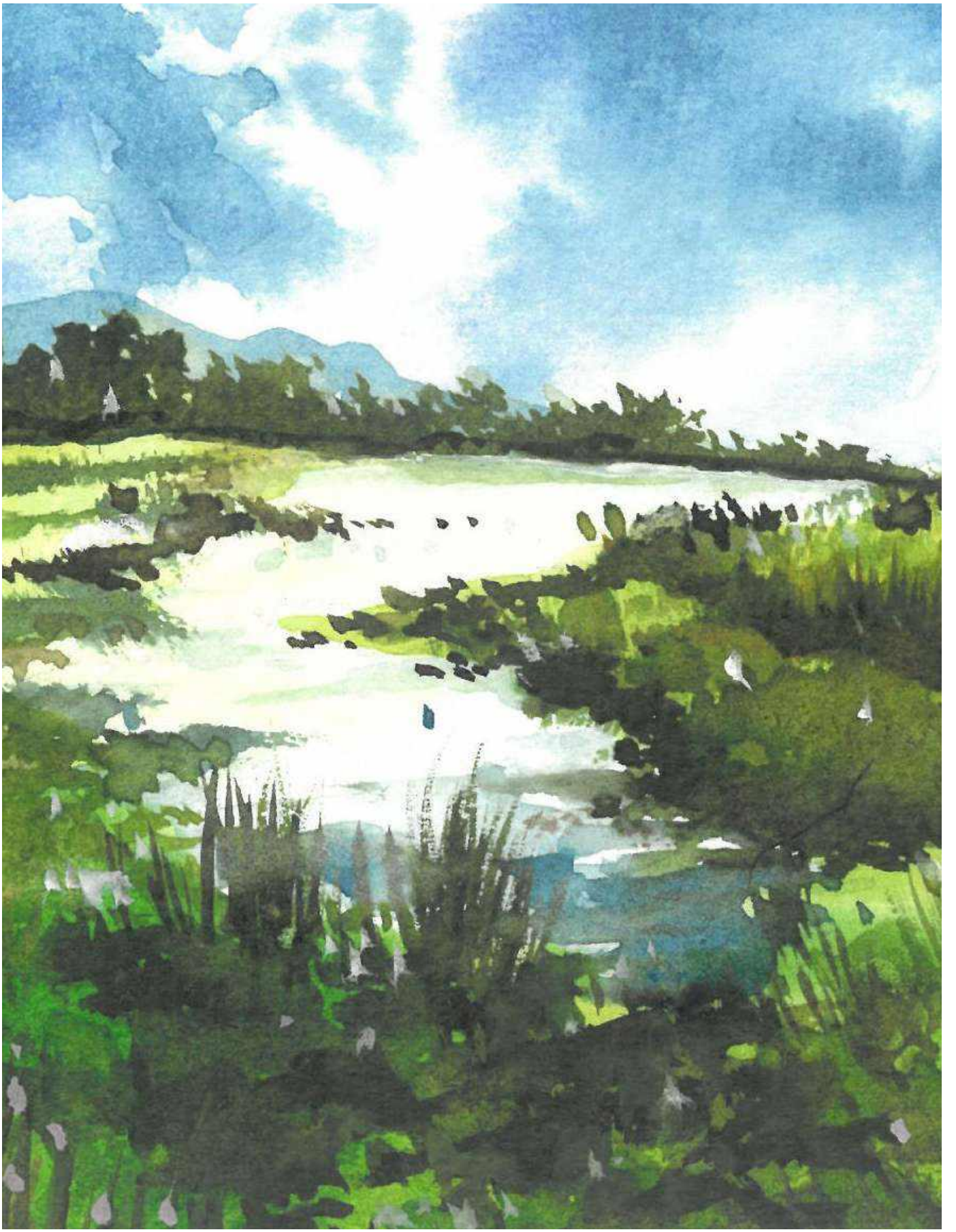
A Handbook on

The Fishes of Assam



Acknowledgements

We extend our heartful gratitude to everyone who has contributed to the development of this Handbook. First and foremost, we are grateful to Mr. Ravi Shankar Prasad, Special Chief Secretary, Government of Assam and Mr. M. K. Yadava, Principal Chief Conservator of Forests & Head of Forest Force, Assam for their kind support and willingness to write the Preface and Foreword for this Handbook. We express our deepest appreciation to Dr. Satyendra Singh, Additional Principal Chief Conservator of Forest cum the then Member Secretary, Assam State Wetland Authority for his continued and unwavering support in the publication of this Handbook. We also extend our appreciation to Dr. Sonali Ghosh, presently working as the Director of Kaziranga National Park who encouraged the idea of developing this Handbook for the benefit of the frontline forest officials as well as the common people.

This book was made possible by several important collaborations. We extend our deepest appreciation to Mr Hrishikesh Choudhury, Assistant Professor of Zoology for his continuous technical support in the research, his enthusiasm and immense knowledge. We sincerely acknowledge the hard work and diligence of Ms. Rajlakshmi Ozah, Intern at GIZ who tirelessly researched and provided valuable information for this document. Last but not least, we gratefully acknowledge the help and support that we received from the NERAQ team as well as other GIZ colleagues during the development of this Handbook.

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সংখ্যালঘু কল্যাণ বিভাগ, অসম

सत्यमेव जयते

Chandra Mohan Patowary
Minister
Environment & Forests Department
Act East Policy Affairs Department
Welfare of Minorities Department
Government of Assam

Dispur
19.01.2024

MESSAGE

It gives me immense pleasure to observe that Environment & Forest Department, Govt. of Assam has brought out "A Handbook of Fishes of Assam" which is an account of the commonly occurring fishes of the state of Assam. Our state is well known for its vast water bodies, thanks to Brahmaputra and Barak drainage systems, numerous channels and floodplain wetlands created by both the rivers and its perennial tributaries. Due to presence of such well-connected water bodies, Assam is also gifted with a variety of aquatic resources including numerous fishes and other aquatic flora and fauna that include several endemic and rare species.

The fishes of Assam, though constitute a major component of its faunal diversity, fail to get due recognition from the Conservation Scientists as well as the common masses like their other counterparts, the so-called "glamourous animals" such as the Rhino, Tiger or the River Dolphin. The Northeastern region of India is also regarded as a hotspot for freshwater fish biodiversity with nearly 500 species. Assam also is home to around 180 fish species recorded so far and some of them are globally threatened. The Snakehead, *Channa barca* has been included in the Wildlife Protection Act highlighting its immediate conservation needs.

Though we have some scientific publications for the fish fauna of the region, there has been a long felt need for a book on the fishes of Assam for the common readers and laypersons. This gap has also been felt by our frontline forest officials who frequently come across different fish species both within and outside the protected areas. Due to inadequacy of resource materials for their identification as well as understanding of conservation status, many rare species are being caught and remain unnoticed with little scope to initiate conservation measures towards them. I hope that this publication will help to address many such issues and thereby contribute towards sustainable management of our unique natural resources.

I congratulate the entire team for their efforts in bringing out this very important book.

(Chandra Mohan Patowary)

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सत्यमेव जयते

MESSAGE

The Northeastern region of India is home to two of the world's thirty-four biodiversity hotspots. As such, the region represents a wide variety of lifeforms spread across varied habitats – terrestrial, arboreal, aquatic etc. In the past few decades, the biodiversity of this unique region has been mostly observed from the terrestrial point of view while the other groups of flora and fauna have not received as much attention. Aquatic resources are one such group that is under-studied and sparsely discussed in different fora, including government and non-government platforms.

Due to unique topographical features, the Northeastern region's drainage pattern provides the habitat for a variety of aquatic flora and fauna. The Fish fauna is also no-exception with many interesting species, high level of endemism, variation in food fishes and other Small Indigenous varieties. Being a part of the region, Assam's fish faunal diversity is also unique and remarkable. Unlike its other sister states of the region, Assam water bodies mostly occupy floodplain rivers and wetlands thereby providing habitat for a wide variety of fishes distinct from other areas.

Though many fish species of Assam are popular as food fishes, there are other species which have high market demand as ornamental fish. Various studies point towards fast decline in many species population due to factors like climate change, habitat loss, overexploitation, etc.

It is high time that due importance is given to the aquatic resources of the state in general and to the fish fauna in particular. Adequate knowledge, up-to-date information and awareness are essential for initiating an effective conservation programme for such threatened species.

I hope that this Handbook of Fishes of Assam will help all government agencies as well as the common people of the state to have a better understanding about the fish resources in their surroundings. The conservation and protection of the threatened species of fishes will also get a boost with the knowledge and information that this book provides.

(Ravi S. Prasad, IAS)

এম কে যাদৱ, ভাঃ বঃ সেঃ
M. K. Yadava, IFS

প্রধান মুখ্য বন সংৰক্ষক আৰু বন বাহিনীৰ মূৱৰী, অসম
Principal Chief Conservator of Forests
& Head of Forest Force, Assam
Aranya Bhawan, Panjabari, Guwahati-37

Preface

Unlike birds or mammals, it is usually difficult to identify fishes only with the help of pictorial aid. There are many guidebooks for bird watchers or for identifying mammals or butterflies; however, there are hardly any such resources at the disposal of the layperson or the other law enforcing agencies such as Forest and Police officials that can help identify fishes correctly.

Without the availability of any reference books, it is very difficult for the law enforcing officials as well as the common people to contribute towards the conservation of species in their surroundings.

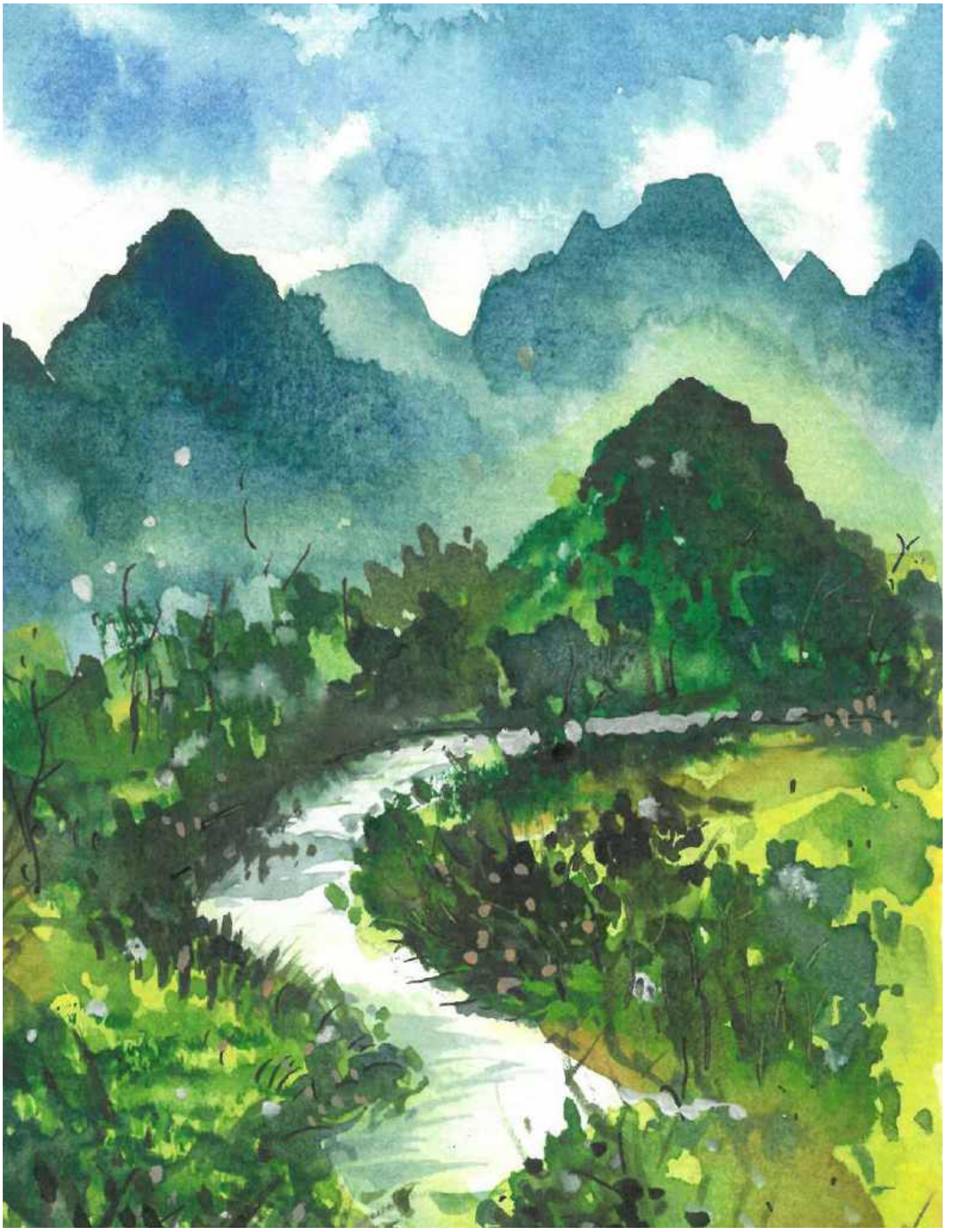
It is well acknowledged that the common masses are familiar with all the fishes available in their surroundings, however, there is a felt gap in terms of relating this locally available knowledge with that of the scientific community. As such, we are missing out on one of the most significant components of the population in the sustainability discourse—one that is recognized as crucial in any conservation effort, including those for protection of fishes.

Not only the common people, the lack of adequate knowledge has also led to a negligent attitude by various law enforcing authorities, Forest department, Policy makers etc. There are many classic examples where some very rare fish species have failed to attract the attention of government authorities, thereby limiting proactive action for their conservation. *Channa barca*, a very rare snakehead is one such example. The species is found in some parts of Assam, but there is hardly awareness at the community level regarding its status as a rare fish due to inadequate information available to them. A similar situation prevails with the Forest department officials at the field level or other law enforcing agencies. Due to the high demand of this fish in the international market, indiscriminate catching from the wild has further declined its population. This is true also for the situation for several other species, especially the SIS (Small Indigenous Species). Many rare SIS are found in neighbourhood water bodies like ponds, small streams etc. But as people are unable to identify them correctly and are unaware of the threats that befall such species, protection measures are few and far between.

This Handbook of Fishes of Assam is an endeavour to address these issues. We are delighted that the GIZ under its NERAQ project (Protection and Sustainable Management of Aquatic Resources of North-eastern Himalayan Region) has come forward to develop this book. We are thankful to all the team members of GIZ involved with this task for their sincere efforts to make this publication a reality. We hope that the book will enhance our knowledge and capacity towards better management of our natural resources.

(Mahendra Kumar Yadava, IFS)

Aranya Bhawan, Panjabari, Guwahati-37, Ph : 0361-2333252 (O), E-mail : hoff-assam@gov.in



How to get the most out of this book?

Assamese name of the fish followed by english name of the fish.

Scientific name & family of the fish.

লাওপুঠি (Indian Glass Barb)

North Eastern vernacular name of the fish species.

Scientific Name: *Laubuka laubuca;* Family: Danionidae

Vernacular Name: Assamese- *Lauputhi, Laupeti.*

Physical description of the fish for identification.

Description:

Body elongated, deep and compressed with slightly oblique mouth. Lateral line complete. Pectorals wing-like, wide. Scales moderate, cycloid. Caudal fin forked. Body colour translucent, shining silver to greenish-grey with a violet lustre on caudal peduncle. Iridescent blue bar markings on sides of the anterior half of body. A deep black, golden-edged blotch at the base of caudal fin. Fins yellowish. Attains a length of about 10.5 cm.

Habitat & Ecology of the fish. Food diet, type of water bodies, & fish reproduction.

Habitat & Ecology:

Inhabits shallow streams, ponds and wetlands. A column feeder; insectivore; but also consumes plankton and plant detritus.

Economic Importance:

Preferred as food fish. Also a potential ornamental fish.

Distribution:

NE India: Floodplain areas of the Brahmaputra and Barak drainages.

River systems where the fish is found.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss due to pollution; & overfishing.

Least Concern (LC)

IUCN stage of the fish.

Introduction

What are Fishes:

Fishes are cold-blooded aquatic vertebrates with gills as the primary mode of respiration and limbs (if any) as paired fins. Among all vertebrates, fishes represent one of the most diversified groups. With more than 60,000 reportedly valid species, nearly 50% are marine while the rest are freshwater. Fishes have occupied almost all the natural aquatic habitats around the globe. Their existence on Earth since 450 million years portrays their high rate of adaptability and resilience throughout changing environmental conditions in which they have had to evolve repeatedly. With a wide range of colours and shapes, fishes are well adapted to camouflage themselves with their respective environment.

The World of Freshwater Fishes:

The component of earth's freshwater supply is only 3% of all available water, but still, this small part of total global water provides the habitats for more than half of the world's recorded fish species. The freshwater habitats for fishes are very diverse and include rivers, lakes, streams, wetlands, reservoirs, derelict ponds, swamps, canals, etc. The extraordinary diversity of freshwater fishes in relatively small water bodies has led to some remarkable evolutionary changes and a high grade of adaptability to many freshwater fish species. They are distributed in ice-cold water, in the caves with zero sunlight, in large rivers as well as tiny water bodies. In terms of size also, freshwater fish range from very big sizes like some Sting Ray measuring as long as 4 meters to the tiniest fish which is only a few millimeters long. Freshwater fishes are an integral part of human civilization as there has always been a close socio-cultural association among the fishes with the people from time immemorial. Moreover, the livelihood of nearly 60 million people in the world is directly or indirectly dependent on the availability of freshwater fish. Fishes have long been in association with mankind, e.g., the Sung Dynasty kept goldfishes as 'Ornamental Fish' in small glass containers. Indeed, the bright, attractive colouration of many fish species has led to the development of the hobby of aquarium fishes. Angling is another form of popular hobby associated with fish in many parts of the globe. Another very important reason why fishes attract the attention of the majority of the human population is their role as an important source of protein, thereby playing a major role in the world's food supply to the fast-growing global population. However, the freshwater fish stocks in nearly every part of the world are now facing tremendous challenges for survival. One estimate has suggested that nearly 30% of global freshwater species are threatened with extinction. Habitat loss, pollution, unmanaged fishing, species invasion, flow modification, and climate change-induced factors are primarily responsible for the fast declination of the freshwater fish fauna of the world.

Northeastern India – a Hotspot for Freshwater Fish Biodiversity:

The northeastern part of India is considered one of the hot spots of freshwater fish biodiversity in the world. The northeastern states, viz., Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura, have a handful of freshwater fisheries resources mainly in terms of numerous rivers and their associated streams and floodplain wetlands, lakes, ponds, etc. The diversity is attributed to the unusual topography of the region which consists of hills, plateaus, valleys, and plains, resulting in the major drainage systems including the Ganga-Brahmaputra, Barak-Surma, Kaladan, and Chindwin-Irrawaddy. Geologically, these distinct entities of the Indian subcontinent were derived as part of the tectonic setting caused by the collision of the Indian, Chinese, and Burmese plates, which formed the mighty Himalayas and the Indo-Burman range. Indeed, the myriad waterbodies and their diverse groups of fishes have always been lucrative to the eyes of an ichthyologist and, as such, the northeast (NE) region has always attracted several workers from around the globe to study, identify, describe, comment and/or report on the fishes herein. Today, the NE region is estimated to harbour more than 500 fish species with a high level of endemism, an estimate that should encompass more than 50% of the total fish species known from India. A major portion of NE Indian fishes are small indigenous species (SIS), which include both food and ornamental values and with high market demand. Though it is difficult to quantify the exact number of threatened species from NE India, many studies suggest a fast decline in their number and even threatening extinction, especially species like *Channa barca, Ompok, Anguilla*, etc. require immediate protection and conservation.

Fish identification– a key to its protection & conservation:

The branch of science that deals with the identification, classification, and nomenclature of a species is known as taxonomy. Taxonomy uses different methodologies for identification. As such, proper taxonomy always needs a systematic study with the help of globally accepted procedures and guidelines to establish the identity of any species or group of organisms. Abundant literature is available and many people are engaged in taxonomic works on fishes of different parts of the world. India including the northeast is no exception to such studies, and some renewed taxonomists of NE India have regularly contributed significantly towards the development of fish taxonomy of the region. Without proper taxonomic identification, it is often difficult to assess the status of any species, which includes fishes as well. Once a species has been correctly identified with the help of available literature, its distribution, abundance, threats, biology, etc., can be easily determined. In fact, correct identification is a part and parcel of conservation. Therefore, we need to study and should be able to identify the species first to conserve it in the long run.

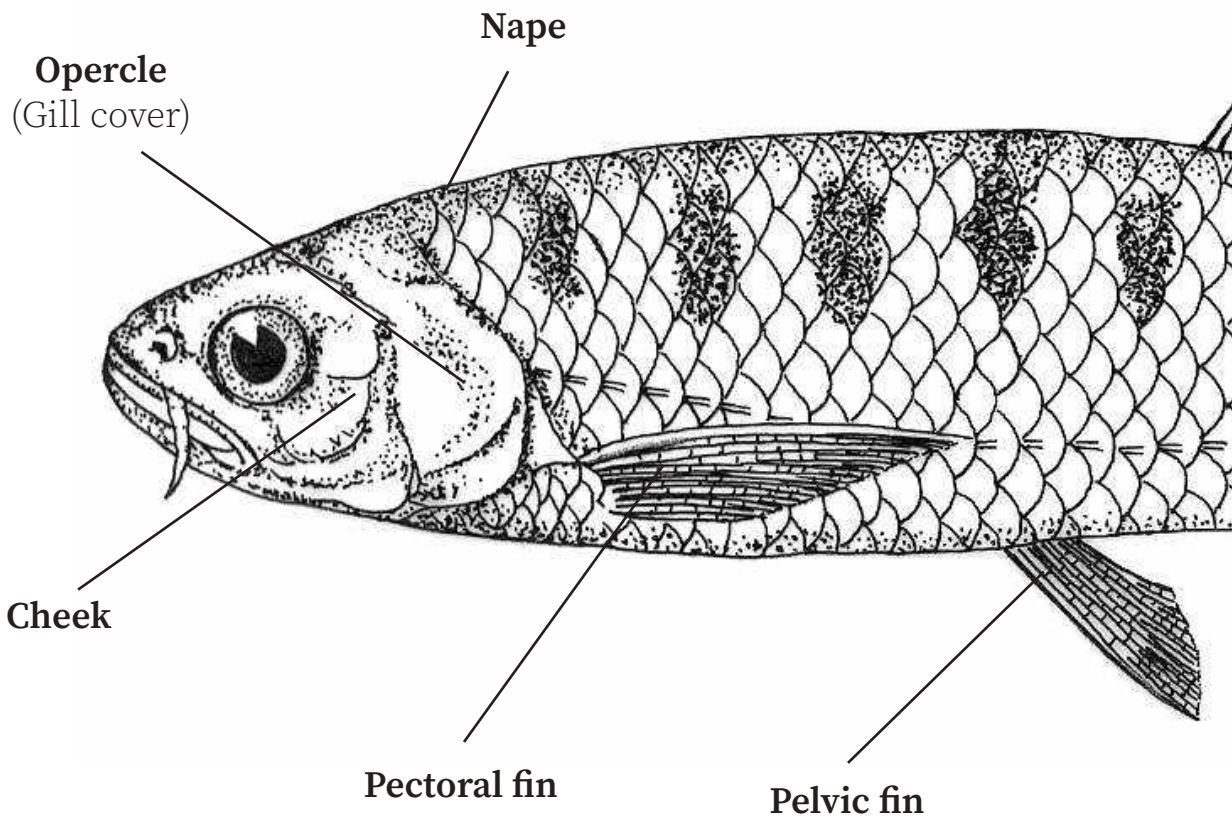
Why this handbook on fishes:

Unlike birds or mammals, fishes are usually difficult to identify unless a useful pictorial aid is available. We have had several guidebooks for conservationists, field experts, bird watchers, and even animal hobbyists to identify mammals, birds, and/or butterflies. However, hardly any book is available for the layman that helps to identify even the most common fishes of the northeast region. Earlier taxonomic handbooks on scientific fish identification have always used the technicality of taxonomic keys, yet the utilization of the same demands dedicated scientific skills through training. Moreover, the available illustrations in posters and/or brochures include a few common fish species to investigate. Therefore, the unavailability of a reference book for the common user has generated a big gap resulting in his/her inability to contribute, even minimally, to the conservation of the available fish species in the surroundings. Knowing any species with their vernacular names is fine. However, this knowledge is not enough to aid the scientific community towards conservation. So, we are missing the most significant component of the population that is recognized as a key stakeholder in the conservation and protection of fish. Not only the common people, but the lack of adequate knowledge of fish has also had an unfortunate negative impact on the law enforcing authorities, forest department, policymakers, etc., for proactive participation in fish conservation. For example, *Channa barca* (Seng Goroka), which is a rare snakehead fish of Assam and adjoining states, is known to very few community people as well as the forest department officials and other law enforcement agencies. Yet, this snakehead is one of the highest demanding, lucrative freshwater fish of the Asian continent that has got an immensely high value in the international aquarium fish market. Indiscriminate catching from the wild for illegal trade has, unfortunately, declined its population in the wild. Similar is the situation for several other SIS fishes of the NE region. Coincidently, many rare SIS fishes had once existed in the neighbourhood water bodies such as ponds, swamps, small streams, paddy fields, etc. However, the threats that they are facing are indeed proof of unawareness among the stakeholders who are unable to identify them correctly, so have taken little and/or no efforts for their protection.

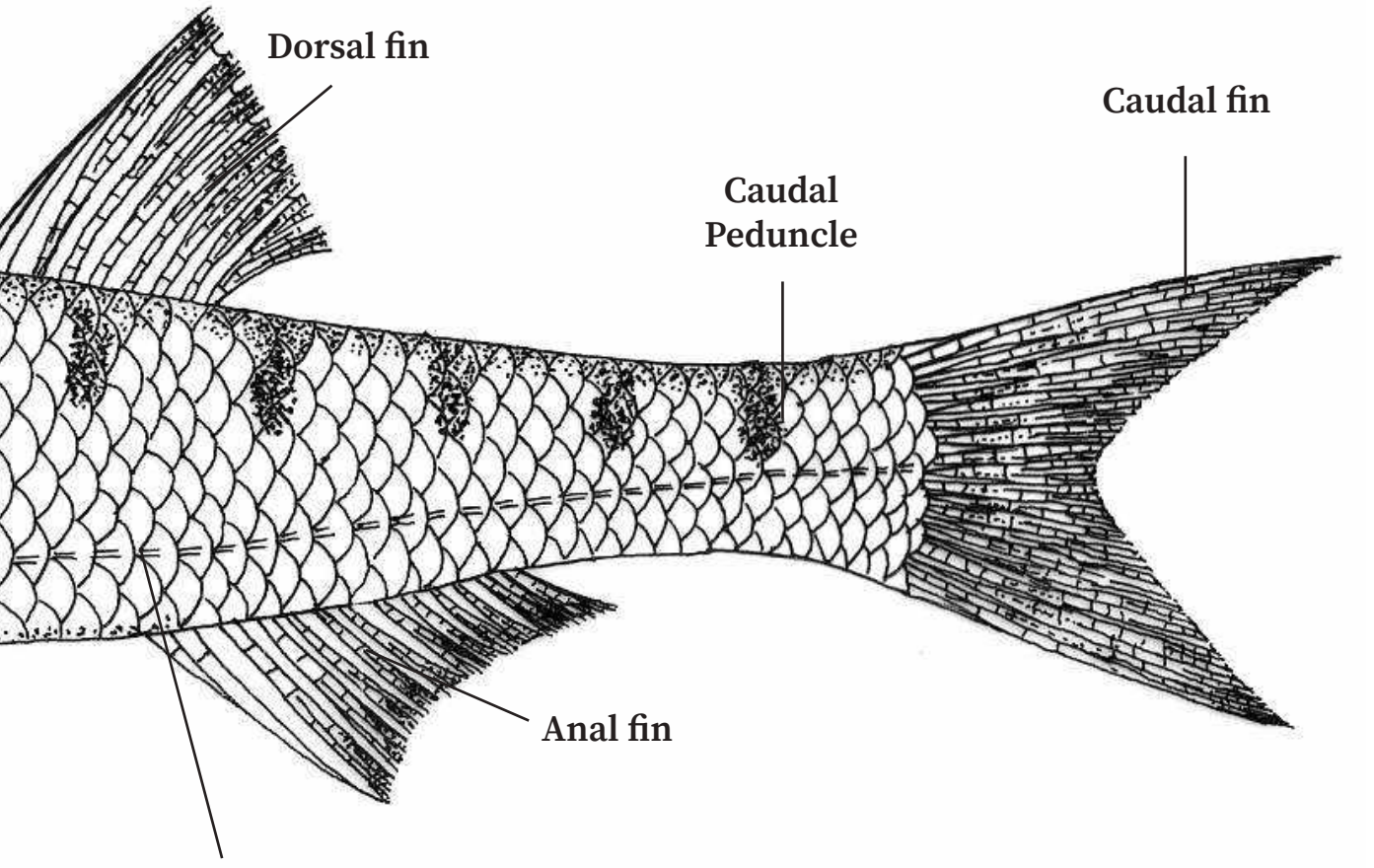
The main objectives of this handbook include:

- To make available a reference book on the common fish species of Assam, which includes all vital information, but avoids strict scientific terminologies.
- To create awareness of the unique fish diversity, the threats that these species are facing, their important habitats, and the possible conservation measures.
- To use this fish book as a resource material to train forest department officials including other law enforcement agencies for conservation and protection of the declining fish species of the state.

Pictorial Keys



To Identify Morphological Features of a Fish



Pictorial Keys

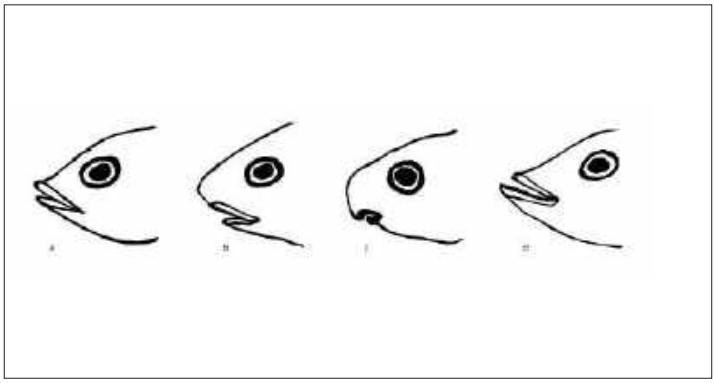


Figure 1. Principal types of mouth positions of fishes- a. Terminal; b. Sub-terminal; c. Inferior; d. Superior.

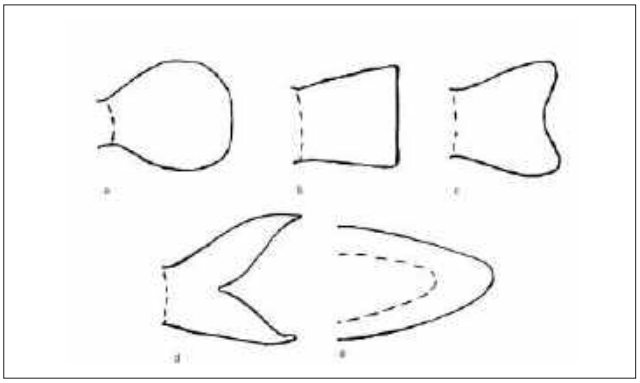


Figure 2. Common shapes of caudal fins of fishes- a. Round; b. Truncate; c. Emarginate; d. Forked; e. Pointed.

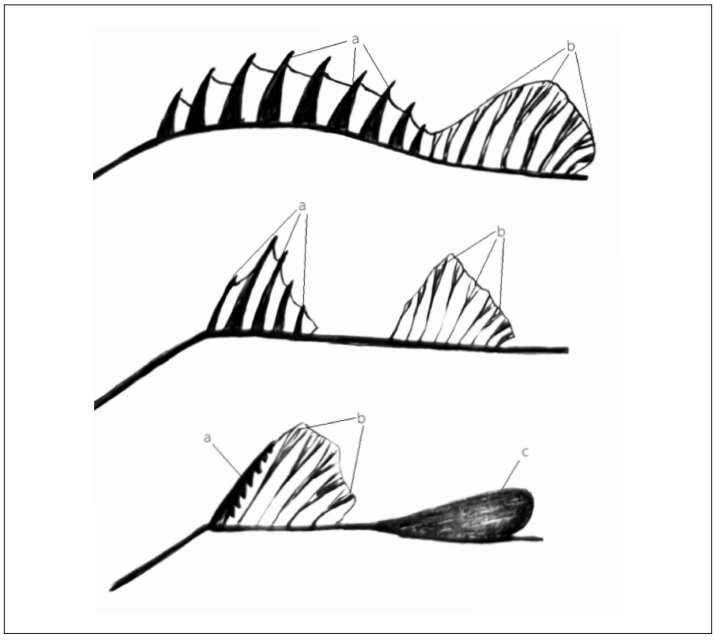


Figure 3. Dorsal profiles of fishes illustrating the types of dorsal fins- a. Spines; b. Soft rays; c. Adipose dorsal fin.

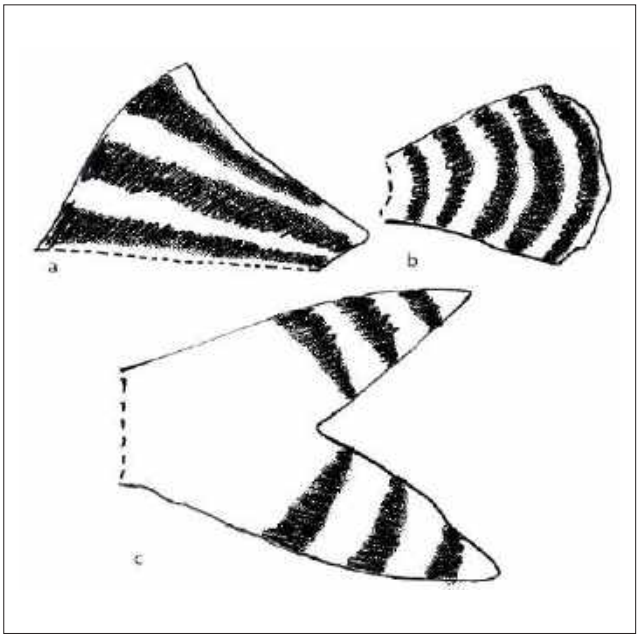


Figure 4. Pattern of colour bands on fins of fishes- a. Dorsal fin; b. Pectoral fin; c. Caudal fin

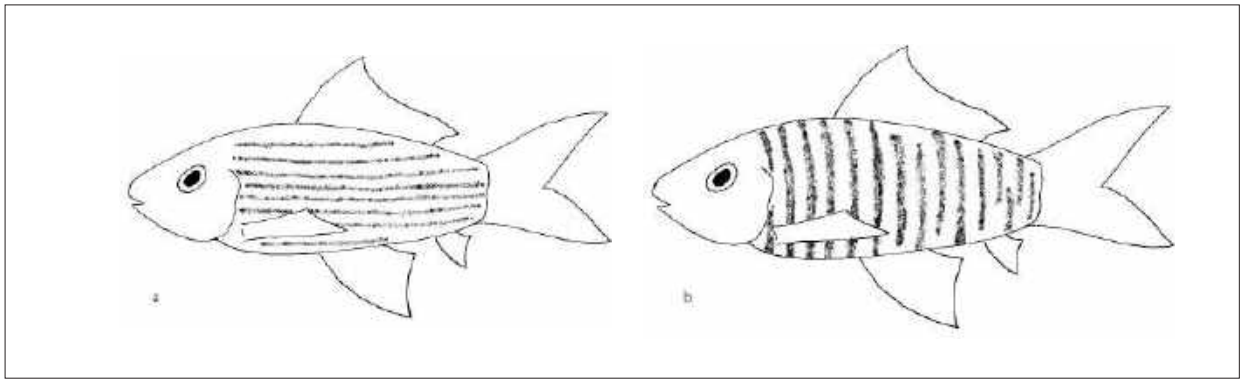


Figure 5. Colour pattern on body of fishes- a. Stripes (horizontal markings); b. Bars (vertical markings).

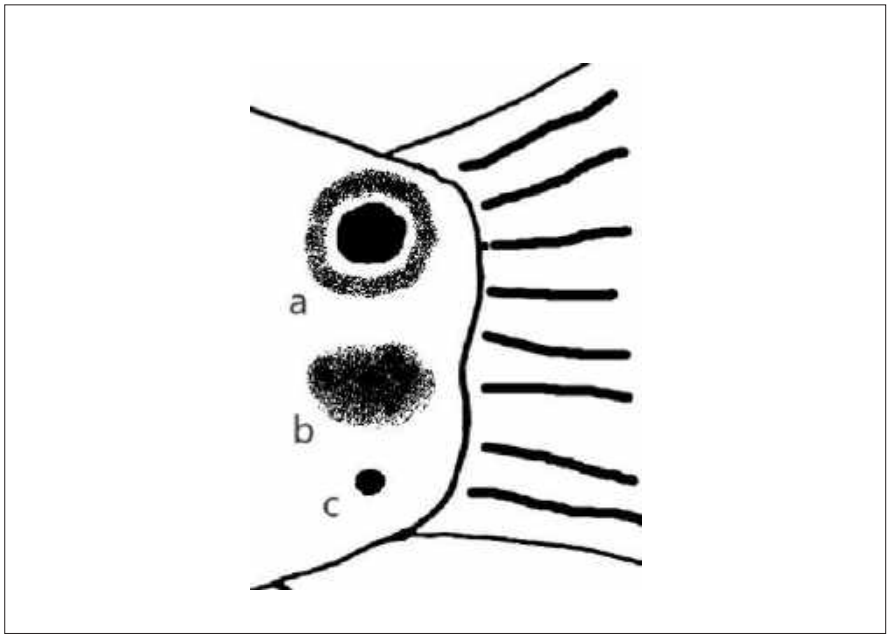


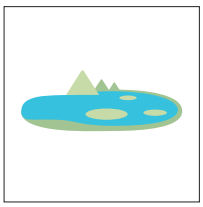
Figure 6. Specific markings on body of fishes- a. Ocellus (eyespot); b. Blotch; c. Spot.

Iconography & Symbols

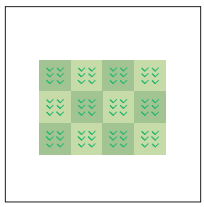
WATER BODIES

Rivers

Streams



Beels



Paddy Fields

DIET

Omnivore

Carnivore

Herbivore

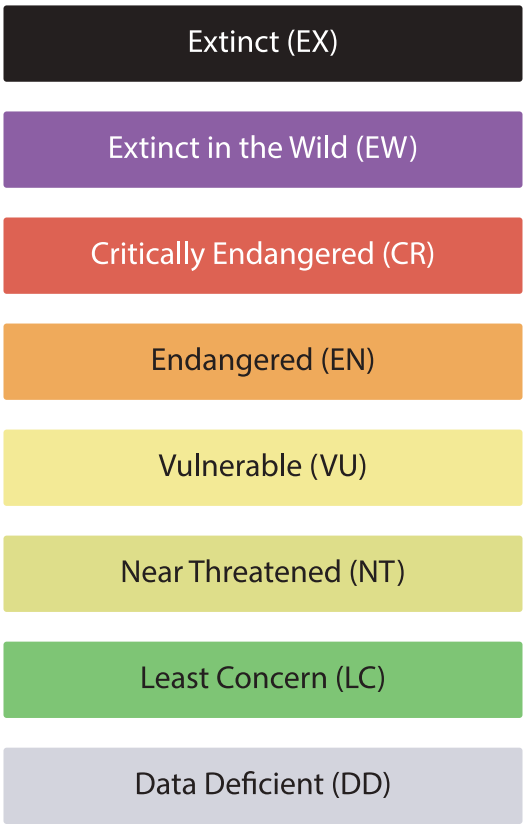
Planktonivore

USAGE

Ornamental Fish

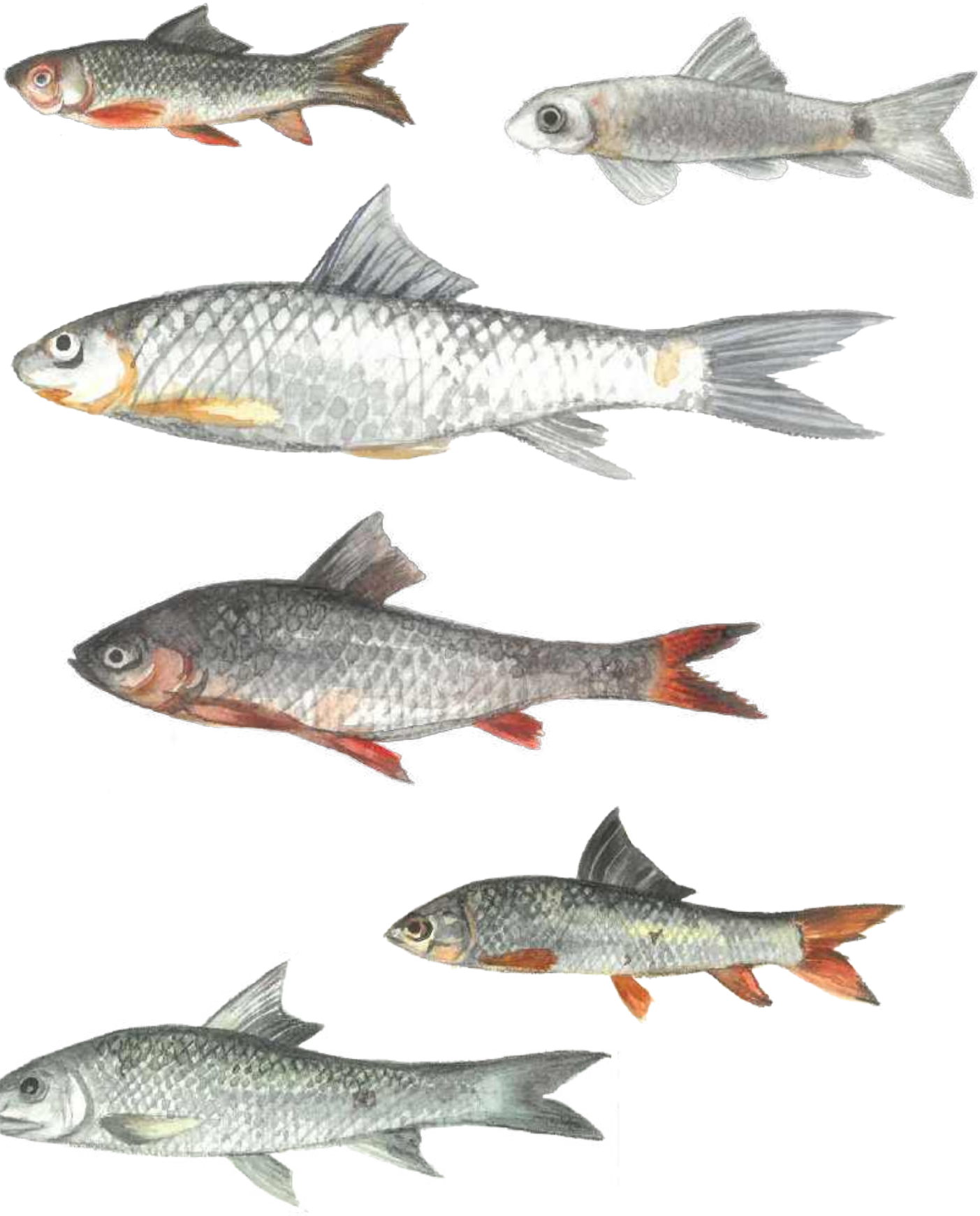
Food Fish

THE IUCN RED LIST CATEGORIES



The International Union for Conservation of Nature (IUCN) Red List of Threatened Species, also known as the IUCN Red List or Red Data Book, founded in 1964, is an inventory of the global conservation status and extinction risk of biological species.

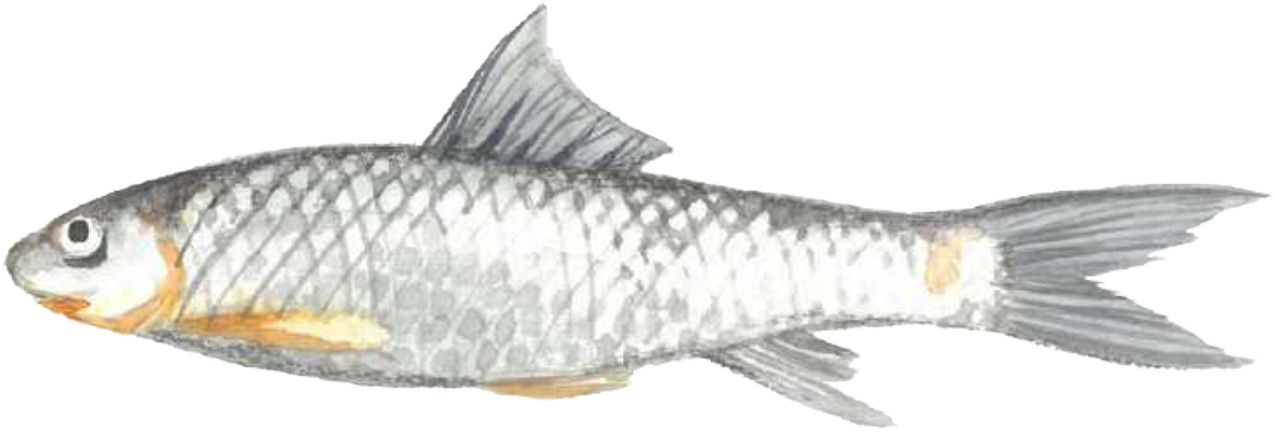
CARPS



শিল ঘৰিয়া (Kalabans)

Scientific Name: *Bangana dero;* Family: Cyprinidae

Vernacular Name: Assamese- *Silgharia, Gorea, Nepura* | **Bengali-** *Kursa, Katalkusi, Kulkabatta* | **Manipuri-** *Khabag; Tankhul* | **Nagaland-** *Khithal* | **Nishing (Arunachal Pradesh)-** *Ngope ngoei.*



Description:

Body elongate. Mouth rather narrow, without lateral lobes, snout overhanging the jaws, with a groove across it, and covered with pores. Lips fleshy and smooth on the edges. The fold across the lower jaw is interrupted. A cartilaginous layer on inside of both lips are present. Tubercles surround lips and snout of adults. Colour greyish, darkest along the back, each scale tinged with red, a darkish band along the side, or short grey bars passing to lateral line. Fins with a faint reddish hue. Outer edge of dorsal rather stained. Attains a length of up to 75 cm.

Habitat & Ecology:

Adults inhabit torrential hill-streams in shallow water. They migrate to warmer regions of lakes and streams during winter. Reportedly herbivorous.

Economic Importance:

High demanding food fish in local fish markets; also used as bait by anglers for catching other carnivorous fishes.

Distribution:

NE India: Foothill streams of the Ganga-Brahmaputra drainage.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, & pollution.

Least Concern (LC)

মিৰিকা (Mrigal Carp)

Scientific Name: *Cirrhinus mrigala;* Family: Cyprinidae

Vernacular Name: Assamese- *Mirika, Mirga* | **Bengali-** *Mirka, Mrigal.*

Description:

Body elongated, moderately compressed. Snout blunt in dorsal view pointed in lateral view. Mouth sub-terminal with thick lips; the upper lip entire and not continuous with the lower lip. Body covered by medium-sized cycloid scales. One pair of very short barbels on the corners of the mouth. Caudal fin deeply forked. Body dark grey on back turning silvery on the sides and fading to white on belly. Fins greyish, tips of pelvic and lower lobe of caudal tinged orange especially during the breeding season. Attains a length of up to 90 cm.

Habitat & Ecology:

All large waterbodies including rivers and beels; also found in lakes and ponds. Bottom feeder; omnivorous; feeds on molluscs, crustacea, algae, and detritus.

Economic Importance:

Used a food fish. Introduced in aquaculture systems. Good demand in market.

Distribution:

NE India: Brahmaputra and Barak drainages of all NE states.

Conservation Status & Threats:

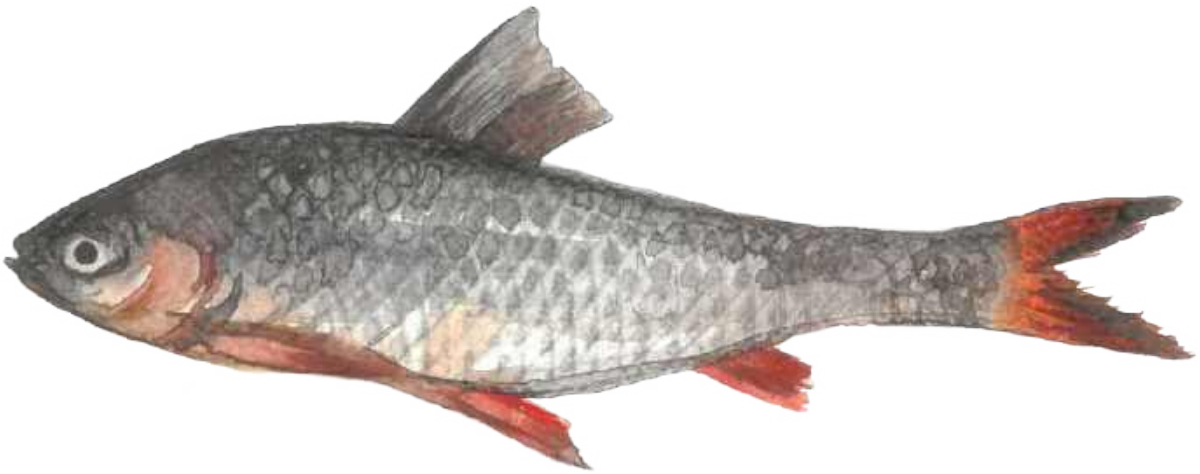
Least concern (IUCN). Threats include overfishing and habitat loss due to pollution.

Least Concern (LC)

লাচিম (Reba Carp)

Scientific Name: *Cirrhinus reba;* Family: Cyprinidae

Vernacular Name: Assamese- *Rashim, Lachim, Lassem* | **Bengali-** *Raig, Batta, kharge-bata* | **Manipuri-** *Khabag.*



Description:

Body fairly elongated, compressed, abdomen rounded. Head is blunt and oval. Snout somewhat acute, slightly projecting beyond mouth. Mouth terminal extends horizontally and is small. Jaws protrude in opening and the upper jaw is longest. Nostrils are near the middle, between the eye and the jaw. Barbels a pair of rostral. Colouration silvery, scales darkest at their edges forming longitudinal bands on the body. In preserved specimens bands extend from the anterior to the posterior end. Anal and pelvic fins orange–tipped. Attains a length of up to 30 cm.

Habitat & Ecology:

Inhabits clear rivers and wetlands. A plankton and detritus feeder.

Economic importance:

A popular food fish with high market demand.

Distribution:

NE India: All the NE states except Nagaland.

Conservation Status & Threats:

Least concern (IUCN). Threats include overfishing, pollution.

Least Concern (LC)

শিলকামোৰা (Annandalei Garra)

Scientific Name: *Garra annandalei;* Family: Cyprinidae

Vernacular Name: Assamese- *Shilkamra* | Bengali- *Nandani* | Manipuri- *Nungnga* | Nishing (Arunachal Pradesh)- *Ngop.*

Description:

Body elongated and cylindrical with slightly depressed head. Mouth small, semi-circular and well developed. Proboscis absent and barbels two pairs. Interorbital space convex and upper lips ciliate. Pectoral fin shorter than head and caudal fin deeply emarginate. Body greyish, dark grey on dorsum and paler on belly. A black spot present on upper angle of gill-opening. Lower lobe of caudal black and other fins blackish. Attains a length of up to about 20 cm.

Habitat & Ecology:

Inhabits in the flowing streams, more commonly in the hills than plains.

Economic Importance:

Little food value, but sometimes preferred as ornamental fish.

Distribution:

NE India: Brahmaputra drainage in Assam, Meghalaya, Arunachal Pradesh.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, & pollution.

Least Concern (LC)

শিলকামোৰা (Gotyla Sucker Head)

Scientific Name: *Garra gotyla;* Family: Cyprinidae

Vernacular Name: Assamese- *Xilkamura* | **Bengali**- *Ghorpoia* | **Nishing (Arunachal Pradesh)**- *Nagoyoutotum* **Manipuri**- *Ngamu sengum* | **Khasi (Meghalaya)**- *Dohjee.*

Description:

Body short, sub-cylindrical, ventral surface flat. Head slightly depressed anteriorly. Snout with a well-developed median proboscis and a transverse lobe at tip; Mouth inferior, transverse, semicircular. Eyes large. Barbels two pairs. Colouration is dark-greyish, with a bluish green band along the centre of the body, and extending along the middle of the caudal fin. A dark spot behind the gill openings. Abdomen creamy-white. Fins yellowish, stained darker at their margins. Attains a length of about 14 cm.

Habitat & Ecology:

Inhabits slow moving rivers, beels and ponds. Also seen in deep pools of clear, sluggish streams and creeks. Bottom-dweller; feeds on plants, filamentous algae and diatoms. Can be reared in ponds and tanks.

Economic Importance:

This is a popular food fish with great demand in the market. Also admired as a sport fish.

Distribution:

NE India: All the NE states except Nagaland.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, pollution, & overfishing.

Least Concern (LC)

বাটা (Bata Labeo)

Scientific Name: *Labeo bata;* Family: Cyprinidae

Vernacular Name: Assamese- *Bhagan* | **Bengali-** *Bata, Bhangon bata.*

Description:

The body is elongated. Its dorsal profile is more convex than the ventral. The snout slightly projects beyond the mouth, often studded with pores. A pair of small maxillary barbells is hidden inside the labial fold. No cartilaginous support to the lips. Pelvic originate slightly nearer to the snout tip than to the caudal base. Colour is bluish or darkish on upper half, silvery below, and the opercula is light orange. Pelvic and anal fins dark with orange red tips; other fins with fine black dots. Attains a length of up to 30 cm.

Habitat & Ecology:

Inhabits rivers, streams and floodplain wetlands. Its food comprises crustaceans and insect larvae in early stages.

Economic Importance:

Very popular as food fish with high market demand.

Distribution:

NE India: Brahmaputra and Barak drainage system.

Conservation Status & Threats:

Least concern (IUCN). Major threats include overfishing, pollution and sand mining.

Least Concern (LC)

কলিঅৰা (Orangefin Labeo)

Scientific Name: *Labeo calbasu;* Family: Cyprinidae

Vernacular Name: Assamese- *Kaliara, Mali, Mahlee, Kalisasu* | **Bengali-** *kalbasu, kalbosu, kundu, kaljaar* | **Manipuri-** *Ngathi.*

Description:

Dorsal profile is more convex than of abdomen. Lips thick, fringed. Lower jaw with a cartilaginous covering but covered with a thick labial fold. 2 pairs of barbels, rostral pair longer than maxillary pair. No pores on snout. Caudal fin deeply forked. Colour blackish with scarlet in the centre of the scales. Dorsum and upper lateral half dark black, becoming lighter below. Fins black, upper lobe of caudal fin usually tipped with white. Attains a length of up to 90 cm.

Habitat & Ecology:

Inhabits slow moving rivers, beels and ponds. Also seen in deep pools of clear, sluggish streams and creeks. Bottom-dweller; feeds on plants, filamentous algae and diatoms. Can be reared in ponds and tanks.

Economic Importance:

This is a popular food fish with great demand in the market. Also admired as a sport fish.

Distribution:

NE India: All the NE states except Nagaland.

Conservation Status & Threats:

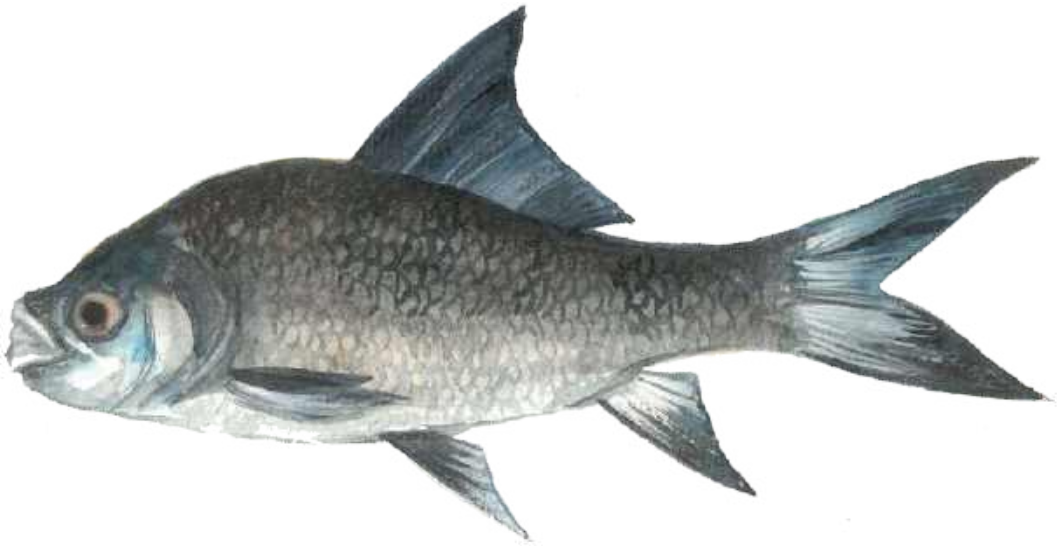
Least concern (IUCN). Threats include habitat loss, pollution, & overfishing.

Least Concern (LC)

ভকুৰা (Catla)

Scientific Name: *Labeo catla;* Family: Cyprinidae

Vernacular Name: **Assamese**-Bhokua | **Bengali**- Katla.



Description:

Body compressed with comparatively broad head. Mouth wide with thick and broad lower lip. Dorsal profile more convex than that of ventral profile. Mouth wide and upturned with prominent protruding lower jaw; upper lip absent, lower lip thick; Barbels absent. Dark grey above, silvery to bronze on sides and abdomen. Fins blackish; pectorals pale. Attains a length of 180 cm.

Habitat & Ecology:

Adults occur in rivers, lakes and culture ponds. Mature individuals breed in rivers. Surface and mid-water feeders, mainly omnivorous with juveniles feeding on detritus and phytoplankton.

Economic Importance:

Primarily consumed as food fish; leading IMC in the market with very high demand; often considered as good game fish by anglers.

Distribution:

NE India: All large lotic and lentic water bodies of NE states.

Conservation Status & Threats:

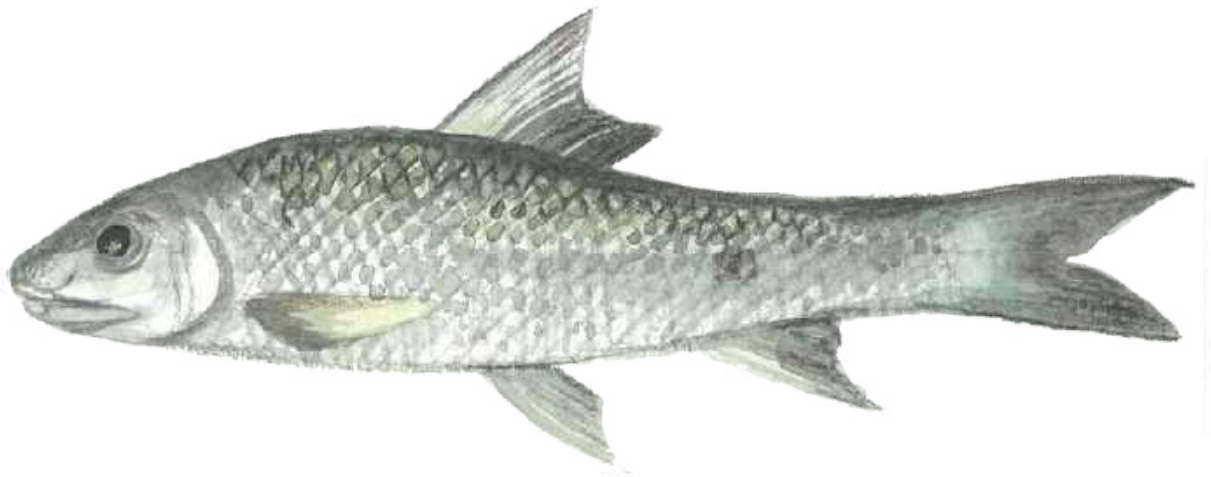
Least concern (IUCN). Threats include overfishing, habitat loss, & pollution.

Least Concern (LC)

শিলঘৰীয়া (Xeel-gorya)

Scientific Name: *Labeo dyocheilus;* Family: Cyprinidae

Vernacular Name: Assamese- *Xeel-gorya* | **Bengali-** *Ghora mach.*



Description:

Body elongated, snout conical, projecting and with a distinct lateral lobe. Eyes are small, not visible from underside of the head. Mouth subterminal to inferior; lower lip partly separated from isthmus by a postlabial groove. Pores on snout. Barbels one short maxillary pair. Caudal fin deeply forked. Colour is dull green, darkest above, fin darkest in the centre. Attains a length of 90 cm.

Habitat & Ecology:

Adults live in clear active currents of large rivers; potamodromous.

Economic importance:

Preferred as food fish.

Distribution:

NE India: Assam, Arunachal Pradesh, Nagaland.

Conservation Status & Threats:

Least concern (IUCN). Major threats include habitat loss, & pollution.

Least Concern (LC)

কুঁড়ি (Kuria Labeo)

Scientific Name: *Labeo gonius;* Family: Cyprinidae

Vernacular Name: Assamese- *kurhi, kuriha, goni, kurchi, kuri, kuria* | **Bengali-** *Khursa ghonia, goinna*
Manipuri- *Kuri* | Meitei- *Kuri.*

Description:

Body elongated; dorsal profile more convex than that of ventral. Mouth blunt, narrow and sub inferior, lips thick and fringed. Eyes moderate and not visible from underside of head. Two very short pairs of barbels. Caudal fin deeply forked. Colour greenish black on back turning lighter on the sides. Scales with dark margins appear to show dark longitudinal lines. Attains a length of up to 60 cm.

Habitat & Ecology:

Riverine fish, mostly resident of floodplain wetlands; sometimes collected from paddy fields. Feeds on algae, vegetation, crustaceans, and insect larvae.

Economic Importance:

Preferred as food fish with high market demand.

Distribution:

NE India: All floodplain wetlands and associated rivers of the NE states.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, & pollution.

Least Concern (LC)

নদীনি (Nandi Labeo)

Scientific Name: *Labeo nandina;* Family: Cyprinidae

Vernacular Name: Assamese- *Nadini,Nandani* | **Bengali-** *Nandani* | **Manipuri-** *Nandani* | **Meitei-** *Nandani.*

Description:

Body elongated, its dorsal profile quite concave above eyes. Snout obtuse, slightly projecting beyond wide mouth with no lateral lobe. Cartilaginous lips thick and fringed. Barbels two pairs. Caudal deeply forked. Colour dark greenish on back, becoming brownish on flanks and lighter on abdomen; centre of scales orange red or reddish brown. Attains a length of up to 80 cm.

Habitat & Ecology:

Found in both rivers and beels; recorded from upper reaches of large rivers.

Economic Importance:

A preferred food fish.

Distribution:

NE India: Restricted to only few wetlands of Assam.

Conservation Status & Threats:

Near Threatened (IUCN). Threats unknown but overharvesting and habitat loss are primary causes of its current low abundance and restricted distribution.

Least Concern (LC)

ৰৌ (Rohu)

Scientific Name: *Labeo rohita;* Family: Cyprinidae

Vernacular Name: **Assamese-** *Rohiti, Rui, Rau* | **Bengali-** *Rahu, Rui, Ruee* | **Manipuri-** *Rou.*

Description:

Body compressed, and dorsal profile is more convex than that of ventral profile. Single pair of barbel (maxillary) present. Snout depressed, projects beyond mouth. Lower jaw chisel like, with a heavily keratinised aris (cutting edge) but invariably covered by a thick labial fold. Caudal fin deeply forked. Colour bluish or brownish along the back, becoming silvery on the sides and beneath. Reddish mark on each scale during breeding season, eyes reddish. Fins dark, pectoral fins dusky. Attains a length of up to 120 cm.

Habitat & Ecology:

Found in freshwater habitats such as ponds, ditches, canals, beels, baors, river, lakes, etc. Introduced in reservoirs. A column feeder; omnivore.

Economic Importance:

Used as culture species in aquaculture. Used as food as well as game fish. One of the highly demanded food fish in the market.

Distribution:

NE India: Assam, Meghalaya, Manipur, Tripura.

Conservation Status & Threats:

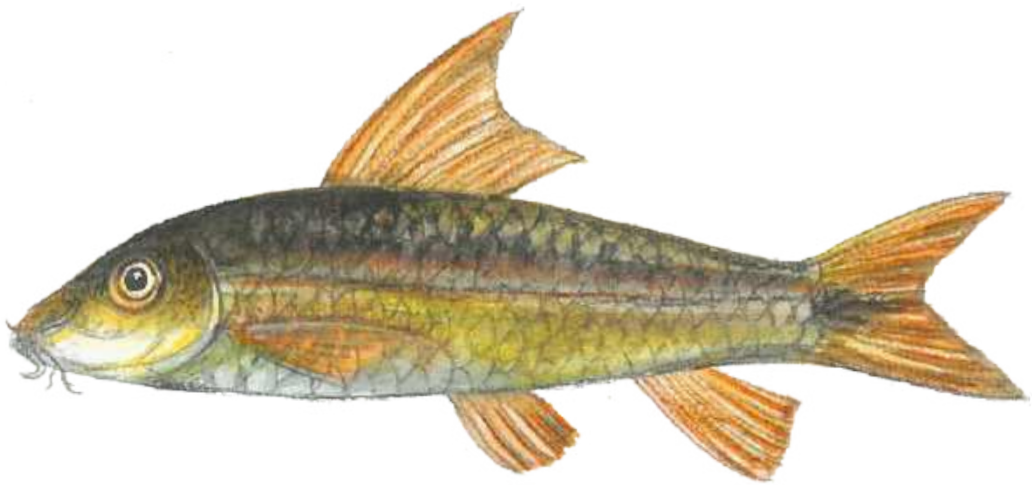
Least concern (IUCN). Threats include habitat loss, pollution, & overfishing.

Least Concern (LC)

লুৰালি (Gangetic Latia)

Scientific Name: *Tariqilabeo latius;* Family: Cyprinidae

Vernacular Name: Assamese- *Lurali* | **Bengali-** *Kalabatta* | **Manipuri-** *Ngaroi* | **Nishing (Arunachal Pradesh)-** *Ngoku ngoi* | **Adi (Arunachal Pradesh)-** *Ngoyou.*



Description:

Body more or less elongate. Head mildly depressed, upper surface broad. Snout prominent, obtusely pointed, with small lateral lobe. Mouth inferior, upper lips deeply indented on edge, lower lip with strong sharp horny covering, the lip at the angle having pendulous lobe. Barbels minute, two pairs; a rostral pair is often rudimentary. Upper half of body greyish or light brownish, with irregular dark punctuations, lower half pale yellowish fading to cream and silvery white ventrally. A faint longitudinal stripe on flank that broadens near base of caudal fin. Fins hyaline with dark brownish rays. Pelvic and anal fins with deep reddish fin rays.

Habitat & Ecology:

Bottom-dweller; feeds on algae, crustaceans and other invertebrates. Adults inhabit streams and rivers. Also, found in beels and mountain streams.

Economic Importance:

Has good market demand as food fish.

Distribution:

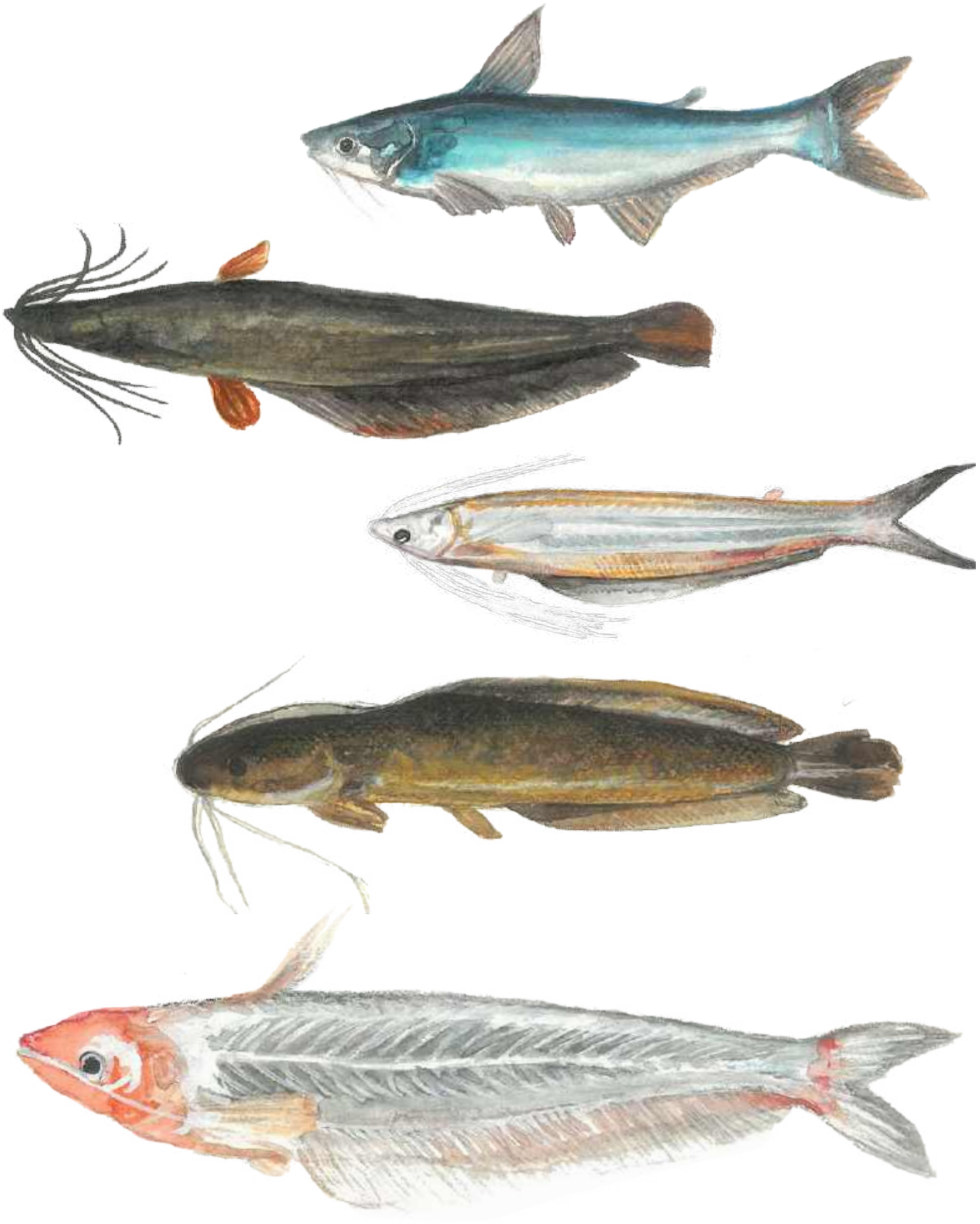
NE India: Brahmaputra and Barak drainages of N. E. states.

Conservation Status & Threats:

Least Concern (IUCN). Threats include habitat loss and pollution.

Least Concern (LC)

CATFISHES



বাঁহপেটীয়া (Ailia)

Scientific Name: *Ailia coila;* Family: Ailiidae

Vernacular Name: Assamese- *Kadali, Bapati, Kandoli, Bardua* | **Bengali-** *Kajuli vacha, Kajoli, Kajri.*

Description:

Body elongated and deeply compressed. Upper jaw longer than lower jaw. Barbels well developed and 4 pairs. Dorsal fin absent and small adipose fin present. Caudal fin forked and lower lobe longer than upper. Body silvery white. Fins greyish at their edges, caudal fin edged with black. Attains a length of up to 25 cm.

Habitat & Ecology:

A surface to midwater fish, lives in shoals that inhabits large rivers and the connected waterbodies. It feeds on insects and crustaceans.

Economic Importance:

Use as food fish. Also having ornamental fish value.

Distribution:

NE India: Assam (Brahmaputra River system), Meghalaya, Tripura, Arunachal Pradesh.

Conservation Status & Threats:

Near threatened (IUCN). Threats include habitat loss and pollution.

Near Threatened (NT)

বাগৰ মাছ (Devil Catfish)

Scientific Name: *Bagarius bagarius;* Family: Sisoridae

Vernacular Name: **Assamese-** *Bagar mach, Goreah, Garua* | **Bengali-** *Bag Mach, Bhgha aor* | **Khasi:** *Khakala* | **Manipuri-** *Ngaren.*

Description:

Body elongate with depressed head. Mouth sub-terminal. Four pairs of barbels. Caudal deeply forked, upper lobe produced into a long filament. Skins on sides and above rough. Body color greenish or olivaceous to rich tan or brown with dark pigmented - first one from the near dorsal base to pelvic, the second one from adipose base to anal fin and the last one at caudal peduncle. Caudal fin yellowish grey. Pelvic and pectoral fins with black spots. Anal with a broad black-coloured band. Attains a length of up to 200 cm.

Habitat & Ecology:

Inhabits deep pools and slow-moving stretches of hillstreams. Also caught from the main channel of large rivers. Voracious predator; feeds on insects, small fishes, frogs and shrimps.

Economic Importance:

Use as food fish by local communities. Also, a potential ornamental fish.

Distribution:

NE India: River drainages of NE states.

Conservation Status & Threats:

Vulnerable (IUCN). Threats include habitat loss due to pollution and mining; and use of destructive fishing practices.

Vulnerable (VU)

বাটাচি মাছ (Tista Batasio)

Scientific Name: *Batasio batasio;* Family: Bagridae

Vernacular Name: Assamese- *Batasi maas.*

Description:

Body moderately elongate, laterally compressed. Head prominent, having a dull edge or point. Mouth sub-terminal with upper lip slightly longer than that of lower lip. Barbels four pairs. First dorsal spine shorter than other rays of the fin. Pectoral spine weak, serrated inwards. Adipose fin present, its base longer than that of anal-fin base. Caudal fin forked. Body colour yellowish-green laterally, darker grey dorsally and pale white or cream ventrally. A dark brown to blackish longitudinal stripe present along the lateral line that forms a blotch below the dorsal fin. Attains a length of about 10 cm.

Habitat & Ecology:

Inhabits mostly moderately flowing streams and rivers. Also recorded from floodplain wetlands. Benthopelagic.

Economic Importance:

Moderate demand as food fish. A fish with potential ornamental value.

Distribution:

NE India: Foothills and floodplains of the Brahmaputra drainage.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss due to pollution and mining, and overfishing.

Least Concern (LC)

চাকা (Squarehead Catfish)

Scientific Name: *Chaca chaca;* Family: Chacidae

Vernacular Name: Assamese- *Chaca* | **Bengali-** *Checa.*

Description:

Body elongated, Tadpole shaped, with a very wide sub-terminal mouth and almost reduced subcutaneous eyes. Head dorso-ventrally compressed. The upper surface covered with tubercles and with many low and elongated spines. 3 pairs of barbels. 1st dorsal fin contains serrated spine. Two rayed anal fins present. 2nd dorsal and 2nd anal confluent with caudal and caudal rounded. Lateral line present and curved downwards. Body coloured blackish or deep brownish. Attains a length of 20 cm.

Habitat & Ecology:

Inhabits rivers, beels, canals and ponds. Prefers soft substrates where it lies concealed in the soft mire of the river bed.

Economic Importance:

The species is not preferred for its ugly look. Has some ornamental value.

Distribution:

NE India: Brahmaputra drainage system.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, & overfishing.

Least Concern (LC)

মাগুৰ (Walking Catfish)

Scientific Name: *Clarias magur;* Family: Clariidae

Vernacular Name: Assamese & Bengali- *Magur.*

Description:

Body elongate. Head moderately depressed. Eyes small, mouth terminal and barbels 4 pairs. Dorsal fin inserted slightly anterior tip of pectoral fins. Pectoral spine strong and fairly serrated on both edges. Dorsal and anal fins occupy more than three-fourths of body length. Body brownish to green-blue with dark back with a greenish lustre; pale brown or reddish on sides; belly pale cream or greyish with spots on both sides. Attains a length of about 45 cm.

Habitat & Ecology:

Inhabits ponds, ditches, swamps and marshes, but recorded from riverine wetlands as well as paddy fields. Bottom-dweller; omnivorous.

Economic Importance:

The species has high demand as food fish mostly because of its high nutritional value. Also preferred as aquarium fish.

Distribution:

NE India: Brahmaputra and Barak drainage.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss due to pollution, and overfishing.

Least Concern (LC)

নেৰিয়া (Garua Bachcha)

Scientific Name: *Clupisoma garua;* Family: Ailiidae

Vernacular Name: Assamese- *Neria* | **Bengali-** *Puttosi, Garua, Gharuya, Gaurchcha, Moturi, Ghero.*

Description:

Body elongate and laterally compressed. Eye with broad adipose lids. Snout rounded. Abdominal edge keeled between pelvic and vent. Upper jaw longer than lower jaw. 4 pairs of barbels present. The caudal fin deeply forked with longer lower caudal lobe. Body colour silvery with the back yellowish-green and the head and shoulder with a golden gloss. Fins hyaline, dorsal and pectoral fins dotted with black; caudal fin pale yellow. Attains a length of up to 35 cm.

Habitat & Ecology:

Commonly found in large rivers. Feeds on insects, crustaceans and small fish.

Economic Importance:

Use as food fish by some communities with high market value.

Distribution:

NE India: Brahmaputra and Barak drainages of Assam, Meghalaya, Tripura, Manipur, Arunachal Pradesh. Large rivers of northern India, West Bengal, Bihar.

Conservation Status & Threats:

Least concern (IUCN). Threats include overfishing, pollution, habitat loss.

Least Concern (LC)

N.A (Conta Catfish)

Scientific Name: *Conta pectinata;* Family: Erethistidae

Vernacular Name: N.A

Description:

Body elongate, sub-cylindrical. Head small, oval-shaped. Mouth small with thick and fleshy lips. Four pairs of barbels. Caudal fin forked, its upper lobe with a long filamentous prolongation. Pectoral fin horizontally placed, its first ray a spine. Body dark brownish mottled with greyish on back and pale whitish below. Barbels with dark and white annulations. Fins hyaline with pale brown bands. Outer rays of caudal fin with whitish border. Attains a length of about 7 cm.

Habitat & Ecology:

Inhabits rocky substrates of rivers and streams. Usually found in cold waters. Bottom-dweller; insectivore.

Economic Importance:

No food value, but preferred as an ornamental fish.

Distribution:

NE India: Upper reaches of Brahmaputra drainage.

Conservation Status & Threats:

Data Deficient (IUCN). Threats include habitat loss due to pollution and mining.

Data Deficient (DD)

শিলগাৰুৱা (Moth Catfish)

Scientific Name: *Erethistes hara;* Family: Erethistidae

Vernacular Name: Assamese- *Xilgaruah* | **Khasi-** *Hara.*

Description:

Body elongate; flat ventrally. Head depressed. Mouth small, terminal. Eyes small. Barbel four pairs. Body tuberculated. Pectoral fin spines long and serrated internally. Dorsal spine strong. Caudal fin forked, upper lobe longer then lower lobe. Body colour murky brown to chocolate with brownish to creamy bars posterior to the dorsal fin. Pale white to greyish ventrally. Maxillary and mandibular barbels with alternate black and brown bands. Attains a length of 13 cm.

Habitat & Ecology:

Inhabits slow-moving hill-streams, with sandy bed bearing aquatic weeds and decaying leaves. It feeds on insects, larvae and benthic detritus.

Economic Importance:

No interest to fisheries. But has good demand in the ornamental fish trade.

Distribution:

NE India: Brahmaputra and Barak drainage.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss due to pollution and mining.

Least Concern (LC)

বাছা (Vacha Catfish)

Scientific Name: *Eutropiicthys vacha;* Family: Schilbeidae

Vernacular Name: Assamese- *Bacha, Basa, Kangon, Tunti, Neria* | **Dimasa-** *Nah-shing*
Bengali- *Bhacha, Caingun, Kangon, Katla, Tunti, Vacha.*

Description:

Body elongated, compressed towards posterior. Head depressed, with terminal wide mouth; upper jaw slightly longer than lower. Dorsal and ventral body profiles equally convex. Four pairs of barbels. Dorsal and pectoral spines strong and serrated internally. Adipose fin present. Caudal fin deeply forked. Body silvery grey dorsally turning silvery white on sides and white on belly. Pectoral and anal fins with reddish margin. Attains a length of up to 38 cm.

Habitat & Ecology:

Inhabits large rivers and associated streams. Swims in groups of variable number. Carnivore; feeds on insects, crustacea and molluscs.

Economic Importance:

The species has high demand as food fish.

Distribution:

NE India: Brahmaputra and Barak River drainages in NE states.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss due to pollution overfishing and obstruction on migration due to construction of large dams.

Least Concern (LC)

কেয়াকাটা (Indian Gagata)

Scientific Name: *Gagata cenia;* Family: Sisoridae

Vernacular Name: Assamese- *Keyakatta* | **Bengali**- *Cenia.*

Description:

Body elongate small and slender with compressed head. Mouth small; barbels 4 pairs, maxillary barbels with stiff basal portions. Dorsal fin with short and strong spine. Pelvic fins reach vent. Body color grayish; young with 4 dark dorsal blotches on back extending to flanks below lateral line. Adipose with black edge. Black stripe on each lobe of caudal and its base. Attains a length of 14 cm.

Habitat & Ecology:

Found in fresh and tidal rivers.

Economic Importance:

The species has some demand as food fish. Also used as ornamental fish.

Distribution:

NE India: Brahmaputra & Barak drainage system.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, overfishing, & pollution.

Least Concern (LC)

শিঙি মাছ (Asian Stinging Catfish)

Scientific Name: *Heteropneustes fossilis;* Family: Heteropneustidae

Vernacular Name: Assamese- *Xingi maas, Singi* | **Bengali-** *Singi mach* | **Khasi-** *Khasinghi*
Manipuri (Meitei)- *Ngachik.*

Description:

Body elongated, compressed towards posterior. Head depressed. Barbels four pairs. Pectoral fin with a strong, serrated spine. Anal fin occupying more than three-fourths of body length. Dorsal fin short. Caudal round. Body reddish-brown or purplish brown, with a pale greyish belly. Attains a length of about 30 cm.

Habitat & Ecology:

Inhabits mostly stagnant waters like ponds, ditches, swamps and marshes, but sometimes occurs in muddy rivers. Also, a common occurrence in paddy fields. Omnivorous.

Economic Importance:

The species has high demand as food fish mostly because of its high nutritional value. Also preferred as an aquarium fish.

Distribution:

NE India: Throughout NE states.

Conservation Status & Threats:

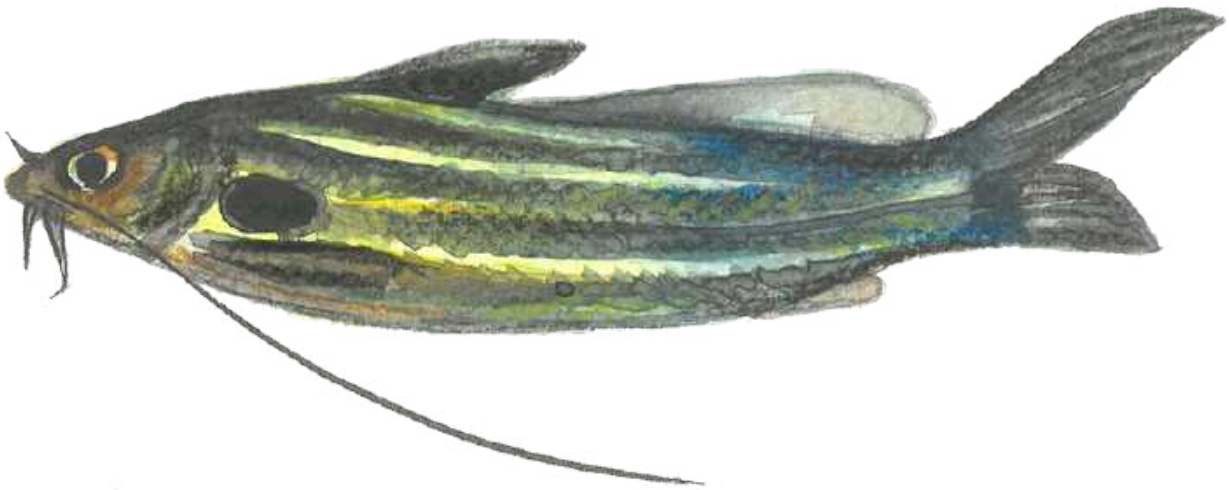
Least concern (IUCN). Threats include habitat loss due to pollution and overfishing.

Least Concern (LC)

শিঙৰা (Day's Mystus)

Scientific Name: *Mystus bleekeri;* Family: Bagridae

Vernacular Name: **Assamese-** *Golsa tengra, Singorah* | **Meitei-** *Tengara* | **Arunachal Pradesh:** *Ngora-poga (in Nyishi & Galo), Tengil (in Adi).*



Description:

Body elongated, moderately compressed. Mouth terminal. Barbels 4 pairs; maxillary pair extending beyond caudal fin. Adipose fin present, its base long, commencing immediately behind the base of dorsal fin ray. Dorsal-fin spine smooth on both edges. Pectoral spines strong with serrations inwards. Body colour dark brown to olivaceous grey on back turning golden to pale brown on sides and cream further towards ventral. Sides with broad brownish stripes: dorsal, midlateral, and ventrolateral, are separated by narrow pale brown interspaces. A large dark brownish tympanic spot present above the pectoral fin. Attains a length of up to 18 cm.

Habitat & Ecology:

Inhabits deep pools of floodplain wetlands mostly among dense decaying vegetation. Also found in rivers and streams. Omnivores with a higher preference for crustaceans, molluscs and insects.

Economic Importance:

The species has a high demand as food fish. Also, a potential ornamental fish.

Distribution:

NE India: Floodplain areas of Brahmaputra & Barak drainages.

Conservation Status & Threats:

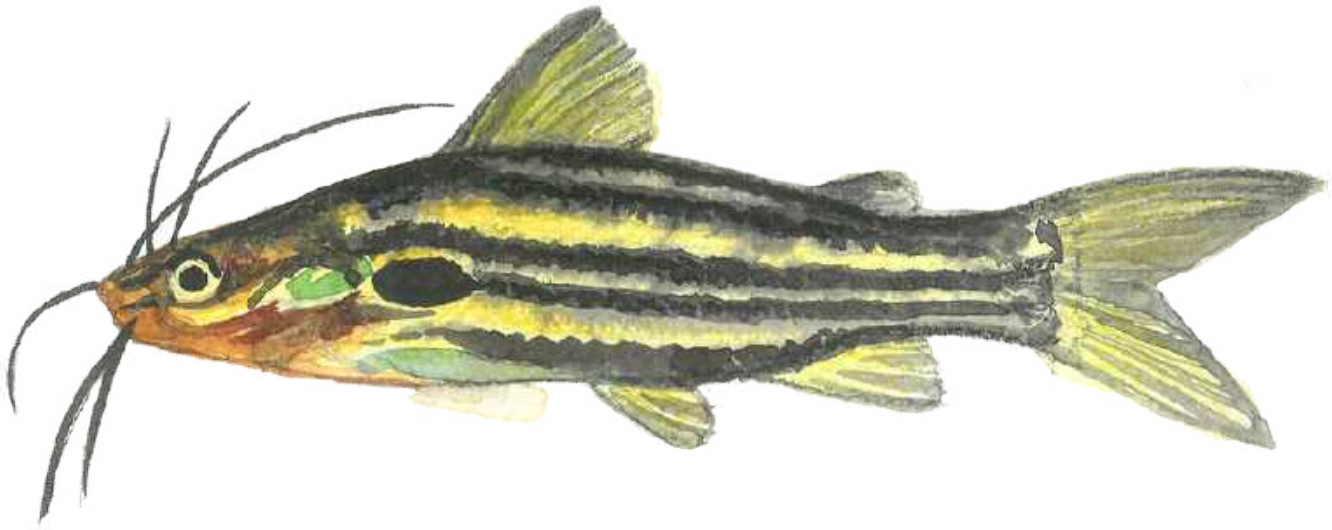
Least concern (IUCN). Threats include habitat loss due to pollution and overfishing.

Least Concern (LC)

শিঙৰা (Carcio Tengra)

Scientific Name: *Mystus carcio;* Family: Bagridae

Vernacular Name: Assamese- *Singora* | **Bengali-** *Tengra.*



Description:

Body elongated and slightly compressed. Head depressed. Dorsal spine long up to head keep out the head. Pectoral spine stronger than dorsal spine, used as offence organ and injuries that occur by it are very painful. Body ground color amber, superimposed with four brownish broad stripes. The midlateral stripe originates immediately behind the posterolateral corner of the head. All the stripes extended continuously up to the base of caudal fin. A distinct dark brown spot is also present. Attains a length of 5 cm.

Habitat & Ecology:

This species usually found in weedy, sandy and muddy places of the pools, streams and river in the rainy season.

Economic Importance:

The species has high demand as food fish. Also having ornamental value in the international market.

Distribution:

NE India: Brahmaputra & Barak drainage system.

Conservation Status & Threats:

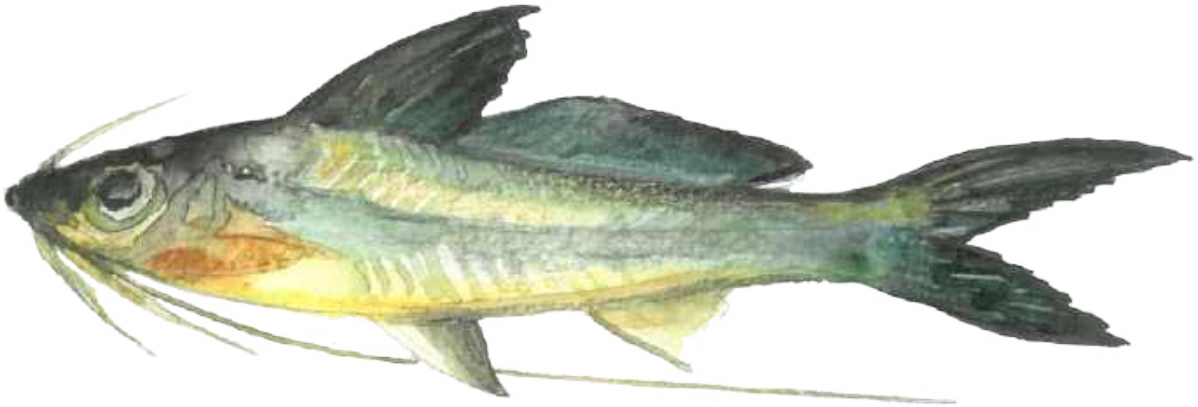
Least concern (IUCN). Threats include habitat loss, overfishing, & pollution.

Least Concern (LC)

বাৰশিঙৰা (Dwarf Cat-Fish)

Scientific Name: *Mystus cavasius;* Family: Bagridae

Vernacular Name: **Assamese-** *Barxingorah, Xingorah, Nodir boga tengra* | **Bengali-** *Kavasi tengara, Tengara* | **Manipuri-** *Ngase.*



Description:

Body elongated, compressed; head conical. Barbels 4 pairs. Maxillary pair in adults reaching beyond caudal fin; but in young specimen, do not extend beyond the anal fin. Dorsal spine weak. Adipose dorsal fin large, originating just behind dorsal. Upper lobe of caudal fin longer than lower lobe and pointed. Colour greyish dorsally fading to pale golden on sides to silvery white ventrally. A well-defined mid-lateral brownish longitudinal stripe succeeded by a thin longitudinal stripe below; a dark humeral spot emphasized by a pale area along its ventral margin. Dorsal and caudal fins dusky; paired fins and anal fin dull white. Attains a length of up to 45 cm.

Habitat & Ecology:

Inhabitants of freshwater and tidal rivers and lakes; also recorded from beels, ponds, ditches and inundated fields.

Economic Importance:

Preferred as food fish. Has potential ornamental value.

Distribution:

NE India: Assam, Meghalaya, Arunachal Pradesh, Manipur, Tripura.

Conservation Status & Threats:

Least concern (IUCN). Major threats include habitat loss due to pollution and overfishing.

Least Concern (LC)

শিঙৰা (Tengara Catfish)

Scientific Name: *Mystus tengara;* Family: Bagridae

Vernacular Name: Assamese- *Singorah, Tingora* | **Bengali-** *Tengra* | **Manipuri (Meitei)-** *Tingare.*

Description:

Body elongated, slightly compressed. Head depressed. Mouth terminal. Barbels 4 pairs. Maxillary barbels reach beyond anal fin. Dorsal spine moderately strong with posterior serrations. Pectoral spine strong with 10 to 13 serrations inwards. Adipose fin present; its base medium in length, not reaching the dorsal-fin base. Body colour olive brownish dorsally that turns golden brown on sides. Each lateral side with 4-5 dark brown stripes, which taper remarkably posteriorly and eventually entirely disappear. Dark brown to black blotch above pectoral-fin base. Fins are hyaline, often golden to pale amber. Attains a length of about 7 cm.

Habitat & Ecology:

Inhabits floodplain wetlands and beels with dense vegetation. Also recorded from paddy fields in monsoons. Omnivore; benthopelagic.

Economic Importance:

The species has a high demand as food fish. Also, a potential ornamental fish.

Distribution:

NE India: Floodplains of Brahmaputra & Barak drainages.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss due to pollution and overfishing.

Least Concern (LC)

পাভ' মাছ (Butter Catfish)

Scientific Name: *Ompok bimaculatus;* Family: Siluridae

Vernacular Name: Assamese- *Pabho, Pava, Pahboh* | **Bengali-** *Pabda, Puffta.*

Description:

This scaleless fish has an elongated body which is strongly compressed. Head depressed, snout rounded, mouth superior and the lower jaw is longer than the upper jaw. Two pairs of barbels are present. Maxillary barbels extend posterior to anal fin base. Nostrils widely separated from each other. Teeth found on jaws and vomer. Caudal fin is deeply forked and its upper lobe is long. Dorsal side grey, a transverse blackish spot present, behind the operculum on the lateral line, caudal stripped with black spots, purple and yellowish spots throughout the body. Attains a length of 45 cm.

Habitat & Ecology:

Adults are found in quiet, shallow, often muddy water, in sandy streams, rivers and tanks. Also occur in canals, beels and inundated fields. Mainly feeds on rainy season and feeds include crustacean larvae, algae, protozoans, a little mud and sand.

Economic Importance:

It is in great demand and market price on account of its good test, flavour, and invigorating effect. The fish has been bred using hormone injections in many aquaculture stations.

Distribution:

NE India: Assam, Meghalaya, Arunachal Pradesh, Nagaland, Tripura.

Conservation Status & Threats:

Near Threatened (IUCN, 2009). Threats include overfishing, habitat loss, etc.

Near Threatened (NT)

পাভ' (Butter Catfish)

Scientific Name: *Ompok pabda;* Family: Siluridae

Vernacular Name: Assamese- *Pabho* | **Bengali-** *Pabda, Madhu pabda* | **Khasi-** *Khababia.*

Description:

Body elongate, laterally compressed towards caudal end. Head depressed with rounded snout. Superior mouth with longer lower jaw. Barbels two pairs, of which maxillary pair extends beyond pectoral origin. Dorsal fin short with few rays. Pectoral fin with smooth spine, but stronger serrations on the inner margin of males. Males slightly slender and smaller in size than females. Females with profusely bulging belly. Caudal forked with rounded lobes and oriented obliquely downwards. Body colour generally silvery grey, dark greyish or beige on the back and fading to white on belly. Two longitudinal bands, one above and other below the lateral line, may sometimes be visible. Attains a length of up to 30 cm.

Habitat & Ecology:

Inhabits floodplain wetlands, rivers, lakes and inundated paddy fields. Omnivore; feeds on algae, roots of some higher plants as well as crustaceans. Also known to prey on small fish.

Economic Importance:

Very high demanding catfish as food. Also, a potential ornamental fish.

Distribution:

NE India: Floodplains regions of Brahmaputra & Barak drainages.

Conservation Status & Threats:

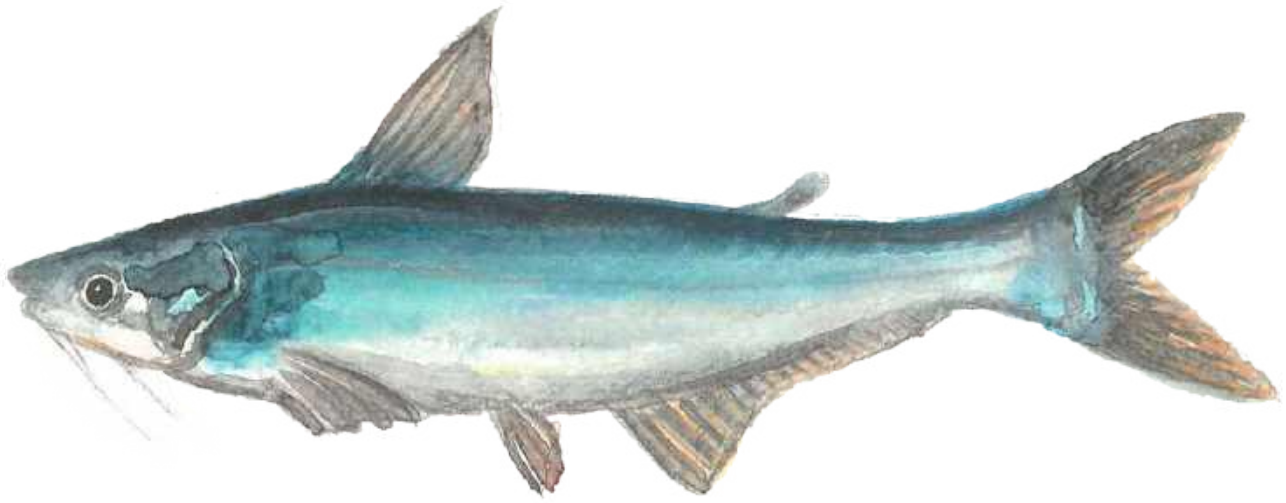
Least concern (IUCN). Threats include overfishing for its high demand in market; and habitat loss due to pollution.

Least Concern (LC)

ক’চ (Pungas Catfish)

Scientific Name: *Pangasius pangasius;* Family: Pangasiidae

Vernacular Name: **Assamese-** *Kos, Pangas, Ponga* | **Bengali-** *Pangra, Pongas.*



Description:

Body elongate; compressed towards caudal. Head depressed with a blunt, slightly rounded snout. Upper jaw longer than lower jaw. Two pairs of barbels present. Dorsal spine serrated anteriorly. Pectoral spine comparatively stronger than dorsal spine and serrated internally. Caudal fin deeply forked. Adipose dorsal short. Color on abdomen silvery, side of head with golden tinge, above the lateral line whitish grey, silvery purple on sides and greyish black on back. Attains a length of about 100 cm.

Habitat & Ecology:

Inhabits both freshwater and brackish water. Some common habitats are big rivers, floodplains, estuaries, canals, etc. Omnivorous.

Economic Importance:

The species has good demand as food fish.

Distribution:

NE India: Throughout large waterbodies of NE India.

Conservation Status & Threats:

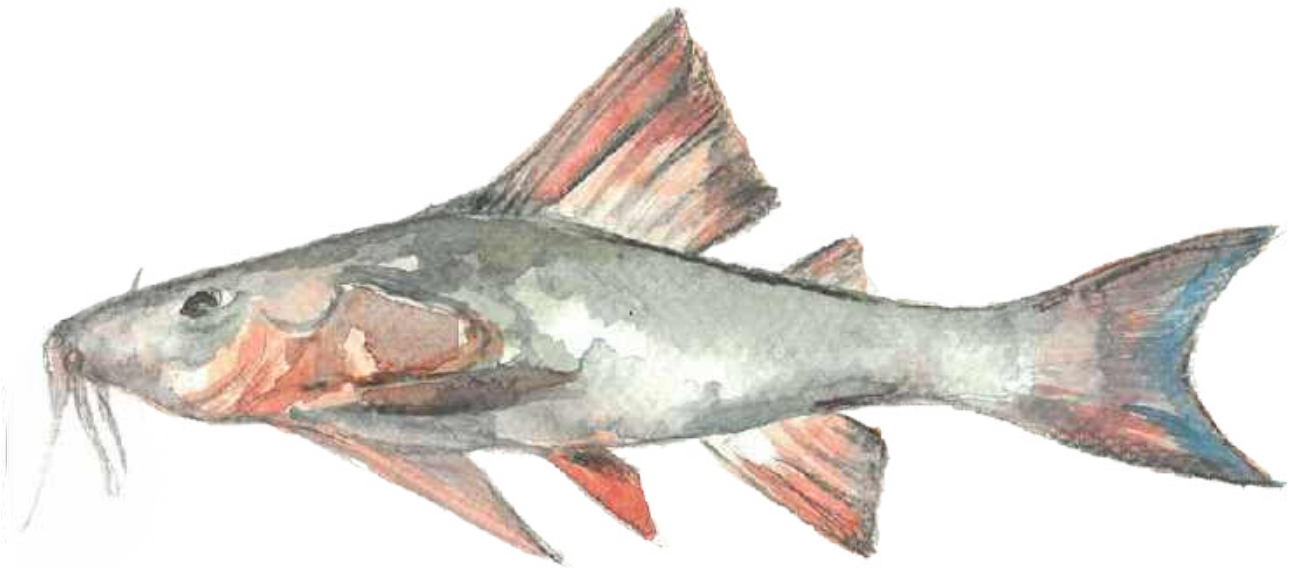
Least concern (IUCN). Threats include habitat loss, overfishing.

Least Concern (LC)

লিঠা (Rita)

Scientific Name: *Rita rita* Family: Bagridae

Vernacular Name: Assamese- *Litha* | **Bengali-** *Ritha.*



Description:

Body elongate with depressed head. Nostril wide apart. Mouth transverse with 3 pairs of barbels. Straight lateral line and with strong dorsal spine. Pectoral spine shorter than dorsal spine. Caudal forked. Body color green or greenish above and flanks, sometimes brownish/ blackish; dull white below. Attains a length of 20 cm.

Habitat & Ecology:

Inhabits rivers and estuaries, preferably muddy to clear water. Prefers backwater of quiet eddies . Feeds on insects, mollusks, shrimps and fishes.

Economic Importance:

The species has high demand as food fish.

Distribution:

NE India: Brahmaputra & Barak drainage system.

Conservation Status & Threats:

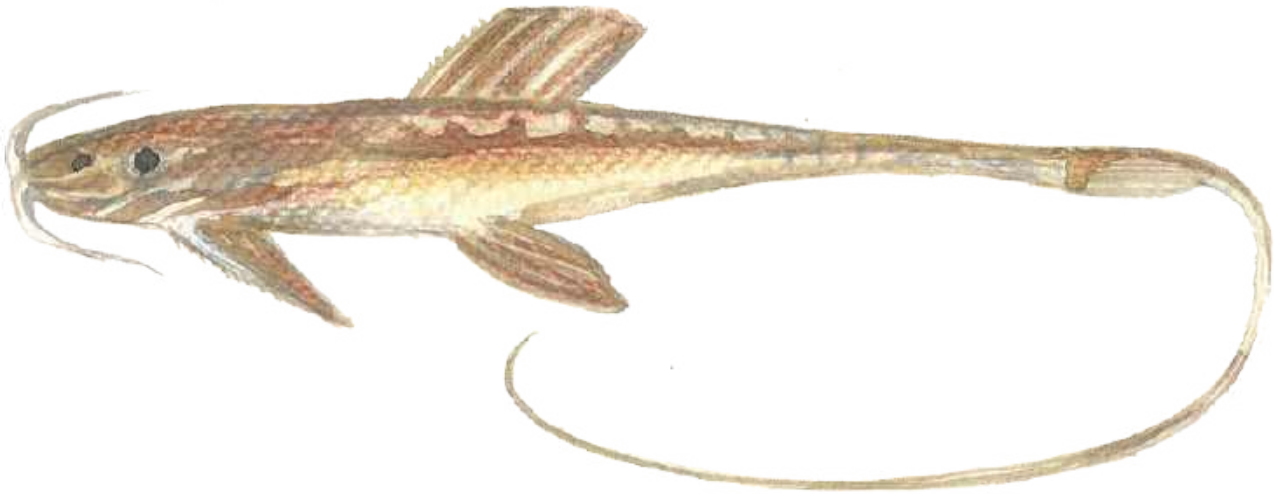
Least concern (IUCN). Threats include habitat loss, overfishing, & pollution.

Least Concern (LC)

N.A (Sisor Catfish)

Scientific Name: *Sisor rabdophorus;* Family: Sisoridae

Vernacular Name: Assamese- *NA* | **Bengali-** *Chenua.*



Description:

Body elongate with small inferior mouth. Also, with a long tapering tail. Six pairs of barbels, one maxillary pair and five mandibular pairs. An anteriorly serrated weak spine in dorsal fin. Adipose fin present in the form of a spine. Pectoral fins horizontal; caudal truncate with elongated and filamentous uppermost ray. Series of bony plates from dorsal base to caudal base. Body color blackish on back and lighter below. Attains a length of 18 cm.

Habitat & Ecology:

Inhabits streams with sandy bottom and strong currents.

Economic Importance:

The species is not preferred as food fish. Has some ornamental value. Plays an ecological role as a detritus feeder.

Distribution:

NE India: Brahmaputra & Barak drainage system.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, & overfishing.

Least Concern (LC)

আঁৰি (Long-Whiskered Catfish)

Scientific Name: *Sperata aor;* Family: Bagridae

Vernacular Name: Assamese- *Ari* | **Bengali-** *Ari, Arr, Tengra* | **Manipuri-** *Ngachou* | **Tripura-** *Aar.*

Description:

Body elongated, head depressed and mouth sub-terminal. Barbels 4 pairs, maxillary pair reaches to the base of caudal fin. Adipose fin well developed and originated near caudal fin. Caudal fin forked and upper lobe slightly longer than lower lobe. Colour dark bluish, gradually fading to whitish on flanks and belly; a small black spot often present on basal bone of dorsal fin; a well-defined dark spot at tip of adipose dorsal fin. Fins yellowish; dorsal and caudal fins stained black. Attains a length of more than 100 cm.

Habitat & Ecology:

Inhabitants of freshwater rivers, ponds, lakes, channels, and reservoirs. Breeds before the onset of the monsoons.

Economic Importance:

Used as food fish. The fish has good market demand and always marketed in fresh condition.

Distribution:

NE India: Assam, Mizoram, Arunachal Pradesh, Manipur, Tripura.

Conservation Status & Threats:

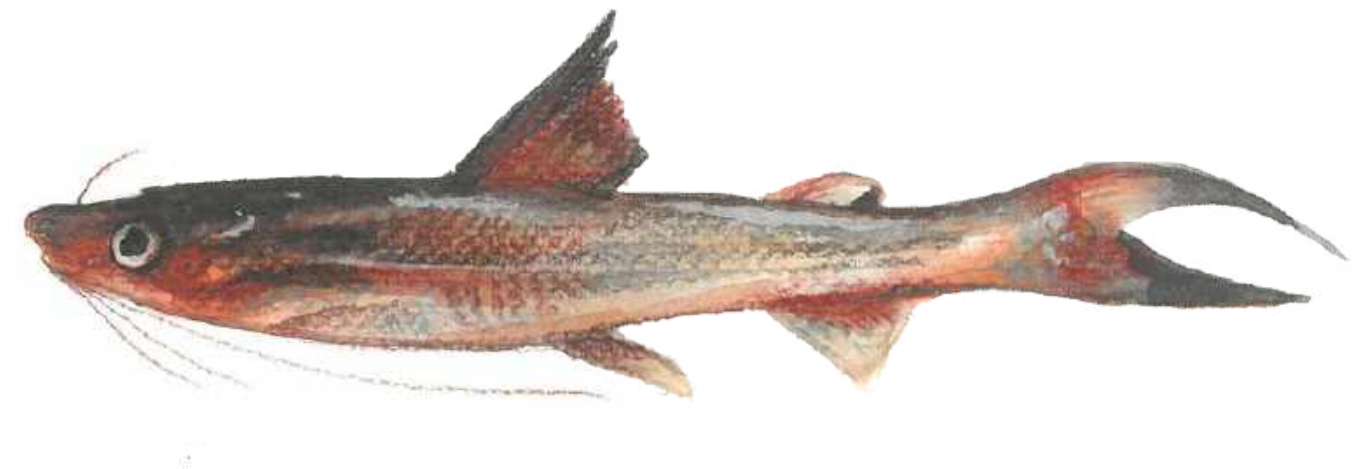
Least concern (IUCN).
Threats include habitat loss, overfishing, & pollution.

Least Concern (LC)

আঁৰি (Giant River-Catfish)

Scientific Name: *Sperata seenghala;* Family: Bagridae

Vernacular Name: **Assamese-** *Aor, Aree* | **Bengali-** *Arr-tengara, Guji* | **Dimasa:** *Nah-gagol.*



Description:

Body elongate, compressed towards caudal. Head elongate and depressed with a spatula-like broad snout. Mouth subterminal. Barbels in 4 pairs: maxillary barbels extend posteriorly to pelvic fins or beyond anal fin. Dorsal spine weakly serrated on its posterior edge; adipose fin base present but short, about as long as the rayed dorsal-fin base. Caudal fin deeply forked with a longer, curved upper lobe. Colour is brownish-grey on back that turns silvery on flanks and whitish on belly. A dark well-defined spot on the posterior end of base adipose dorsal fin. Fins with dark greyish to blackish rays. Attains a length of up to 150 cm.

Habitat & Ecology:

Inhabits large rivers, streams and beels. Benthopelagic and predatory on smaller fishes, molluscs and crustacea. Nocturnal.

Economic Importance:

The species has a high demand as food fish. Also, a potential ornamental fish.

Distribution:

NE India: Brahmaputra and Barak drainage.

Conservation Status & Threats:

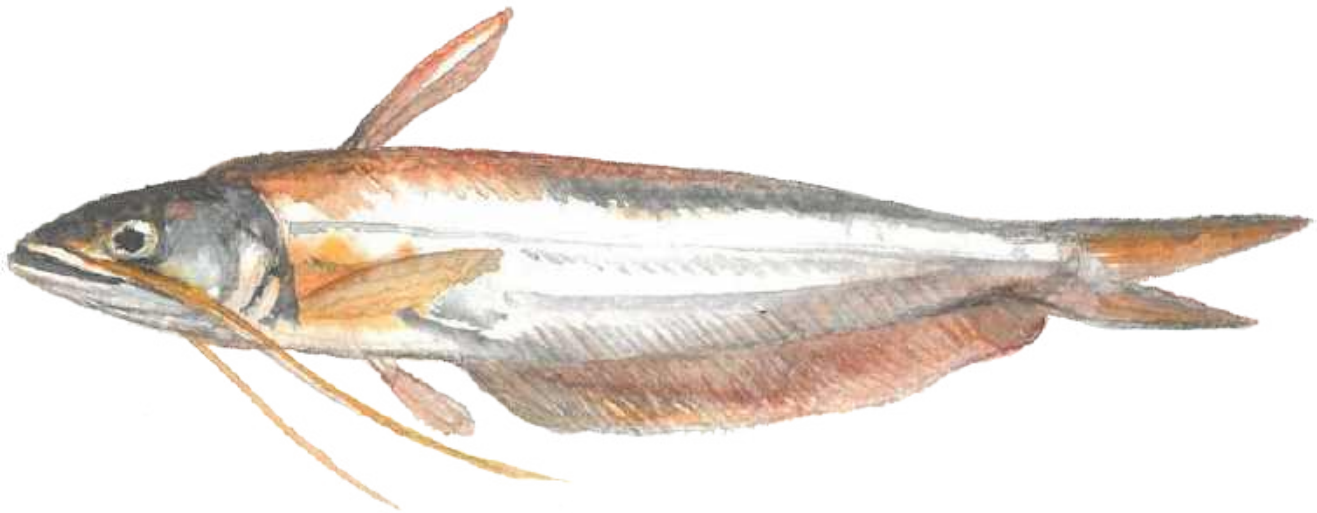
Least concern (IUCN). Threats include habitat loss due to pollution, and overfishing for its high market demand.

Least Concern (LC)

বৰালি (Wallago)

Scientific Name: *Wallago attu;* Family: Siluridae

Vernacular Name: Assamese- *Borali* | **Bengali-** *Boal.*



Description:

Elongated body is laterally compressed. Eyes are small. Mouth wide, its gape extends posteriorly to beyond eyes. Barbels are two pairs; among them, maxillary pair is long and extend posteriorly to well beyond origin of anal fin and the mandibular pair is much shorter, about as long as snout. Dorsal fin is short. Pectoral spine is weak. Caudal fin is deeply forked. Body colour greyish or yellowish grey in above and whitish in below but the fins grey. Attains a length of 1.5 meter.

Habitat & Ecology:

Found in large rivers, lakes and tanks. A large, voracious and predatory catfish that thrives in beels with grassy margins; mostly hides under holes in river banks and canals.

Economic Importance:

A highly preferred food fish.

Distribution:

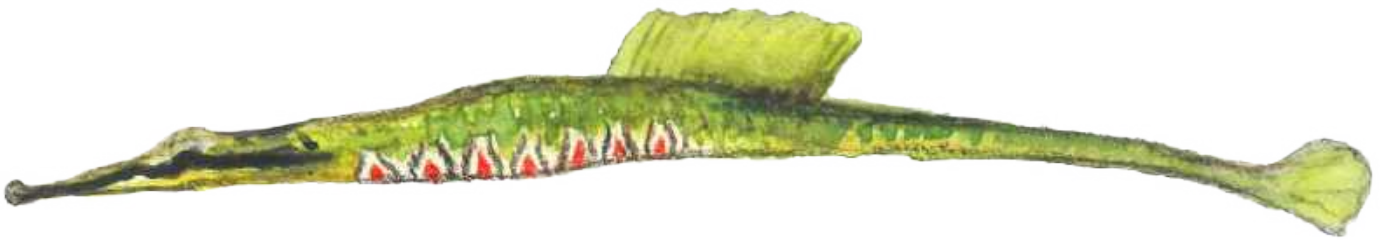
NE India: Brahmaputra & Barak drainage system.

Conservation Status & Threats:

Vulnerable (IUCN). Threats include habitat loss, & overfishing.

Vulnerable (VU)

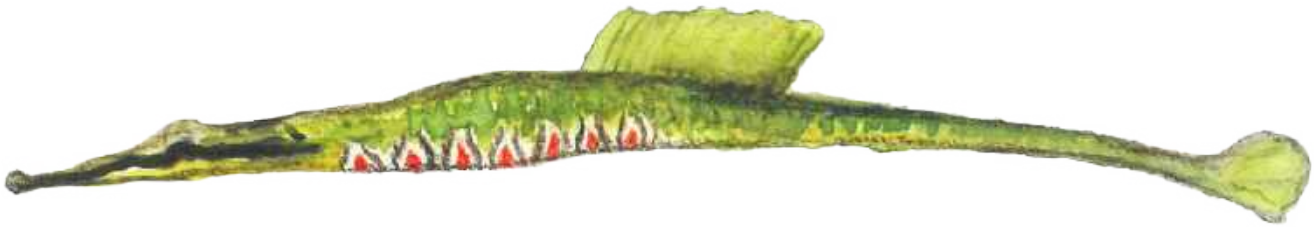
FRESHWATER PIPEFISHES



ঘৰিয়ালৰ কাণ ছিঙা (Deocata Pipefish)

Scientific Name: *Microphis deocata;* **Family:** Syngnathidae

Vernacular Name: Assamese- *Ghorialor Kan singa.*



Description:

Body elongates and sub-cylindrical with small and terminal mouth. Abdomen rounded. Trunk region heptagonal, tail tetragonal. Snout relatively slender. Barbels absent. Anal fin minute. Colour generally brown in males; females with bright red under the lateral line and dotted with blue, vertically banded with darker stripes edged with blue, at the upper end of each dark stripe is a white dot or angular mark. Attains a length of up to 20 cm.

Habitat & Ecology:

Males carry the eggs in a brood pouch situated under the abdomen. Feeds on micro-invertebrates. Found in small rivers and streams among aquatic plants.

Economic Importance:

The species is believed to have medicinal value by local fisherfolk. It has a high demand as an important ornamental fish.

Distribution:

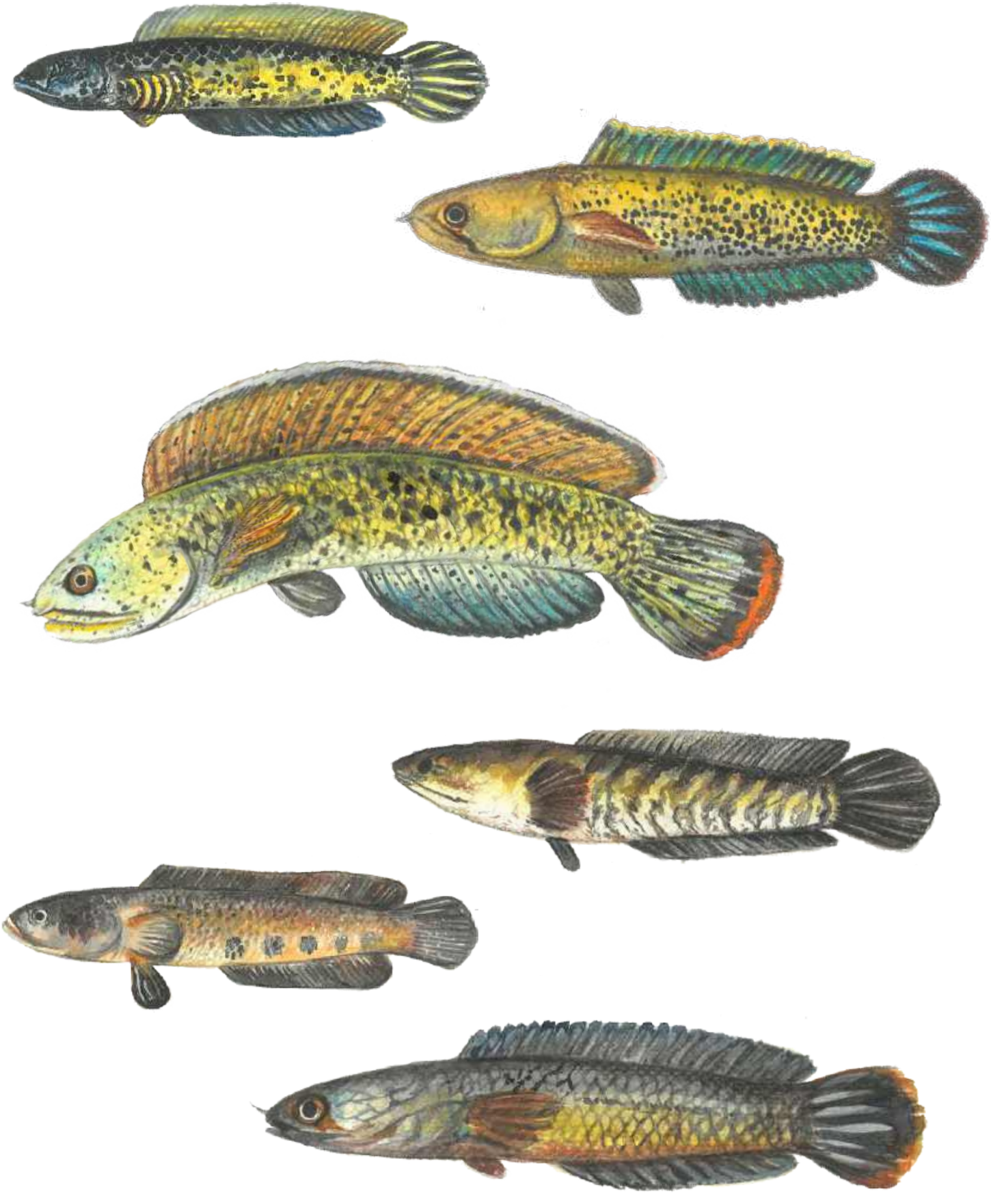
NE India: Brahmaputra drainage along Assam-Bhutan and Assam-Meghalaya borders.

Conservation Status & Threats:

Near threatened (IUCN). Major threats include illegal trading for its ornamental value; and habitat loss due to sand mining and pollution.

Near Threatened (NT)

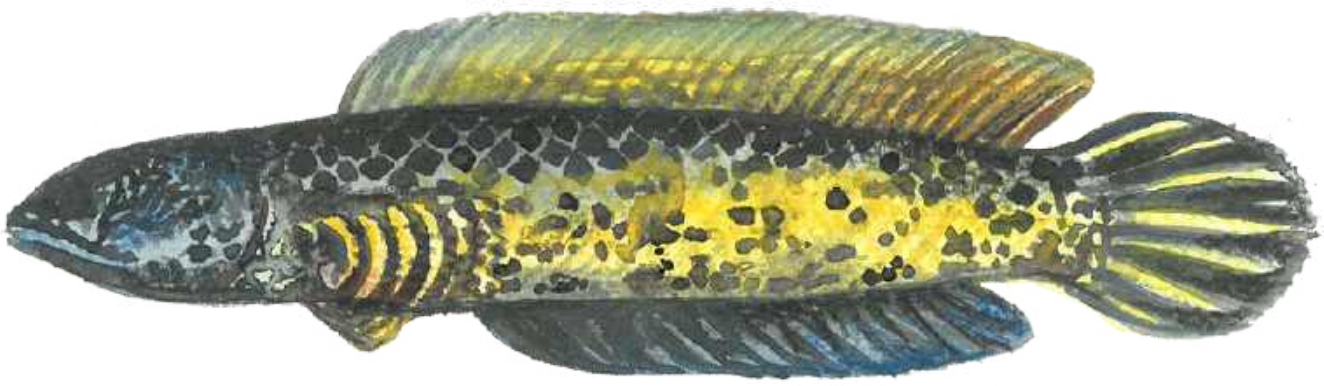
SNAKEHEADS



নাগা চেং (Goldspotted Snakehead)

Scientific Name: *Channa aurantimaculata;* Family: Channidae

Vernacular Name: Assamese- *Naga seng.*



Description:

Body elongated, cylindrical anteriorly, compressed towards caudal. Head depressed with terminal, wide mouth is wide, terminal; jaws having caniniform teeth. Caudal fin is round. Dorsal and anal fins occupy more than three-fourths of body length; height of both fins almost equal to depth of body. Body dark greyish-brown to black dorsally, continuing on sides to form 7-8 wedge-shaped oblique bands alternating with golden yellow scales. Black spots in rows on sides further below the lateral line and ventrally. Head and operculum with large dark brown scales with bluish edges appearing as large spots. Pectoral fin yellowish with 5 vivid, broad black bands with a black blotch at the base. Dorsal and caudal fins with yellowish inter-radial membranes and dark brown rays and provided with rows of dark spots and bands. Anal fin with bluish inter-radial membranes, dark brown rays and rows of dark blackish spots. Attains a length of up to 40 cm.

Habitat & Ecology:

Inhabits clear lakes and streams in direct association with large rivers among dense vegetation. Prefers a muddy to sandy substrate. Also recorded from hillstreams in foothill areas. Carnivore; feeding primarily on crustacea, insect and small fishes.

Economic Importance:

Has good demand as food fish. Also, a potential ornamental fish.

Distribution:

NE India: Restricted to foothill areas of Meghalaya, Nagaland, Indo-Bhutan border and floodplains of Upper Assam of the Brahmaputra drainage.

Conservation Status & Threats:

Data Deficient (IUCN). Threats include habitat loss due to pollution, overfishing, and illegal trade for its high ornamental value.

Data Deficient (DD)

বার্কা চেং (Barca Snakehead)

Scientific Name: *Channa barca;* Family: Channidae

Vernacular Name: Assamese- *Barka cheng, Cheng garaka, Garaka cheng* | **Bengali-** *Tila shol, Pipia, Tila, Bakka-lati, peepli shol.*

Description:

Body elongated and rounded. Mouth terminal, wide, reaching beyond eyes. caniniform teeth present. Caudal fin rounded. Dorsal and anal fin occupy more than 3/4th of the body length. Display considerable changes in colour pattern while growing. Dorsal side of the fish is dark brown while the ventral side is creamy. Body is overlaid by numerous spots of small to moderate sizes, dorsal and caudal fin bearing numerous spots and anal fin bearing spots near the base of the body. Amber to reddish colour at the tip of the dorsal, caudal, pectoral and pelvic fin. Attains a length of up to 100 cm.

Habitat & Ecology:

Inhabitants of riverside floodplain areas, beels. Hides in burrows of inundating swamp, benthopelagic. Prefers live food as crustaceans, amphibians and small fishes.

Economic importance:

The fish has a very high demand as an ornamental fish in the international market. Besides, an excellent food fish, delicious to taste.

Distribution:

NE India: Considered endemic to specific pockets of Assam (Brahmaputra River system); reported from Meghalaya, and West Bengal.

Conservation Status & Threats:

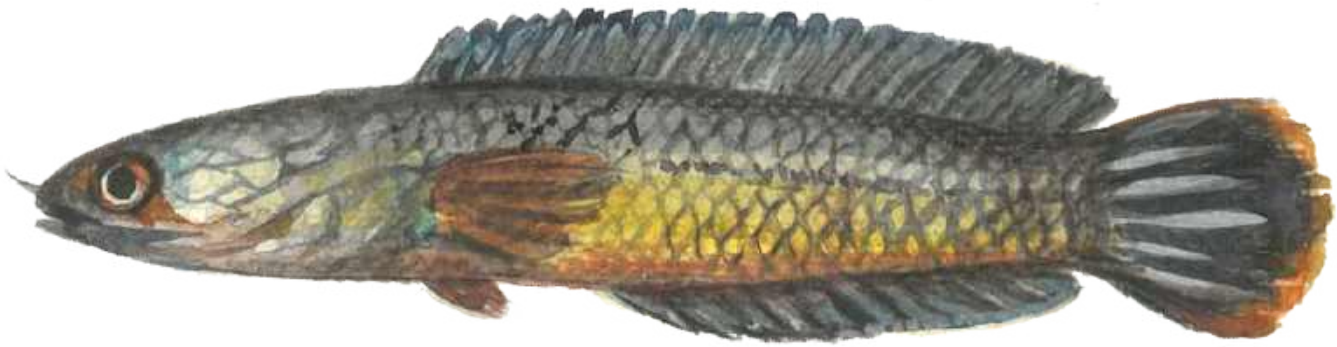
Data Deficient (IUCN). Scheduled II (Wildlife Protection Act). Rampant illegal trade and overfishing due to its high ornamental value is a serious threat to the species.

Data Deficient (DD)

চেঙেলী (Dwarf Snakehead)

Scientific Name: *Channa gachua;* Family: Channidae

Vernacular Name: Assamese- *Sengeli, Taki, Sen* | **Bengali-** *Cheng.*



Description:

Body elongated, cylindrical anteriorly, tapering towards posterior. Head depressed with wide terminal mouth. Jaws with caniniform teeth. Scales are cycloid on head. Caudal fin round. Body greyish black to brown dorsolaterally, pale cream ventrally; bluish ventrally in males. Dorsal, anal and caudal fins with white margins; sometimes reddish in males. Eye spot present in juveniles near on the posteriormost end of dorsal-fin base near the caudal-fin base. Attains a length of about 28 cm.

Habitat & Ecology:

Inhabits lentic water bodies and sluggish-flowing canals as well as derelict ponds and paddy fields. Carnivore; feeds on small fish, insects and crustaceans. Exhibit parental care, with the male brooding eggs and fry in his mouth.

Economic Importance:

It has high demand both as food fish and ornamental fish.

Distribution:

NE India: Floodplain areas of Brahmaputra and Barak River drainages in all NE states.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss due to pollution and sand mining, and overfishing.

Least Concern (LC)

শাল (Great Snakehead)

Scientific Name: *Channa marulius;* Family: Channidae

Vernacular Name: Assamese- *Xaal, Sal* | **Bengali-** *Gajal, Gajar, Sal* | **Manipuri-** *Ngamuporom* | **Nepali-** *Sora, sol.*

Description:

Body elongate, cylindrical anteriorly, tapering towards posterior. Snout pointed wide mouth with thick lips and jaws bearing sharp caniniform teeth. Eyes large situated on dorsolateral half of head. Dorsal and anal fins occupy more than three-fourths of body length. A distinctive orange ocellus near the caudal peduncle. Body dark brown to black dorso-laterally turning coppery brown or pale brownish ventrally. A series of dark blotches along the sides, outlined by a row of white scales, appear as eye spots in juveniles. Juveniles with a bluish stripe along the sides of body. Attains a length of about 150-180 cm.

Habitat & Ecology:

Inhabits larger rivers, lakes, canals, and swamps where it is often associated with aquatic vegetation. Carnivorous; predating on smaller fishes, amphibians and insects.

Economic Importance:

It has high demand both as food fish and ornamental fish.

Distribution:

NE India: Brahmaputra and Barak River drainages of all NE states.

Conservation Status & Threats:

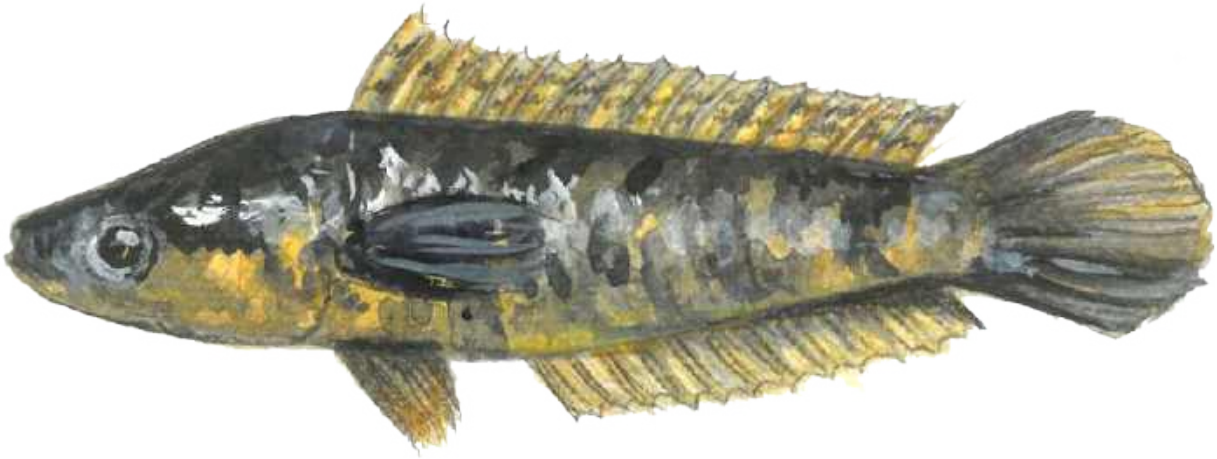
Least Concern (IUCN). Threats include habitat loss, overfishing, & illegal trade for ornamental value.

Least Concern (LC)

গৰৈ (Spotted Snakehead)

Scientific Name: *Channa punctata;* Family: Channidae

Vernacular Name: Assamese- *Goroi.*



Description:

Body elongated, cylindrical on the anterior half, compressed towards caudal end. Eyes located on anterior part of head. Mouth terminal; jaws wide with thick lips bearing minute caniniform teeth. Scales large on head. Dorsal and anal fins extend through more than three-fourths of body length. Caudal fin round. Body usually yellowish to light brown on sides, darker greyish brown to coffee on back; creamy yellow below. A series of about 8-9 vertical bands above lateral line, alternating with a similar series below it. Numerous black spots, blotches, short stripes and bars mottled across body, dorsal, anal and caudal fins. Dorsal, anal and caudal fins are dark grey. Attains a length of up to 15 cm.

Habitat & Ecology:

Inhabits mostly shallow lentic waterbodies such as derelict ponds, swamps, ditches and beels. Carnivorous; feed on worms, insects and small fish.

Economic Importance:

Good demand as food fish. Also, a potential ornamental fish.

Distribution:

NE India: All NE states.

Conservation Status & Threats:

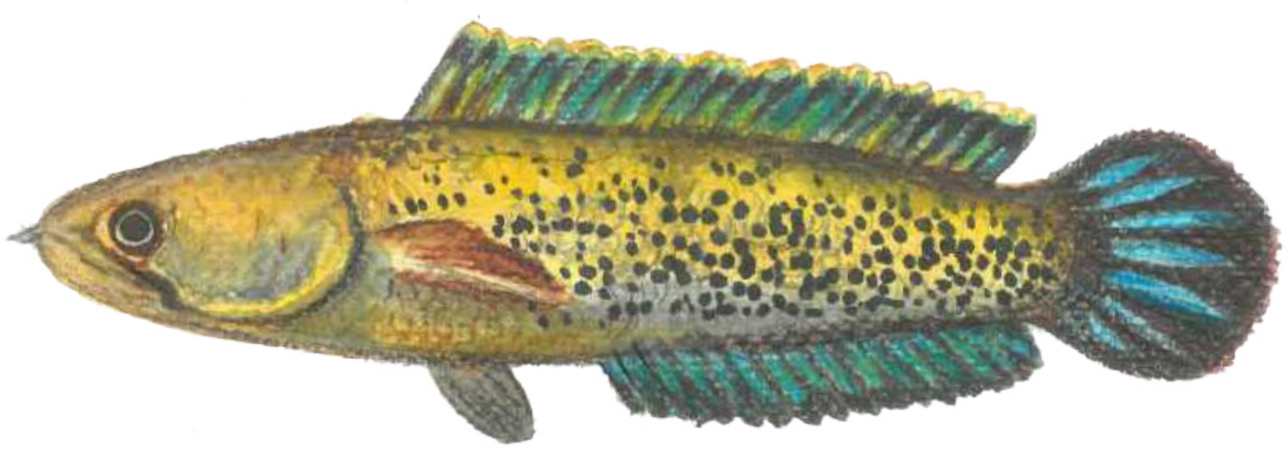
Least concern (IUCN). Major threats include habitat loss and overfishing.

Least Concern (LC)

চেঙা/ চেঙেলী (Assamese Snakehead)

Scientific Name: *Channa stewartii;* Family: Channidae

Vernacular Name: Assamese- *Seng, Sengeli, Senga* | **Bengali-** *Cheng.*



Description:

Body elongate, cylindrical anteriorly, compressed towards the caudal fin. Mouth is wide, terminal. Jaws have caniniform teeth. Head depressed with large cycloid scales. Long dorsal and anal fin occupying more than three-fourths of the length of the body. Caudal fin round. Lateral line complete but broken. Body dark grey to brownish dorsally fading to lighter brown on sides and cream on belly. Numerous black spots on the lateral scales that often aggregate to form oblique bars on back. Pectoral, pelvic fins brown. Dorsal, anal and caudal fins with dark rays and bluish green inter-radial membranes; distal margin of dorsal dusky brown; each fin having a whitish to reddish margin. Attains a length of up to 30 cm.

Habitat & Ecology:

Inhabits both lotic and lentic waters in shallow areas with dense vegetation. Usually prefers to stay in burrows or hide among vegetation. Carnivorous; primarily feeding on insects, larvae, crustaceans, small fishes, and even small amphibians during their breeding season.

Economic Importance:

It has high demand both as food fish and ornamental fish.

Distribution:

NE India: Floodplain and foothills of Brahmaputra and Barak drainages.

Conservation Status & Threats:

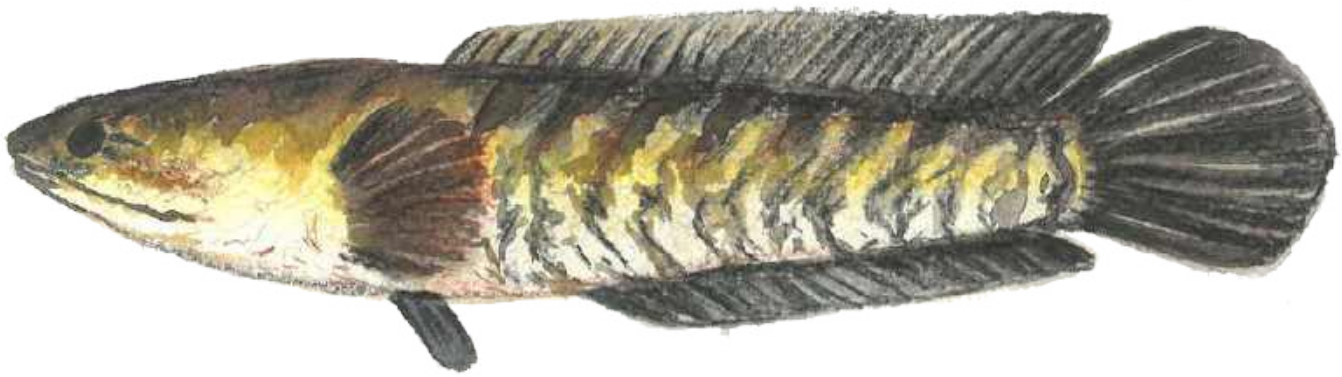
Least Concern (IUCN). Threats include habitat loss, overfishing and illegal trade for its high ornamental value.

Least Concern (LC)

শ'ল (Striped Snakehead)

Scientific Name: *Channa striata;* Family: Channidae

Vernacular Name: Assamese- *Sol Mach* | **Bengali-** *Shol.*



Description:

Body elongated, cylindrical with depressed head. Eyes moderate. Caudal rounded. Large scales on head. 50-60 scales in lateral series. Body color gray-green to black-green above; pale or yellow on sides and white below. Dorsal and anal fins are darker in color and with dark patches. Caudal also dark and with two vertical bands on its base. Paired fins are pale. Attains a length up to 70 cm.

Habitat & Ecology:

Inhabits freshwater ponds, streams and tanks of plains; prefers stagnant muddy water and grassy tanks. Muddy, weedy and shallow streams, rivers, rivulets, depressions, beels and ditches are its suitable habitats. Can tolerate slightly brackish waters.

Economic Importance:

The species has high demand as food fish. Also having ornamental value in the international market.

Distribution:

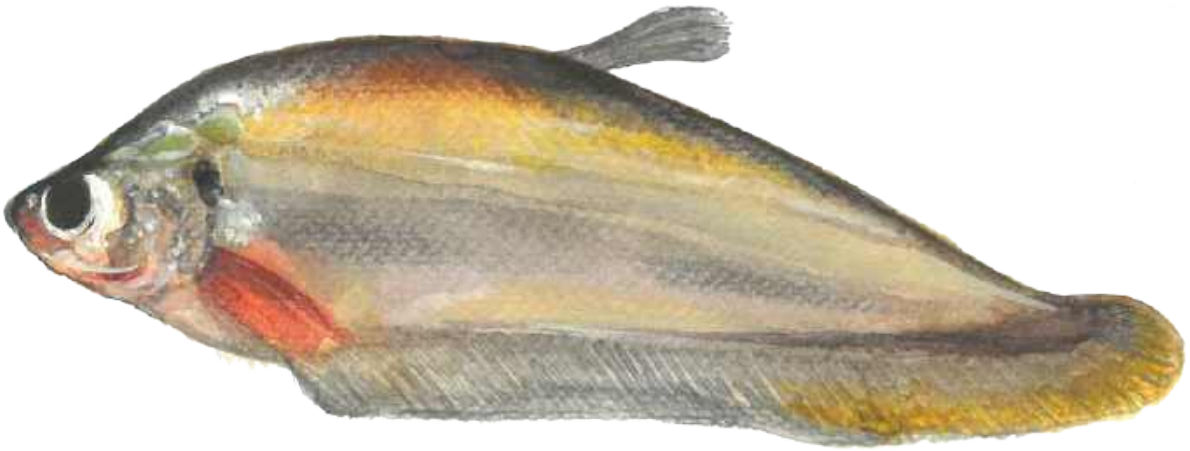
NE India: Brahmaputra & Barak drainage system.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, overfishing, & pollution.

Least Concern (LC)

FEATHERBACKS



চিতল (Clown Knifefish)

Scientific Name: *Chitala chitala;* Family: Notopteridae

Vernacular Name: Assamese- *Chital, Kandla* | **Bengali-** *Chital, Chithal* | **Manipuri-** *Seetul.*

Description:

Body elongated, Body strongly compressed. Head small, its dorsal profile concave. Snout pointed, mouth sub-terminal, oblique. Prominent hump on back separates head and body. Dorsal fin short. Anal fin occupies more than three-fourths of body length and conjoint with caudal fin. Pelvic fin rudimentary. Whole body and head are covered with numerous small sized scales. Body dark grey dorsally that turns silvery white on sides and belly, with series of golden or silvery bars along the back. Additionally, small, indistinct, non-ocellated dark spots along the base of anal-fin near caudal region. Attains a length of up to 150 cm.

Habitat & Ecology:

Inhabits clear standing waters, rivers and streams, and derelict ponds as well as paddy fields. Bottom-dweller; mostly feeding on insect larvae and algae.

Economic Importance:

Good food value as well as demanded in the ornamental fish market.

Distribution:

NE India: All the N.E. states.

Conservation Status & Threats:

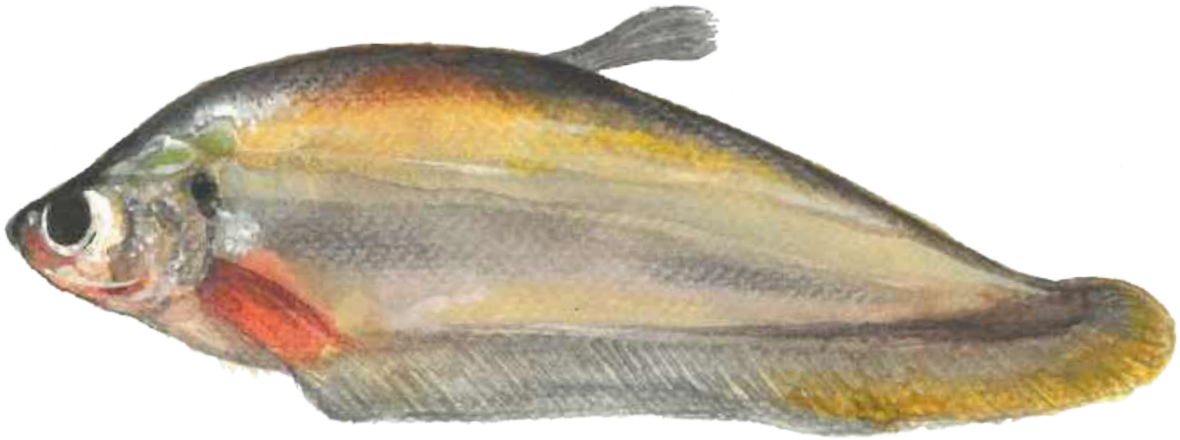
Near Threatened (IUCN). Threats include overfishing, habitat loss, and pollution.

Near Threatened (NT)

কান্ধুলি (Bronze Featherback)

Scientific Name: *Notopterus notopterus;* Family: Notopteridae

Vernacular Name: Assamese- *Kandhuli* | **Bengali:** *Foli, Kangla.*



Description:

Body strongly compressed; its dorsal and ventral profiles almost equally convex. Scales minute. Dorsal fin short. Anal fin occupies more than three-fourths of body length and confluent with caudal fin. Pelvic fin rudimentary. Snout conical and pointed laterally. Mouth sub-terminal with sharp jaws. Body pale bronze to evenly brown with darker head dorsally; turning slivery white on sides and belly. Fins with dark brown fin rays. Attains a length of up to 60 cm.

Habitat & Ecology:

Found in clear streams, floodplain wetlands, ponds and canals. Carnivore; primarily feed on crustaceans, insects and molluscs.

Economic Importance:

Good demand as food fish. Also, a potential ornamental fish.

Distribution:

NE India: All NE states.

Conservation Status & Threats:

Least concern (IUCN). Major threats include overfishing, habitat loss, & pollution, etc.

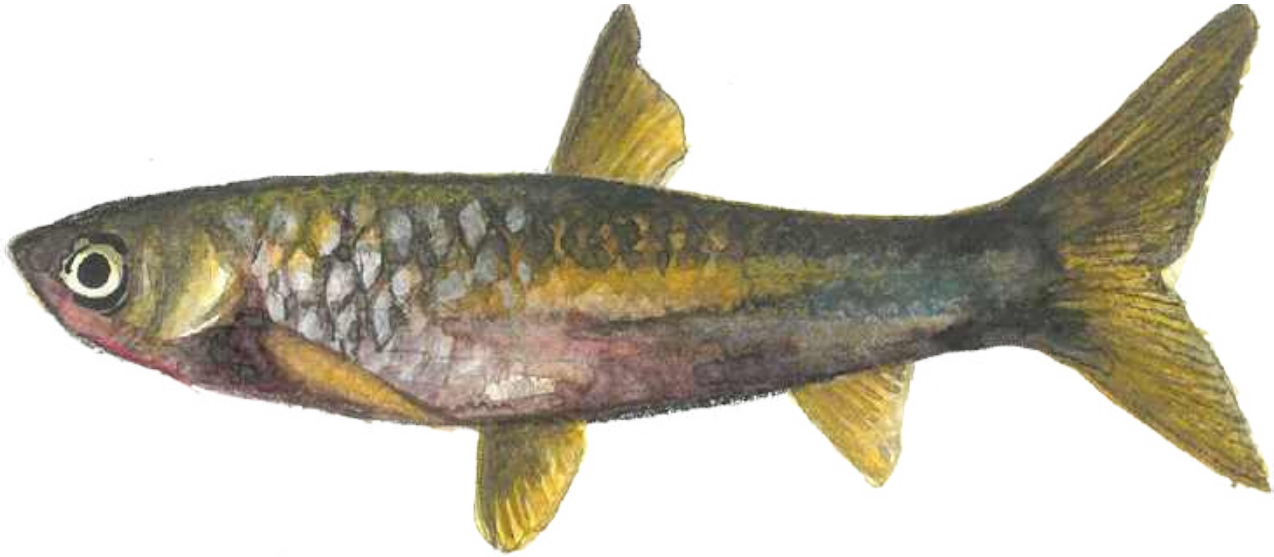
Least Concern (LC)

BARBS & HILL BARBS

এলেং (Bengala Barb)

Scientific Name: *Bengala elanga;* Family: Cyprinidae

Vernacular Name: Assamese- *Elang* | **Bengali-** *Along.*



Description:

Body elongated, moderately compressed. Mouth superior with well-defined jaw prominences and emargination. Single pair of short rostral barbels. Scales cycloid, moderate. Lateral line complete. Caudal forked, pectoral length is equal to head length. Body colour silvery, sometimes with bronze stripe along upper portion of each side. Attains a length of 21 cm.

Habitat & Ecology:

Found in the middle and lower reaches of rivers and ponds. Also recorded from rice paddy in monsoons. Insectivore; also feed on plankton.

Economic Importance:

Preferred as food fish.

Distribution:

NE India: Brahmaputra drainage in Upper Assam.

Conservation Status & Threats:

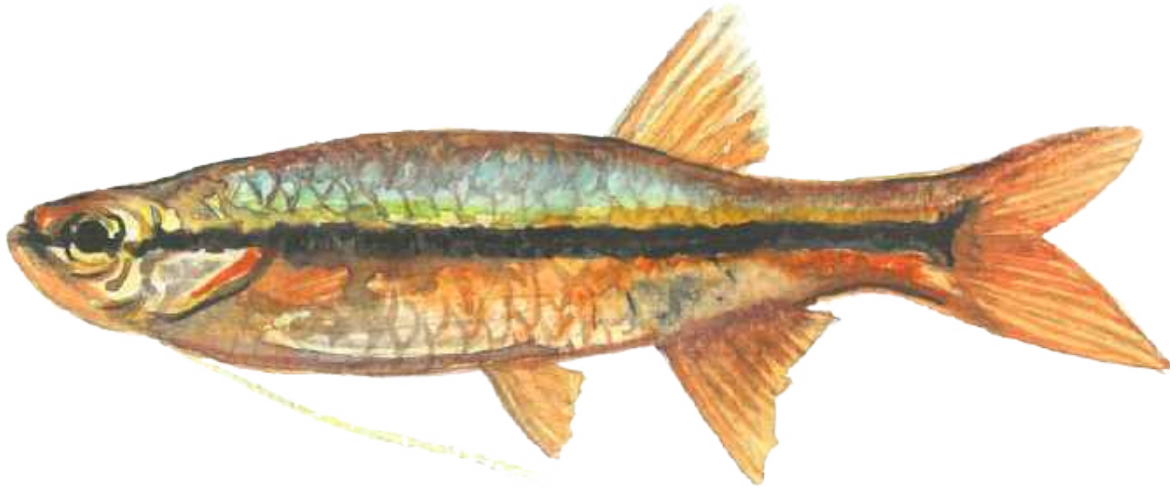
Least concern (IUCN). Threats include habitat loss due to pollution, and overfishing.

Least Concern (LC)

দৰিকণা (Flying Barb)

Scientific Name: *Esomus danrica;* Family: Danionidae

Vernacular Name: Assamese- *Dorikana, Dorkina* | **Bengali-** *Dadhikha, Danrika, Jongia.*



Description:

Body moderately compressed, elongated. Mouth superior with two pairs of barbels; maxillary barbels are extremely long and usually extend to about middle of body; rostral barbels are short and fleshy. Lower jaw is longer. Pectoral fin wide and long with first simple ray extending beyond pelvic-fin base. Lateral line incomplete. Dorsal fin positioned on the posterior half of body. Anal-fin origin below the posterior base of dorsal. Outer ray of pelvic elongated. Colour olive-green to grey-green dorsally turning lighter with a pearly iridescence and sprinkled with fine dots; flanks silvery to faint reddish; belly silvery white; a broad dark lateral stripe from mouth to base of caudal fin (in juveniles bordered dorsally by a fine gold stripe), the dark band broadens out on caudal peduncle to form a striking dark brown triangular blotch (often only faintly indicated). Pelvic and caudal fins reddish in males, pale amber in females. Other fins hyaline.

Habitat & Ecology:

Inhabits ponds, streams, floodplain wetlands as well as inundated paddy fields.

Economic Importance:

Good demand as food and ornamental fish.

Distribution:

NE India: All waterbodies of NE states.

Conservation Status & Threats:

Least concern (IUCN). Major threats include habitat loss, and overfishing.

Least Concern (LC)

ব'কা (Copper Mahseer)

Scientific Name: *Neolissochilus hexagonolepis;* Family: Cyprinidae

Vernacular Name: Assamese- *Boka, Bokar, Boolooah, Katli, Xilghoria* | Bengali- *Bulak, Bhorkhol* | Khasi (Meghalaya)- *Khabaw* | Noete (Arunachal Pradesh)- *Ngasa,* Nishing (Arunachal Pradesh)- *Ngoge* | Manipuri- *Ngara.*

Description:

Body deep anteriorly, trunk and peduncle smoothly tapering from anterior to posterior. Head broad. Barbels two pairs. Caudal fin deeply forked. Colour leaden tinges along the upper portion of the body, becoming dull while shot with gold on the sides and beneath, edges of scales darkest. Fins yellow, with dark band having a lighter outer edge along the upper and lower edge of the caudal fin. Attains a length of up to 180 cm.

Habitat & Ecology:

Adults occur in fast flowing streams and rivers with rocky bottoms, mainly in the middle of streams. Omnivorous. Adults feed mainly on filamentous green algae, less on chironomid larvae, crustaceans and water beetles. They migrate upstream during the breeding season where spawning takes place on stones and gravel.

Economic Importance:

The fish is considered delicious, and the market demand is very high. The species is also a commercially important game fish.

Distribution:

NE India: All the NE states. Eastern Himalayas.

Conservation Status & Threats:

Near Threatened (IUCN). Threats include habitat loss, pollution, & overfishing.

Near Threatened (NT)

পুঠি (Highfin Barb)

Scientific Name: *Oreichthys crenuchoides;* Family: Cyprinidae

Vernacular Name: N.A

Description:

Body and face are more rounded. The last simple dorsal ray is flexible and smooth. Scale count is 23 in the lengthwise series and 7 in the transverse series. The tube-bearing scales of the lateral line are restricted to the first 6 or 7 scales anteriorly. The head is marked by numerous fine rows of pores, mostly in parallel groups on the snout, cheeks, interorbital space, and opercular bones. Barbels are absent. Black blotch at caudal fin base large. Anal fin without black spot or blotch. Attains a length of 3 cm.

Habitat & Ecology:

Occurs in clear streams and rivers.

Economic Importance:

The species has high demand as ornamental fish.

Distribution:

NE India: The species is restricted to Assam and West Bengal.

Conservation Status & Threats:

Data Deficient (IUCN). Threats include habitat loss, overfishing, & pollution.

Data Deficient (DD)

সেন্দুৰীপুঠি (Rosy Barb)

Scientific Name: *Pethia conchonius;* Family: Cyprinidae

Vernacular Name: Assamese- *Xenduri Puthi* | **Bengali-** *Kunchon-pungti* | **Manipuri-** *Phabou nga.*

Description:

Body deep and compressed laterally. Moderate mouth with no barbels and upper jaw slightly longer. Dorsal fin originates nearer to snout tip and its last unbranched ray osseous, moderately strong and serrated. Lateral line incomplete. Body dark grey to coppery black dorsally. Scales with black to brownish tinge in males; silvery white in females. A large black spot on the caudal half of flank posterior to the anal fin. Dorsal fin hyaline to dark grey; fins orange or greyish to hyaline; all fins except pectorals edged with black in males. Males turn dark cherry to copper brown in colour during the mating season while the slightly larger females become more luminous. Attains a length of up to 14 cm.

Habitat & Ecology:

Inhabits floodplain wetlands, ponds as well as streams.

Economic Importance:

High demand as an ornamental fish. Also sold as food fish in local markets.

Distribution:

NE India: Abundant in all the seven NE states.

Conservation Status & Threats:

Least concern (IUCN). Threats mainly include overfishing.

Least Concern (LC)

পুঠি (Spottedsail Barb)

Scientific Name: *Pethia phutunio;* Family: Cyprinidae

Vernacular Name: Assamese- *Puthi* | **Bengali-** *Shol.*

Description:

Body fairly deep and compressed, dorsal profile more convex than that of the abdomen, there being a considerable rise from the snout to the base of the dorsal fin. Barbels absent. It is a silvery fish, with three blotches on the body. An additional dark spot on the gill plate is not black, but translucent, exposing the pink of the gills. Fins are pale orange, slightly darker in the male. Sexes are difficult to recognize, except that the female has a fuller body. Attains a length of 4 cm.

Habitat & Ecology:

Inhabits occur in clear streams and rivers. Found in standing waters, over silt and mud. Feeds on worms, crustaceans, insects and plant matter.

Economic Importance:

The species has high demand as food fish. Also having ornamental value in the international market.

Distribution:

NE India: Brahmaputra & Barak drainage system.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, overfishing, & pollution.

Least Concern (LC)

পুঠি (Swamp Barb)

Scientific Name: *Puntius chola;* Family: Cyprinidae

Vernacular Name: Assamese- *Puthi* | **Nishing (Arunachal Pradesh)**- *Phen ngoi* | **Khasi (Meghalaya)**- *Shalynnai tungtab* | **Manipuri**- *Phabou nga.*

Description:

Deep and compressed body with less convex of its lower profile than upper. Terminal small mouth contains a pair of maxillary barbels. Dorsal fin inserted equidistant between snout and base of caudal. Colour silvery, opercle shot with gold and purple. A black blotch is located on the 21st and 23rd scales along the lateral line. Another blotch is located on the base of the dorsal fin, while a faint band is located along its middle portion. A scarlet red longitudinal band extends from the posterior end of the gill opening to the base of the caudal fin. Attains a length of up to 15 cm.

Habitat & Ecology:

Abundant in lotic and lentic waterbodies including streams, rivers, canals, beels, ponds as well as inundated paddy fields. Occurs mainly in shallow water. Feeds on worms, crustaceans, insects and plant matter.

Economic importance:

A highly popular and demanded food fish. Also, popular as an ornamental fish.

Distribution:

NE India: Assam, Meghalaya, Arunachal Pradesh, Manipur, Tripura.

Conservation Status & Threats:

Least concern (IUCN). Threats include overfishing, habitat loss, & pollution.

Least Concern (LC)

পুঠি মাছ (Spotfin Swamp Barb)

Scientific Name: *Puntius sophore;* Family: Cyprinidae

Vernacular Name: Assamese- *Puthi maas, Xendurdia puthi* | **Bengali-** *Punti* | **Manipuri-** *Phabounga.*

Description:

Body compressed, deep, moderately elongated. Dorsal profile more convex than ventral. Mouth small, terminal, slightly longer upper jaw. Barbels absent. Pelvic fins originate a little behind the origin of dorsal. Lateral line complete. Colour dull silvery, dark greyish along the back and each scale has a dark base formed by fine black dots. Dorsal, ventral and anal fins generally stained with black spots at their extremities. A black spot at the base of 3rd to 7th divided dorsal rays and blackish blotch at 23rd scale at base of caudal fin. Males develop a thick, brilliant red mid-lateral stripe during monsoon season. Attains a length of up to 13 cm.

Habitat & Ecology:

Adults inhabit rivers, streams and ponds in floodplains as well as submontane regions. Omnivore. A very plentiful shoaling fish.

Economic Importance:

Preferred as food fish. Demand as ornamental fish.

Distribution:

NE India: All the N. E. states except Nagaland.

Conservation Status & Threats:

Least concern (IUCN). Threats include overfishing, and habitat loss.

Least Concern (LC)

পুঠি (One Spot Barb)

Scientific Name: *Puntius terio;* Family: Cyprinidae

Vernacular Name: Assamese- *Puthi* | **Bengali-** *Teri-pungti.*

Description:

Body deep, compressed; dorsal profile more convex than ventral with considerable rise from snout to the base of dorsal fin. Barbels absent. Colour dark grey to greenish dorsally, turning silvery white and/or bronze laterally; each scale has a number of fine black spots most numerous at the anterior margin. A large black blotch on the 17th scale from which a fine dark line runs back to caudal-fin base. Fins golden to pale yellowish, margins black, the dorsal fin with a median band. Attains a length of 9 cm.

Habitat & Ecology:

Omnivore, feed mostly on detritus and insect larvae. Mostly recorded along the shallow muddy banks of floodplain wetlands and associated canals, ponds as well as inundated fields.

Economic Importance:

The species has both food as well as ornamental value.

Distribution:

NE India: Waterbodies of the Brahmaputra and Barak drainages.

Conservation Status & Threats:

Least concern (IUCN).

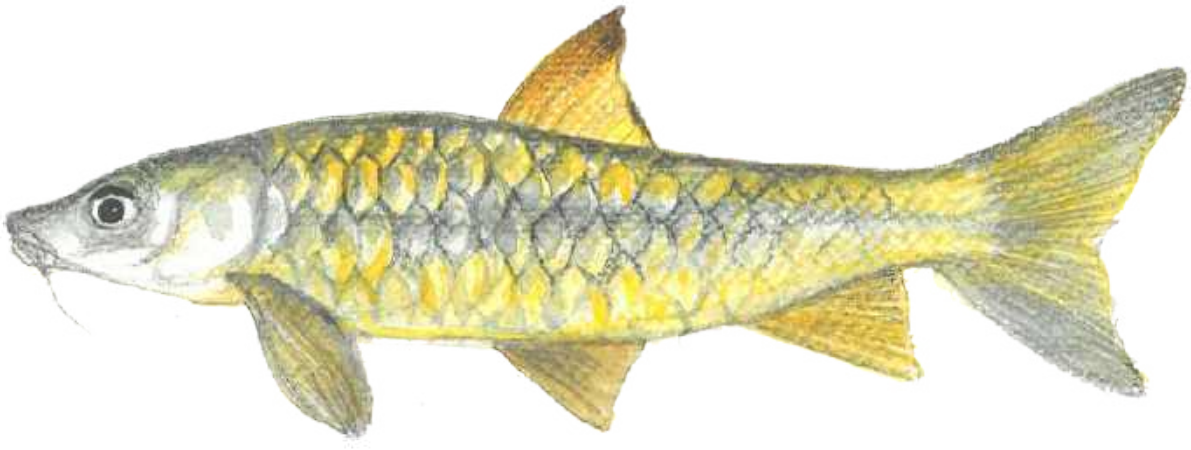
Threats including habitat loss, and pollution.

Least Concern (LC)

পিঠিয়া (Putitor Mahseer)

Scientific Name: *Tor putitora;* Family: Cyprinidae

Vernacular Name: Assamese- *Pithia, Peetia, Jongatora, Jongapithia* | **Bengali-** *Putitora, Khamahasur, Sahara* | **Manipuri-** *Ngara* | **Nishing (Arunachal Pradesh)-** *Ngauch* | **Nocte (Arunachal Pradesh)-** *Ngadi;* **Khasi (Meghalaya)-** *Khalat.*



Description:

Body elongated and both dorsal and ventral profiles are straight and somewhat compressed. Mouth small and upper jaw slightly longer than that of lower jaw. Lips thick and fleshy. Barbels two pairs. Colour of the side is greenish silvery. Belly silvery to white. Scale golden with dark base and formed of minute black spot. Anal, pelvic and pectoral fins reddish yellow in colour. Attains a length of upto 275 cm.

Habitat & Ecology:

Inhabit streams, riverine pools, and lakes. Found in rapid streams with rocky bottoms. Omnivorous, feeding on fish, zooplankton, dipteran larvae and plant matter. Ascend streams to breed over gravel and stones and return to perennial ponds after breeding. Spawning takes place during low phase of flood.

Economic Importance:

This is an excellent sport fish with high food value. Juveniles are also used as aquarium fish.

Distribution:

NE India: Assam, Meghalaya, Arunachal Pradesh, Tripura. All along the Himalayas.

Conservation Status & Threats:

Endangered (IUCN). Threats include habitat loss and degradation due to the large number of existing and planned hydropower projects in the Himalayan range. Overfishing and pollution are also big threats to the survival of the species.

Endangered (EN)

পিঠিয়া (Mahseer)

Scientific Name: *Tor tor;* Family: Cyprinidae

Vernacular Name: Assamese- *Jongatora, Pithia, Xeelghoria* | Bengali- *Mahasol* | Manipuri- *Ngara, Ngakreng* | Nishing (Arunachal Pradesh)- *Ngorika* | Nocte (Arunachal Pradesh)- *Ngarat* | Khasi (Meghalaya)- *Khamet.*

Description:

Body stout, elongated and compressed. Ventral profile is more arched than dorsal profile. Head comparatively smaller but pointed. Mouth inferior. Lips thick and fleshy, running at angles of mouth. Barbels two pairs. Scales large. Colour silvery or greenish dorsally, turning silvery on sides, often shot with gold, creamy-white ventrally. Lower fins reddish yellow. Attains a length of up to 200 cm.

Habitat & Ecology:

Inhabitants of hill streams with high water currents and rocky bottoms. Omnivore; but primarily feeds on crustaceans and smaller fishes.

Economic Importance:

High demanding food fish in local markets. A good game fish, usually profitable to the angler.

Distribution:

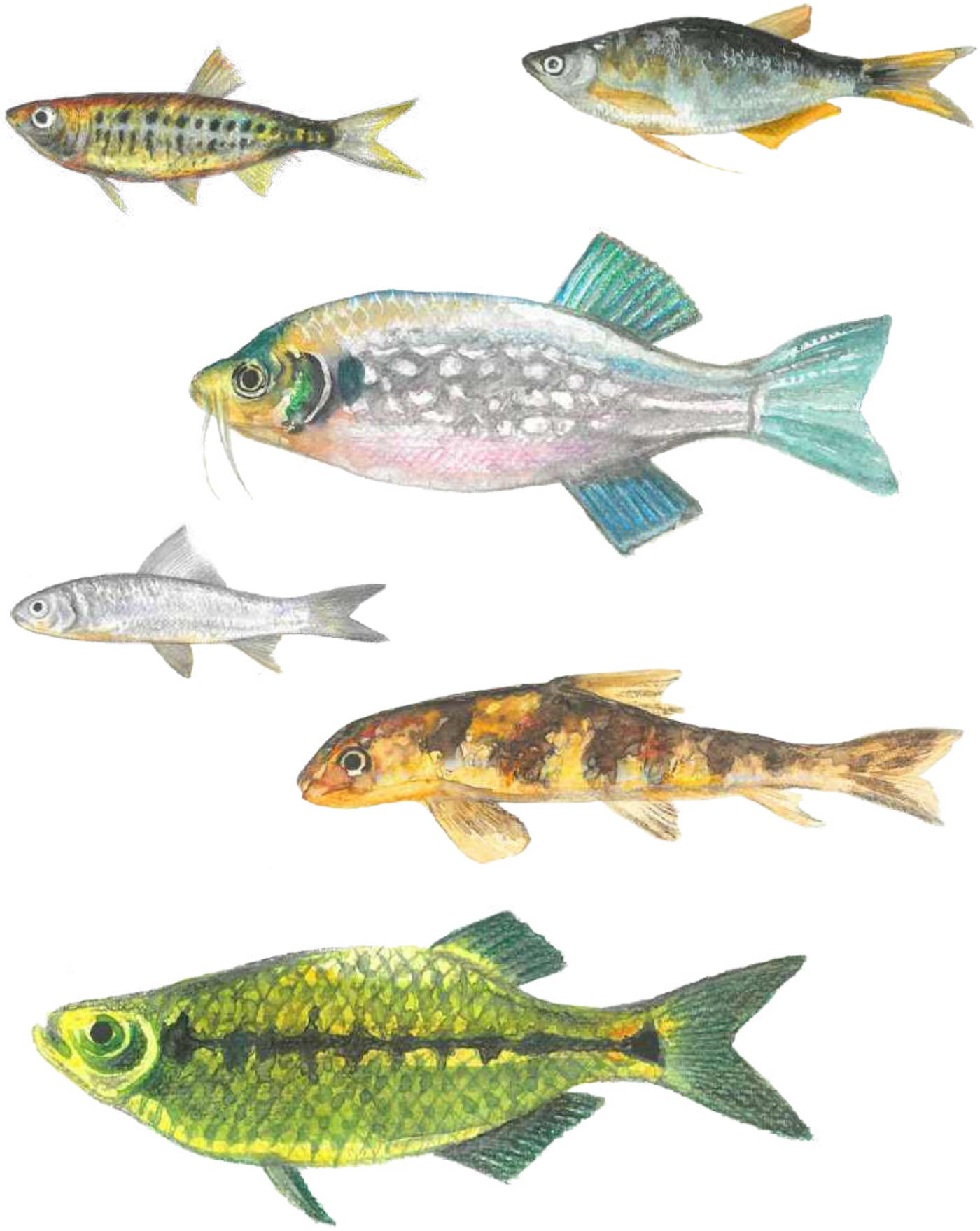
NE India: Hill streams associated with the Brahmaputra and Barak drainages.

Conservation Status & Threats:

Data Deficient (IUCN). Threats include habitat loss due to sand and boulder mining; and construction of dams.

Data Deficient (DD)

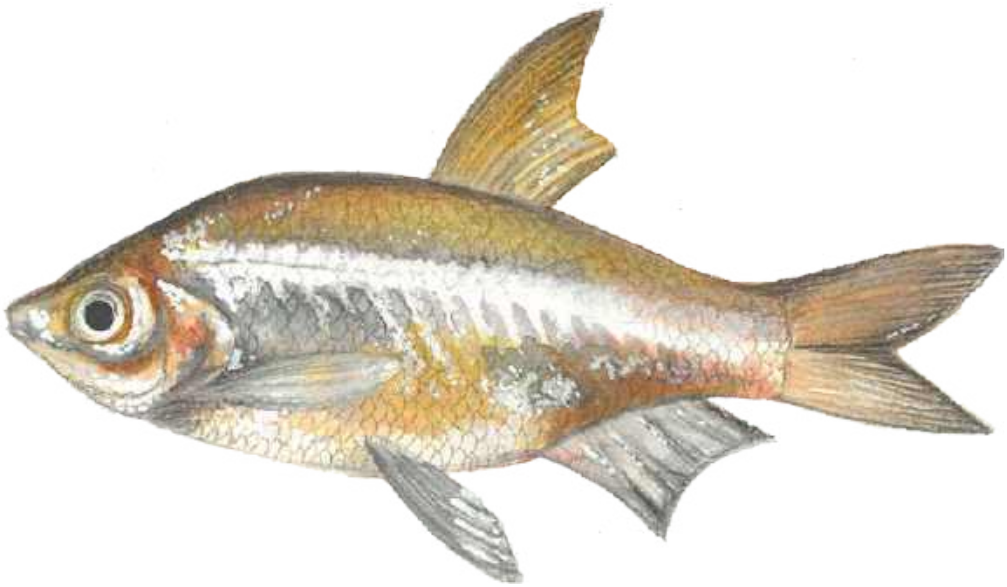
DANIOS, MINNOWS, BARILS & HILLSTREAM MINNOWS



মোৱা (Mola Carplet)

Scientific Name: *Amblypharyngodon mola;* Family: Danionidae

Vernacular Name: Assamese- *Moa.*



Description:

Body laterally compressed and dorsal profile is more convex than that of ventral. No barbels. Caudal fin deeply forked and lobes are pointed. Dark markings present in dorsal and anal fins. Body color light greenish on back and silvery at sides and beneath.

Habitat & Ecology:

Adults are found in ponds, canals, beels, slow-moving streams, nullahs and paddy fields.

Economic Importance:

The species is popular as food fish and preferred for its nutritious value and low price.

Distribution:

NE India: Brahmaputra & Barak drainage system.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, overfishing, & pollution.

Least Concern (LC)

কৰাং (Shacra Baril)

Scientific Name: *Opsarius shacra;* Family: Danionidae

Vernacular Name: Assamese- *Bola, Koksa, Korang, Boirela, Na-borna.*

Description:

Body elongate, compressed. Mouth terminal, moderate with two pairs of well-developed barbels. First 4 rays of pectoral fin enlarged. Body colour olive on back and silvery on flanks and belly with faint pinkish hue; overlayered by 12 vertical bars from back downward towards lateral line. A black band on upper portion of dorsal fin. Attains a length of 12 cm.

Habitat & Ecology:

Inhabits moderately flowing foothill streams with sand, mud, rocks and pebbles as substrates. Insectivore.

Economic Importance:

High local demand as food fish. Also, a potential ornamental fish.

Distribution:

NE India: Foothill areas of the Brahmaputra drainage.

Conservation Status & Threats:

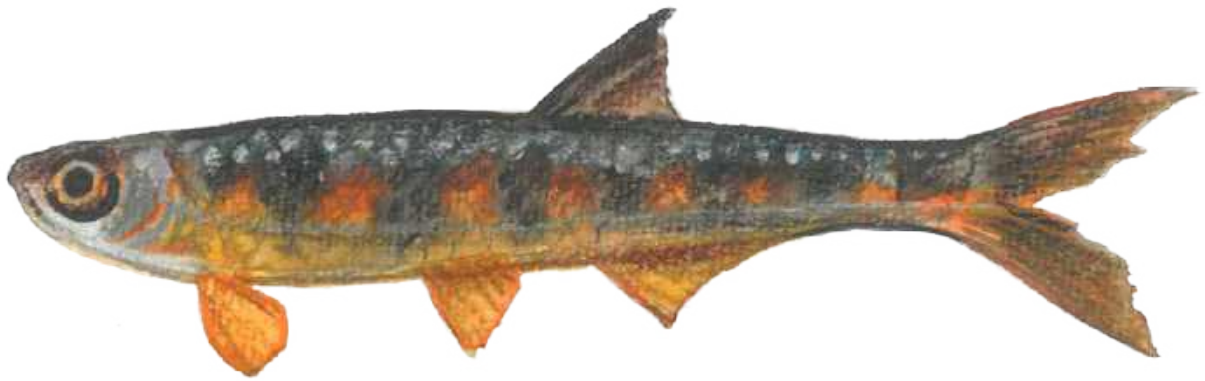
Least concern (IUCN). Threats include habitat loss due to pollution and mining; and use of destructive fishing gears like poisons, electrofishing, etc.

Least Concern (LC)

কৰাং (Vagra Baril)

Scientific Name: *Barilius vagra;* Family: Cyprinidae

Vernacular Name: Assamese- *Boroli, Boireli, Korang* | **Bengali**- *Korang, Khoksa.*



Description:

Body moderately compressed, elongate, its depth shallowest when compared to other barils. Mouth moderate, jaws long. Barbels two pairs. Pectoral slightly shorter than length of head; both pectoral and pelvic-fin with well-developed axillary scales. Caudal forked with equal lobes. Body dark greyish dorsally turning silvery white on sides and belly; marked with 13-18 prominent bluish-black bars usually above the lateral line. Fins hyaline or yellowish. Attains a length of up to 15 cm.

Habitat & Ecology:

Inhabits hill streams with a rocky bottom. Insectivore, feeding primarily on flies and insect larvae.

Economic Importance:

Consumed as food fish in locally markets. A highly potential ornamental fish.

Distribution:

NE India: Brahmaputra drainage in Assam, Arunachal Pradesh, Sikkim along the Himalayan foothills.

Conservation Status & Threats:

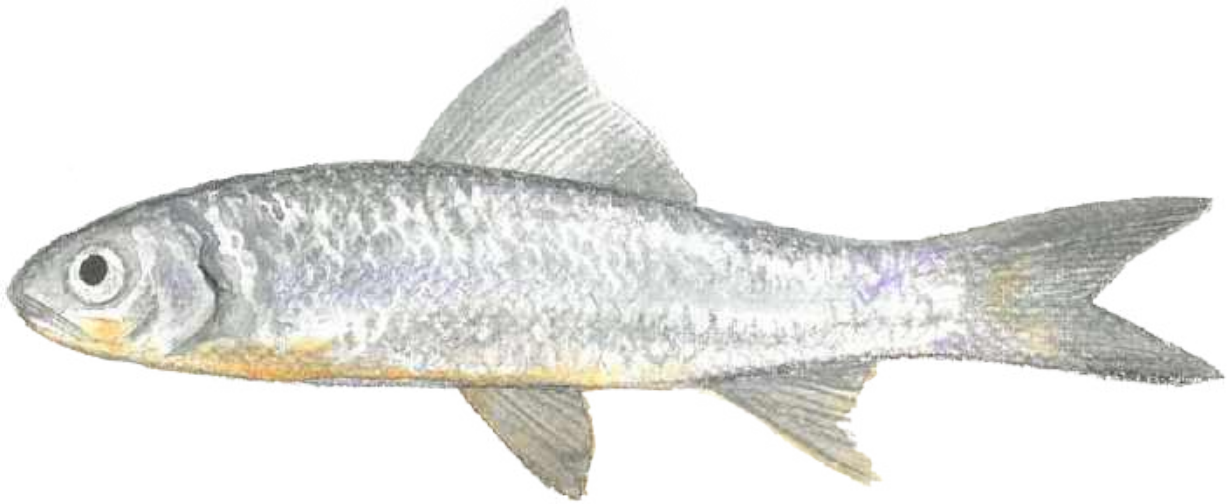
Least concern (IUCN). Threats include overfishing and habitat loss due to sand and boulder mining.

Least Concern (LC)

বৰিয়লা (Morari)

Scientific Name: *Cabdio morar;* Family: Danionidae

Vernacular Name: Assamese- *Boriola, Boirali* | **Bengali**- *Piyali.*



Description:

Body elongated and laterally compressed. The shape of the face is small and downward. The upper jaw is longer than the lower jaw. The lower jaw is crescent-shaped and sharp-edged. The pharyngeal teeth are located in three rows. The dorsal fin originates at the dorsal end well behind the root of the pelvic fin. Lateral lines present, curving downwards and extending to the lower part of the body. Body surface and sides dark brown, both sides and belly yellowish-silver. A bright curved line can be seen on the side. The color of the fins is dark yellow. Some parts of the surface, thorax and caudal fin are pink. Attains a length of 13 cm.

Habitat & Ecology:

Found in streams and ponds in plains and mountainous regions.

Economic Importance:

The species has high demand as food fish.

Distribution:

NE India: Brahmaputra & Barak drainage system.

Conservation Status & Threats:

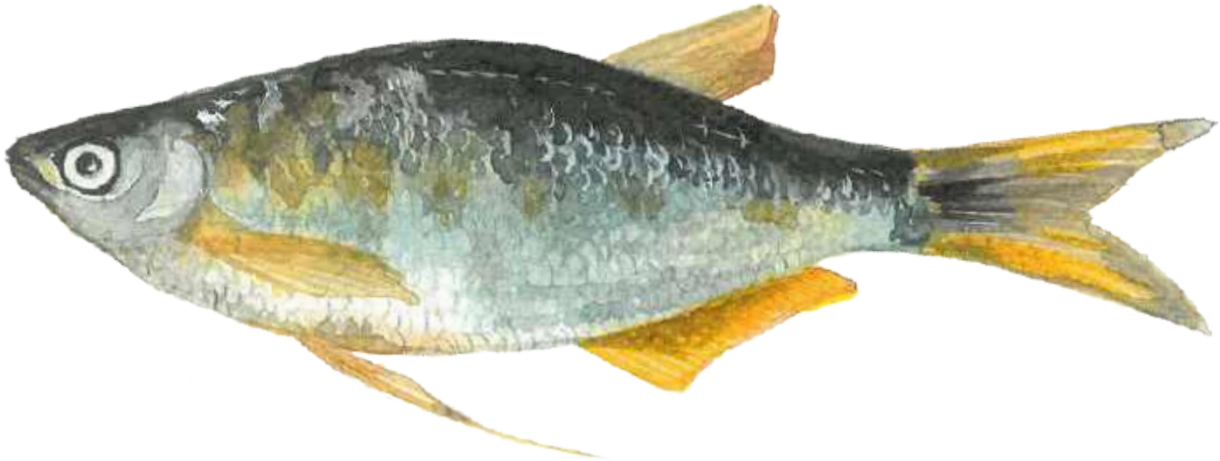
Least concern (IUCN). Threats include habitat loss, & overfishing.

Least Concern (LC)

লাওপেটি (Silver Hatchet Chela)

Scientific Name: *Chela cachius;* Family: Cyprinidae

Vernacular Name: Assamese- *Laupeti* | **Bengali-** *Pata chela, Chap chela.*



Description:

Body elongated, deep and strongly compressed. Mouth terminal, slightly oblique upwards. Ventral profile more arched than dorsal. Lateral line complete and curved downwards. Body color translucent, shining brilliant silver. Light olive on back and whitish below. A greenish longitudinal band from level of dorsal fin. Fins yellowish. Attains a length of 4-6 cm.

Habitat & Ecology:

Inhabits wetlands and rivers. Primarily insectivore; also feeds on plankton.

Economic Importance:

Preferred as food fish. Also a potential ornamental fish.

Distribution:

NE India: Brahmaputra & Barak drainages of NE India.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss due to pollution and overfishing.

Least Concern (LC)

লাওপতি (Dangila Danio)

Scientific Name: *Danio dangila;* Family: Danionidae

Vernacular Name: Assamese- *Laupoti* | **Bengali**- *Nipati.*

Description:

Body elongated and laterally compressed. Abdominal profile more convex than that of dorsal. Oblique mouth consists of two pairs of barbells (maxillary and rostral). Caudal fin slightly emarginated. Lateral line concave and complete with 36-40 scales. Olive in the back, sides and abdomen silvery with several blue lines. Anal fin with two or three stripes. Attains a length of 15 cm.

Habitat & Ecology:

Found in streams in mountainous regions.

Economic Importance:

The species has high demand as ornamental fish.

Distribution:

NE India: Brahmaputra & Barak drainage system.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, & harmful fishing practices.

Least Concern (LC)

দৰিকণা (Zebrafish)

Scientific Name: *Danio rerio;* Family: Danionidae

Vernacular Name: Assamese- *Dorikona, dorkina* | **Bengali-** *Anju.*

Description:

Body fusiform, laterally compressed. Terminal mouth directed upwards. Ventral profile more arched than dorsal. Barbels two pairs. Dorsal fin originates opposite anal. Caudal fin forked with equal lobes. Four metallic blue longitudinal bands, separated by three narrow silver ones. Three lower blue bands produced along caudal fin. Anal with three transverse blue bands. Paired fins colourless. Attains a length of 4.5 cm.

Habitat & Ecology:

Inhabits streams, canals, ditches, ponds and beels. Occur in slow-moving to stagnant water bodies, particularly rice-fields; and lower reaches of streams. Common in rivulets at foot hills. Insectivore; also feed on plankton.

Economic Importance:

The species has high value as an ornamental fish. Also, a food fish.

Distribution:

NE India: Floodplain areas of Brahmaputra & Barak drainages. Ganges and Mahanadi river system.

Conservation Status & Threats:

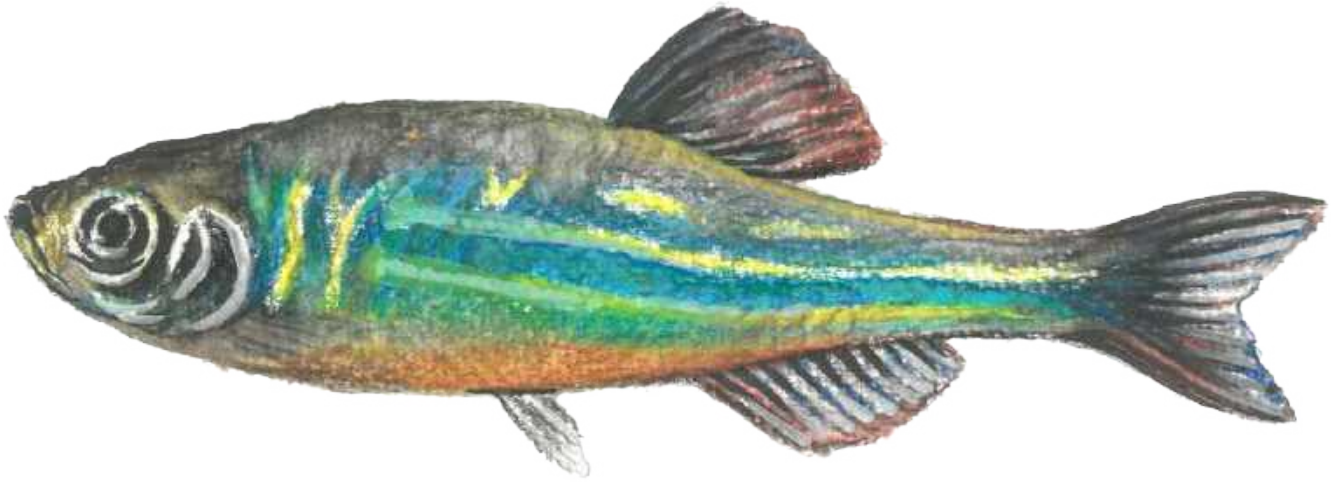
Least concern (IUCN). Threats include habitat loss due to pollution.

Least Concern (LC)

চেবলি (Giant Danio)

Scientific Name: *Devario aequipinnatus;* Family: Danionidae

Vernacular Name: Assamese- *Bhitti, Chebli, Xaaldorikana* | Bengali- *Debari.*



Description:

Body moderately elongated, compressed. Mouth superior, without barbels. Caudal fin forked. Dorsal fin originates on posterior half of body and opposite to anal fin. Scales moderate. Lateral line complete. Body dark greyish to brown turning to silver on sides, further fading to pale-white on belly. Prominent greenish blue iridescence on the sides; layered with golden yellow irregular spots and one or two short bars between pectoral and pelvic fins followed by stripes up to base of caudal fin. Dorsal fin hyaline edged with grey; pelvic anal and caudal fins golden yellow. Attains a maximum length of about 15 cm.

Habitat & Ecology:

Inhabits shallow hill streams in shaded, mid-hill clear waters with pebble or gravel substrates. Occurs in schools. Insectivore; feeds mainly on crustacean and insect larvae.

Economic Importance:

High demanding ornamental fish. Also preferred as food fish.

Distribution:

NE India: Foothill areas of the Brahmaputra and Barak drainages in Assam, Arunachal Pradesh, Meghalaya, Manipur, Mizoram, Nagaland.

Conservation Status & Threats:

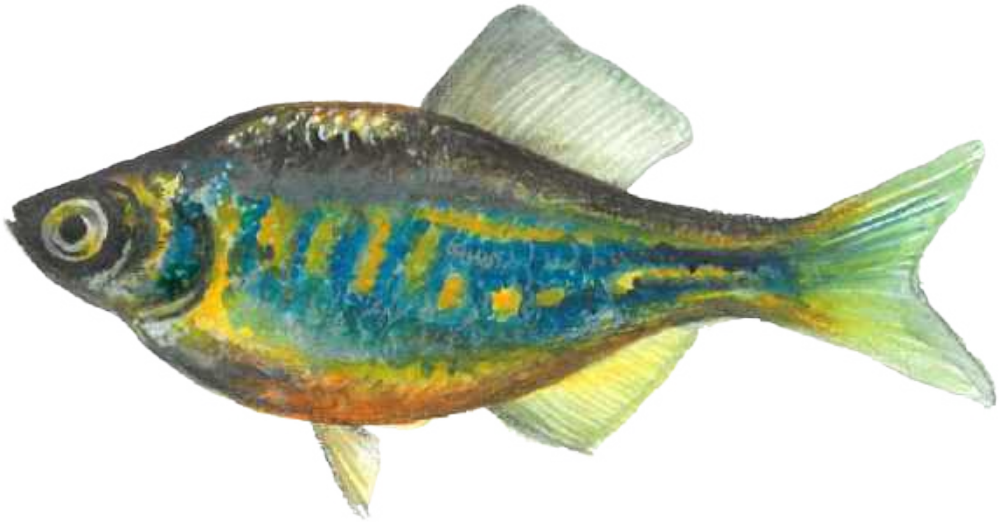
Least concern (IUCN). Threats include overfishing; habitat loss due to sand and gravel mining and pollution; and harmful fishing practices like poisoning, liming, etc.

Least Concern (LC)

লাওপুটি (Bengal Danio)

Scientific Name: *Devario devario;* Family: Cyprinidae

Vernacular Name: Assamese- *Lauputi, Dahrie* | **Bengali-** *Anju, Debari* | **Khasi (Meghalaya)-** *Shalynnai.*



Description:

Body strongly compressed. Ventral profile more convex than dorsal. Longer lower jaw with a symphyseal prominence and upper with a notch. Mouth small, obliquely directed upwards without barbels. Dorsal fin inserted slightly posterior to anal fin. Colour greenish above, with many large irregular golden spots, and a golden gloss; below silvery white. On each side of the tail, extending to the end of the fin is a bluish stripe. Fins yellow, eyes white with a golden ring round pupil. Attains a length of up to 10 cm.

Habitat & Ecology:

Inhabits the plains and submontane areas in rivers, streams, beels and inundated fields. Omnivore.

Economic Importance:

Preferred as a food fish. Also, high demanding ornamental fish.

Distribution:

NE India: All large waterbodies of Brahmaputra and Barak drainages.

Conservation Status & Threats:

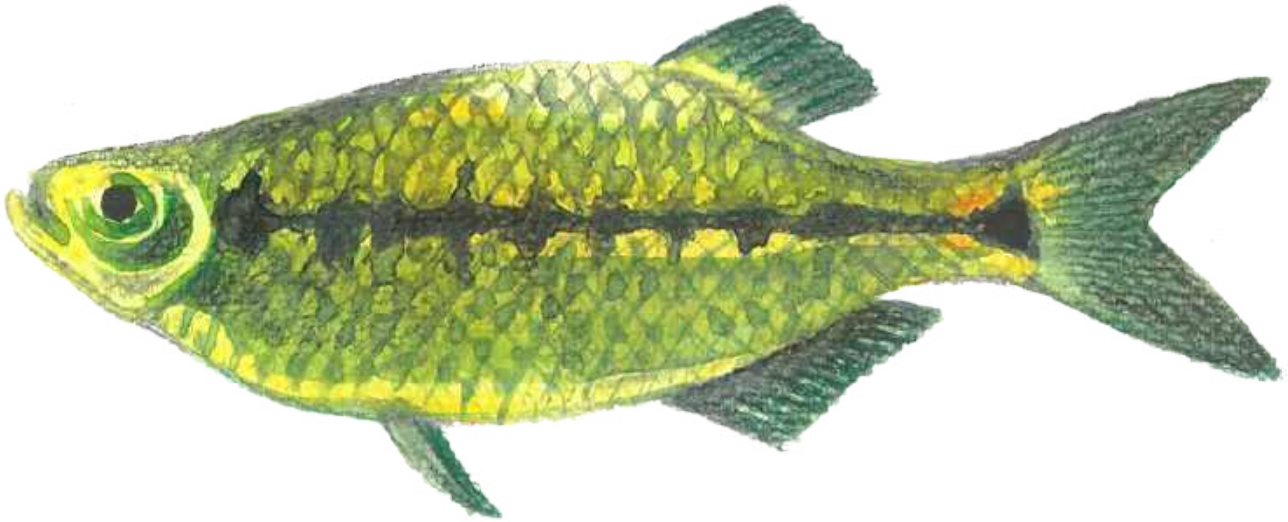
Least concern (IUCN). Threats include overfishing, & pollution.

Least Concern (LC)

লাওপুঠি (Indian Glass Barb)

Scientific Name: *Laubuka laubuca;* Family: Danionidae

Vernacular Name: Assamese- *Lauputhi, Laupeti.*



Description:

Body elongated, deep and compressed with slightly oblique mouth. Lateral line complete. Pectorals wing-like, wide. Scales moderate, cycloid. Caudal fin forked. Body colour translucent, shining silver to greenish-grey with a violet lustre on caudal peduncle. Iridescent blue bar markings on sides of the anterior half of body. A deep black, golden-edged blotch at the base of caudal fin. Fins yellowish. Attains a length of about 10.5 cm.

Habitat & Ecology:

Inhabits shallow streams, ponds and wetlands. A column feeder; insectivore; but also consumes plankton and plant detritus.

Economic Importance:

Preferred as food fish. Also a potential ornamental fish.

Distribution:

NE India: Floodplain areas of the Brahmaputra and Barak drainages.

Conservation Status & Threats:

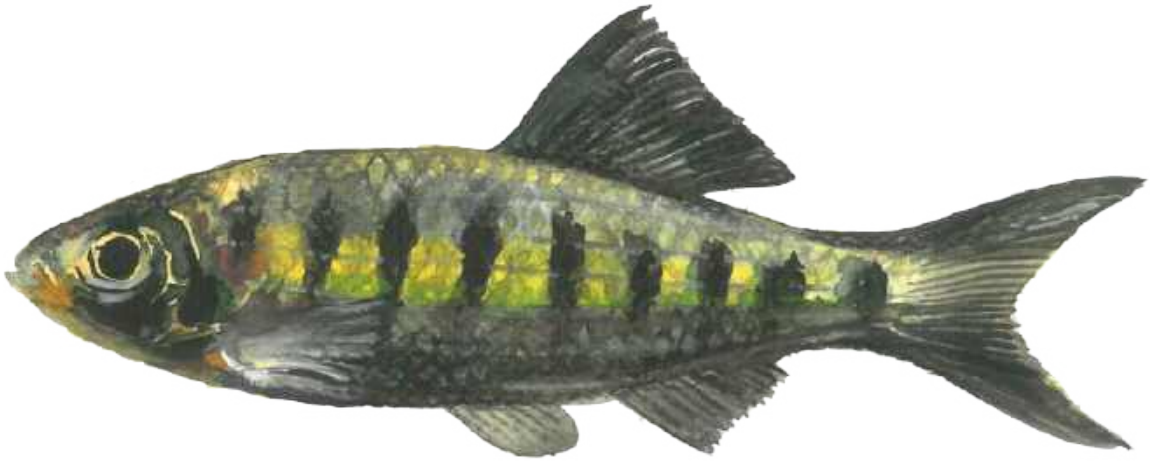
Least concern (IUCN). Threats include habitat loss due to pollution; & overfishing.

Least Concern (LC)

বালিচুন্দ্রি (Barna Baril)

Scientific Name: *Opsarius barna;* Family: Cyprinidae

Vernacular Name: Assamese- *Balisundre* | **Dimasa-** *Nahdawkha* | **Bengali-** *Bhola, Ghol* | **Manipuri-** *Ngawa* | **Nishing (Arunachal Pradesh)-** *Rebio tapoi* | **Tripura-** *Joia, Ghal.*



Description:

Body deep, laterally compressed; its ventral profile more convex than that of dorsal. Mouth moderate without barbels. Colour dark grey dorsally fading to silvery white laterally. 7-8 well-marked bluish vertical bands, the first of which sometimes passes through the eye. Fins yellowish, the dorsal, caudal and anal usually tinged with red. Attains a length of 7.5 cm.

Habitat & Ecology:

Omnivore with high preference for insects. Inhabits clear hill streams with gravelly bottoms.

Economic Importance:

High demand in local markets as food fish. Good demand as an ornamental fish.

Distribution:

NE India: Foothills of Brahmaputra and Barak drainages of NE states.

Conservation Status & Threats:

Least concern (IUCN). Threats include harmful fishing practices and habitat loss due to sand and boulder mining.

Least Concern (LC)

বালিচন্দা (Hamilton's Barila)

Scientific Name: *Opsarius bendelisis;* Family: Danionidae

Vernacular Name: **Assamese-** *Balisonda, Karang, Boriola* | **Bengali-** *Khoksa, Joia* | **Nishing (Arunachal Pradesh)-** Rebiotapio, Ngaba ngata.

Description:

Body elongated and compressed with moderately cleft mouth. Two short pairs of barbels present. Body colour silvery, with lateral bars. Scales tinged with black spots at the base. Fins whitish, tinged with orange. A grey margin to the dorsal and caudal, the lower lobe of which sometimes stained black. Males with expanded fan-like pectoral fins and prominent breeding tubercles on snout. Attains a length up to 22 cm.

Habitat & Ecology:

The fish is an insectivore. Adults occur in streams and rivers along the base of hills with pebbly and rocky bottoms.

Economic Importance:

The fish has high demand as a food fish.

Distribution:

NE India: Streams of Ganga, Brahmaputra and Barak drainages Along the Himalayan foothills.

Conservation Status & Threats:

Least concern (IUCN). The species is locally threatened by destructive fishing techniques such as dynamite fishing, overexploitation, and loss of habitat due to sand and boulder mining.

Least Concern (LC)

বলা (Tileo Baril)

Scientific Name: *Opsarius tileo;* Family: Danionidae

Vernacular Name: Assamese- *Tilei, Sellen, Boolla* | **Bengali-** *Koksa.*

Description:

Body deep. Mouth wide; jaws short, maxilla extends to below middle of orbit; barbels a rudimentary maxillary pair, or entirely absent. Dorsal fin inserted in advance of anal fin, the anal fin being behind the vertical from its last ray. Scales small. Colour bluish brown on back, becoming silvery on flanks and belly, two or three rows of blue spots and blotches having a vertical character, along the sides of body. Dorsal and caudal fins dark grey, with a light pinkish edge; other fins yellowish.

Habitat & Ecology:

Found in hill streams and rivers with pebbly or sandy bottoms. Insectivore.

Economic Importance:

Preferred as food fish; also has high ornamental value.

Distribution:

NE India: Brahmaputra and Barak drainages of the NE states.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss due to sand and boulder mining, and coal mining; and pollution.

Least Concern (LC)

িশল-কাম'ৰা (River Stone Carp Minnow)

Scientific Name: *Psilorhynchus sucatio;* Family: Psilorhynchidae

Vernacular Name: **Assamese-** *Xeelkamura* | **Dimasa-** *Nahlongthai* | **Bengali-** *Patharchati.*

Description:

Spindle-shaped body with arched dorsal profile and flattened ventral side. Head depressed. Scales moderate. Expanded and horizontally placed pectoral and pelvic fins. Caudal deeply forked and with black marks. Vertical bands on body. Mouth small, inferior and transverse. Barbel absent. Nostrils extend beyond the mouth, which is small and transverse. Colour dorsal side is greenish with scattered dots; on the sides these are collected into clouds, and below the body is whitish and diaphanous. The fins of the back, breast and tail are dotted. Eyes are brown, with a narrow golden circle round the pupil. Attains a length of about 8 cm.

Habitat & Ecology:

Occurs mainly in the edges of sandy streams. Common near emergent or overhanging vegetation. Prefers pools and run areas of mountain streams.

Economic Importance:

Little interest in fisheries. The species has ornamental value.

Distribution:

NE India: Assam, Arunachal Pradesh, Meghalaya, Nagaland, Mizoram, Tripura.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss due to sand mining and pollution.

Least Concern (LC)

ঁশল-কাম'ৰা (Balitora Minnow)

Scientific Name: *Psilorhynchus balitora;* Family: Psilorhynchidae

Vernacular Name: Assamese- *Xeel-kamora* | Bengali- *Patharchati* | Nishing (Arunachal Pradesh): *Ngop nogi.*

Description:

Body robust and moderately elevated. Head small, conical with narrow and subventral mouth. Paired fins horizontally placed and anal fin short. Scales large. Caudal fin deeply forked. Body colouration reddish brown, with irregular black blotches forming badly defined bands, in places passing over the back. Three bars on the caudal and some black on the anterior half of the dorsal. Attains a length of 4.8 cm.

Habitat & Ecology:

The species is found in the fast streams and shallow rivers, especially where the bottom is rocky, adhering tightly to the rocky substratum with the expanded paired fins and the breast applied to the rocks. Like other torrential fishes, it always points its head against the flow of current. The variegated colouration of the fish harmonises so perfectly with the surroundings that it is hard to detect its presence even from a short distance.

Economic Importance:

The species has demand as an ornamental fish.

Distribution:

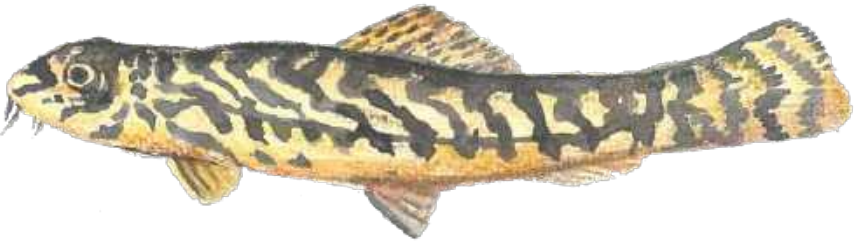
NE India: Assam, Meghalaya, Arunachal Pradesh, Nagaland. North Bengal, Bihar.

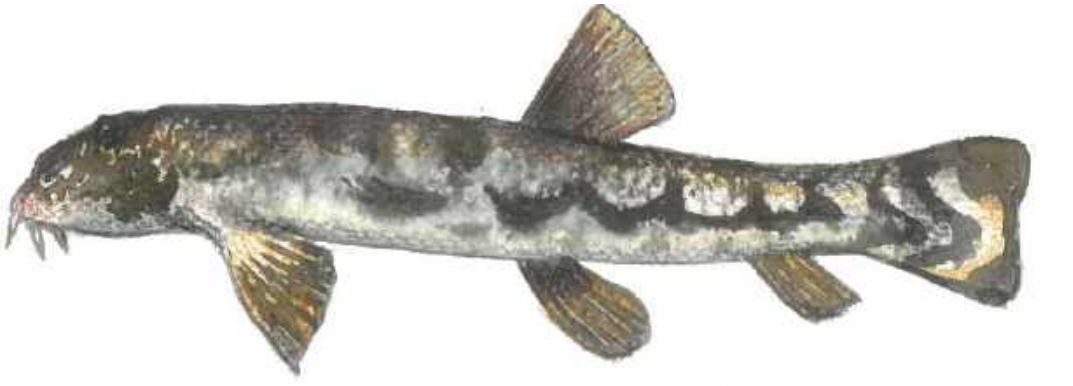
Conservation Status & Threats:

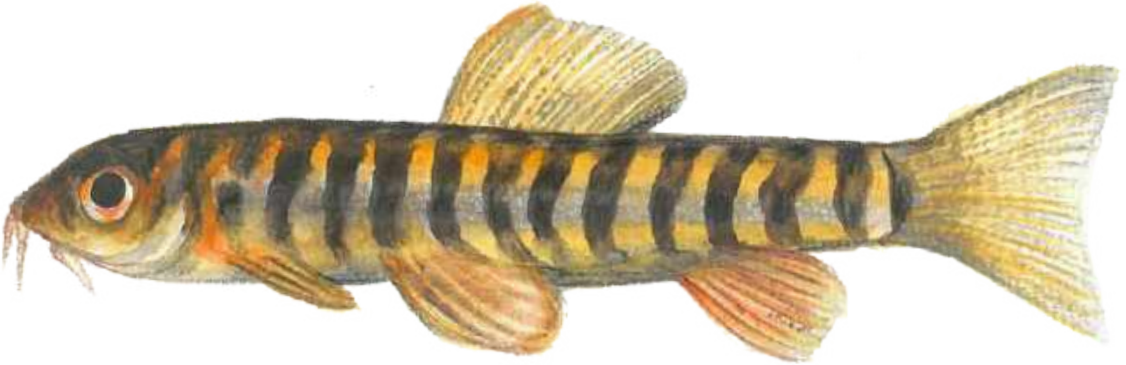
Least concern (IUCN). Threats include habitat loss and overfishing for ornamental value.

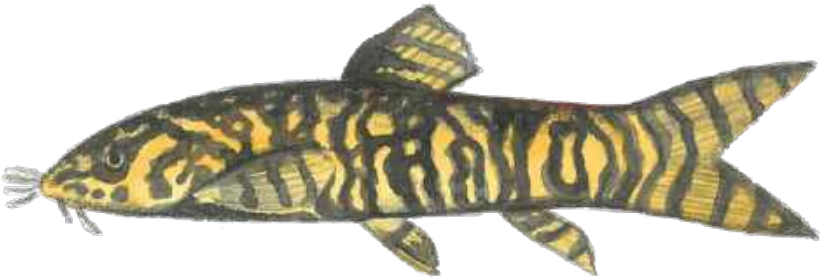
Least Concern (LC)

LOACHES









বটিয়া (Bengal Loach)

Scientific Name: *Botia dario;* Family: Botiidae

Vernacular Name: Assamese- *Botia, Gethu* | **Bengali-** *Batya* | **Manipuri-** *Sareng khoibi*
Khasi (Meghalaya)- *Dohser* | **Tripura-** *Rani mach.*

Description:

Body elongated and laterally compressed. Dorsal profile more convex than that of ventral, head flattened at sides. Mouth small and ventral, barbels 4 pairs. Caudal fin deeply forked. Colour greyish with 7 to 8 brownish oblique vertical bars descending from back to abdomen. Caudal fin with 2 to 3 oblique thin black bars on each lobe. Attains a length of up to 15 cm.

Habitat & Ecology:

The fish is an omnivore. Inhabits mainly rivers, clear mountain streams and wetlands.

Economic Importance:

High demand as an ornamental fish. Also preferred as food fish for its good flavour.

Distribution:

NE India: Waterbodies of Ganga, Brahmaputra and Barak drainages. Ganga drainage.

Conservation Status & Threats:

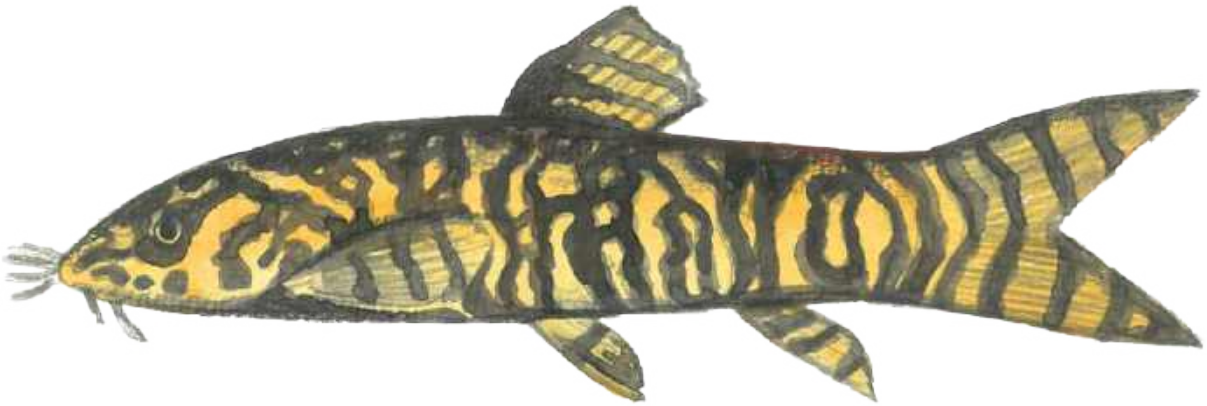
Least concern (IUCN). Rampant habitat destruction throughout its range distribution and harvest for aquarium trade.

Least Concern (LC)

বটিয়া (Gangetic Loach)

Scientific Name: *Botia rostrata;* Family: Botiidae

Vernacular Name: Assamese- *Botia* | **Nishing (Arunachal Pradesh):** *Pan ngoi* | **Tripura**- *Rani mach*
Khasi (Meghalaya)*: Dohser.*



Description:

Both dorsal and ventral profiles are equally arched. Head long, narrow and pointed. Mouth small. Two pairs of rostral barbels; caudal fin deeply forked. Snout considerably longer than remaining part of head. Body colour yellowish with brown cross-bands of irregular pattern, which occasionally form blotches. Dorsal and anal fins with two brown cross-bands; pectoral and pelvic fins, and each caudal lobe with three brown cross-bands. Attains a length of 15 cm.

Habitat & Ecology:

Inhabitants of hill streams. It usually remains attached to the rocks and boulders of torrential waters. A carnivorous species that feeds on insect larvae and benthic organisms.

Economic Importance:

The species has high food value as well as highly priced ornamental fish.

Distribution:

NE India: Assam, Meghalaya, Arunachal Pradesh, Tripura. Bihar, Uttarakhand, West Bengal.

Conservation Status & Threats:

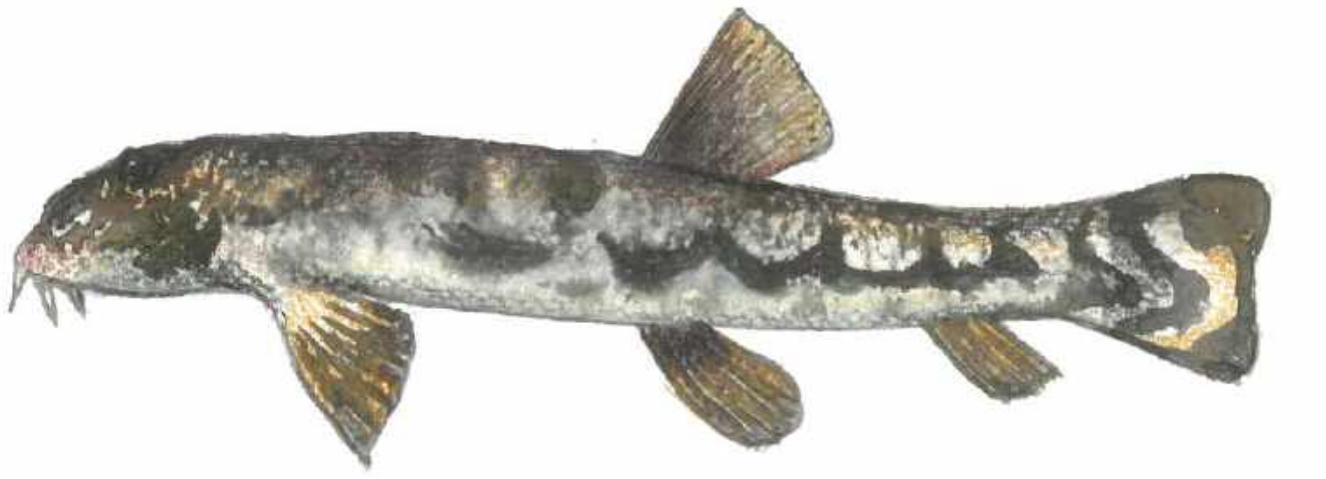
Vulnerable (IUCN). Threats include overfishing for aquarium trade.

Vulnerable (VU)

নদীআৰি মাছ (Gongota Loach)

Scientific Name: *Canthophyrs gongota;* Family: Cobitidae

Vernacular Name: Assamese- *Nadiari Mach*| **Bengali-** *Pahari Gutum.*



Description:

Body is subcylindrical and posteriorly tapering. Upper profile of snout is nearly straight or a little concave. Eyes are close together situated high up at middle of head. Lips are thick, lower with papillae, 4 rostral and 2 maxillary barbells. Scales are small. Lateral line is present. Dorsal fin is started at centre between anterior margin of eye and root of caudal fin. Pelvics originate slightly in advance of that of dorsal; caudal rounded. Body colour greenish above and yellowish-white below. Back usually with irregular bands descending upto lateral line.. Attains a length of 10 cm.

Habitat & Ecology:

Inhabits streams and rivers. Occurs in shallow slow-moving streams with sandy, muddy or gravelly bottoms.

Economic Importance:

The species has moderate demand as food as well as ornamental fish.

Distribution:

NE India: Brahmaputra & Barak drainage system.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, harmful fishing practices.

Least Concern (LC)

বটিয়া (Guntea Loach)

Scientific Name: *Lepidocephalichthys guntea;* Family: Cobitidae

Vernacular Name: Assamese- *Botia* | Manipuri- *Ngakijrou* | Nishing (Arunachal Pradesh)- *Remumpoda* | Tripura- *Gutum.*

Description:

Body elongated, low, slightly compressed anteriorly and strongly posteriorly. Head oblong, compressed, and blunt. Mouth inferior, narrow, slightly arched. Eyes smaller, superior, covered with transparent skin in anterior part of head. Lips thick, fleshy, continuous at angle of mouth. Barbels 3 pairs. Body is dark olive to brown dorsally, with a coppery stripe along each side, fading to lighter brown on sides. Gill covers greenish. Lateral sides clouded with dark blackish brown spots and blotches, more often clustered mid-laterally to form a series of mottled blotches on females and a complete stripe on males. Dorsal and caudal-fin rays spotted with olive and white; remaining fins golden yellowish with black and bronze bands. Attains a length of up to 15 cm.

Habitat & Ecology:

Inhabits clear standing waters, rivers and streams, and derelict ponds as well as paddy fields. Bottom-dweller; mostly feeding on insect larvae and algae.

Economic Importance:

Good food value as well as demand in the ornamental fish market.

Distribution:

NE India: All the N.E. states.

Conservation Status & Threats:

Least Concern (IUCN). Threats include overfishing, habitat loss and pollution.

Least Concern (LC)

বাঙিল বিটয়া (Kurika Loach)

Scientific Name: *Nemacheilus corica;* Family: Nemacheilidae

Vernacular Name: Assamese- *Botia, Balibotia* | **Bengali-** *Kurika.*

Description:

Moderately elongate. Semi-circular mouth with fleshy lips and lower lip notched at middle. Head curved downward and snout pointed. 3 pairs of barbels. Pectoral fin longer than head. Body golden yellowish to cream in colour; dark grey dorsally fading to silvery white laterally. Two longitudinal and one transverse brown band on snout. 8-9 brown bands on back descending partly on both sides; 9-10 brown blotches or short bands along lateral line. Attains a length of about 5 cm.

Habitat & Ecology:

Adults inhabit clear waters, hill streams with sandy bottoms. Collected in a large river with high, turbid monsoon flow and with diverse substrates consisting of sand, gravel, pebble, and boulders.

Economic Importance:

An aquarium fish with very high demand. Also, minor food value.

Distribution:

NE India: Brahmaputra drainage in Assam, Meghalaya, Arunachal Pradesh.

Conservation Status & Threats:

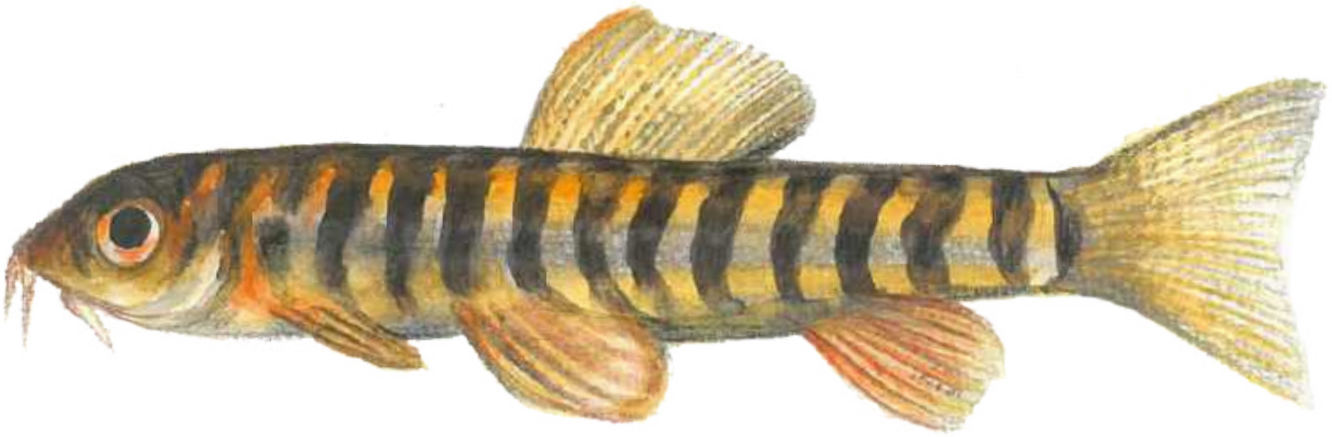
Least concern (IUCN). Threats include overfishing; habitat loss due to sand and boulder mining, and pollution.

Least Concern (LC)

বালি বটিয়া (Loach)

Scientific Name: *Neonoemacheilus assamensis;* **Family:** Nemacheilidae

Vernacular Name: Assamese- *Bali botia.*



Description:

Body elongate, moderately compressed, slender. Mouth inferior, semicircular; upper lip thin, moderately hypertrophied, a pad-like structure in the middle. Barbels three pairs. Caudal fin forked. Body covered with scales but more sparsely between pectoral fins on belly. Body greyish-brown to pale yellow with 13-17 dark brown bars on sides. Attains a length of 4.3 cm.

Habitat & Ecology:

Bottom-dweller; inhabits streams with sandy to pebbly bottoms.

Economic Importance:

Potential ornamental species. Lesser food value.

Distribution:

NE India: North bank streams of Brahmaputra drainage along the Indo-Bhutan and Assam-Arunachal borders.

Conservation Status & Threats:

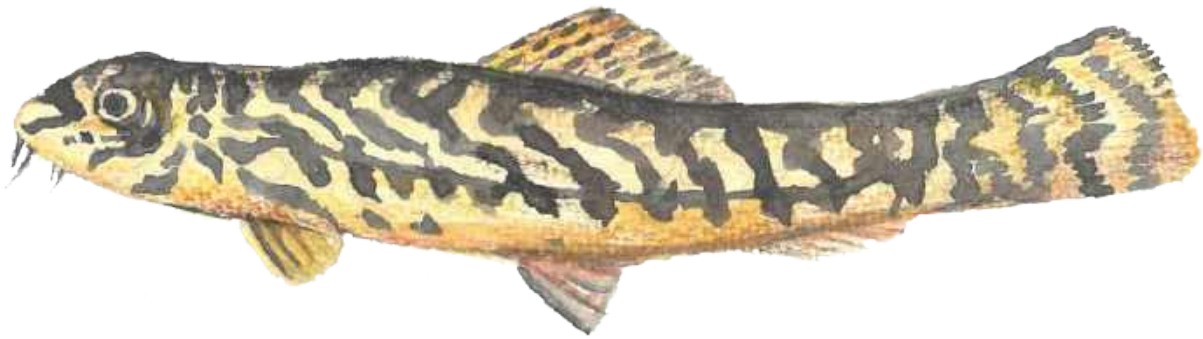
Near Threatened (IUCN). Threats include habitat loss due to sand and coal mining, and river bank erosion.

Near Threatened (NT)

বটিয়া (Mottled Loach)

Scientific Name: *Paracanthocobitis botia;* Family: Nemacheilidae

Vernacular Name: Assamese- *Botia, Balibotia* | **Dimasa**- *Nahlondre* | **Nishing (Arunachal Pradesh)**- *Reibe, Rebuw*
Khasi (Meghalaya)- *Dohser.*



Description:

Body slender, dorsal profile more convex than ventral. Head small, cylindrical, points anteriorly. Snout pointed. Mouth small, subterminal. Lips thick, fleshy, papillated, continuous at angle of mouth. Nostrils close to each other, anterior. Barbels well developed, three pairs. Colour greyish to olive-green dorsally fading to lighter brown or pale yellow on sides; 10-12 short vertically-elongate blotches below lateral line alternating or interspersed with smaller irregular blotches above it, sometimes forming a continuous stripe on the back. Dorsal fin yellowish with rows of black spots. Caudal with about seven ">" shaped irregular bands. A black ocellus on the upper portion of the base of caudal fin. Attains a length of up to 15 cm.

Habitat & Ecology:

Bottom-dweller; feeds on algae, crustaceans, nematodes and insect larvae. Adults inhabit clear water, swift flowing streams with rocky, pebbly and sandy bottoms. Also found in large rivers and beels.

Economic Importance:

High demand as an aquarium fish. Minor interest as a food fish.

Distribution:

NE India: Brahmaputra and Barak drainages of NE states.

Conservation Status & Threats:

Least Concern (IUCN). Threats include overfishing, habitat loss due to sand mining and pollution.

Least Concern (LC)

বটিয়া (Half-Banded Loach)

Scientific Name: *Schistura savona;* Family: Nemacheilidae

Vernacular Name: Assamese- *Botia* | Bengali- *Kurika.*

Description:

Body elongated, moderately compressed. A small semi-circular inferior mouth with fleshy and furrowed lips. Barbels 3 pairs and equal in size. Scales small, scattered all over body. A small appendage on pelvic-fin base. Caudal deeply emarginate. Yellowish-brown to olive green body with 10-12 narrow vertical light-creamy bands; a thicker bar on caudal-fin base. Fins are usually free from markings. Attains a length of about 6 cm.

Habitat & Ecology:

Inhabits rapid streams with gravelly bottoms. Bottom-dweller; insectivore.

Economic Importance:

Very high demand as an ornamental species.

Distribution:

NE India: Foothill stream areas of the Brahmaputra drainage in Assam, Meghalaya and Arunachal Pradesh.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss due to sand and boulder mining, and rampant collection from wild for aquarium trade.

Least Concern (LC)

PERCHES

কাৰৈ (Climbing Perch)

Scientific Name: *Anabas testudineus;* Family: Anabantidae

Vernacular Name: Assamese- *Kawoi* | **Bengali-** *Koi.*

Description:

Body moderately elongated, compressed. Terminal mouth with lower jaw slightly longer. Jaws bearing minute, sharp villiform teeth. Posterior edge of operculum with two strong spines. Head and body covered by rough ctenoid scales. Dorsal and anal fins occupy more than three of body length; dorsal fin with longer base than anal; both fins bear retractile strong spines on anterior two-thirds, soft rays on the last third. Body dark to pale greenish-grey, fading to lighter grey on sides and turning pale yellow on belly. Dorsal and caudal fins dark grey, anal and pectoral fins greyish to pale yellowish. Pelvic fin pale orange. Caudal fin nearly round. Attains a length of up to 25 cm.

Habitat & Ecology:

Inhabits canals, lakes, ponds, swamps as well & estuaries in areas with dense vegetation. Omnivorous; feeds on crustaceans, insects, larvae as well as decaying organic matter.

Economic Importance:

A food fish with very high market demand for its nutritional value.

Distribution:

NE India: All the N.E. states.

Conservation Status & Threats:

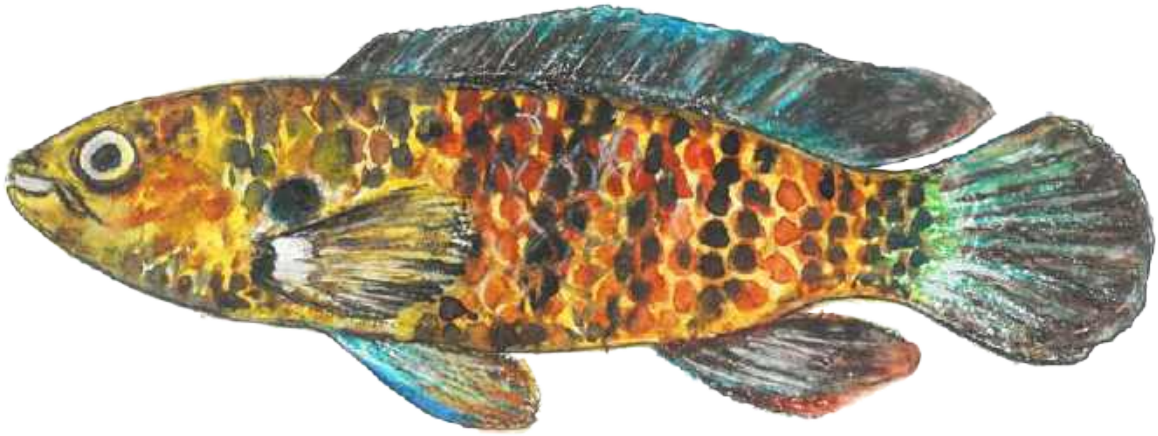
Least concern (IUCN). Threats include habitat loss due to pollution, and overfishing.

Least Concern (LC)

নবাট (Badis)

Scientific Name: *Badis badis;* Family: Badidae

Vernacular Name: Assamese- *Nabat, Randhonee, Koli dumuni* | **Bengali-** *Botkoi, Bhedo, Darhi*
Manipuri- *Ngamhai* | **Nishing (Arunachal Pradesh):** *Khen ngoi.*



Description:

Body slightly compressed. Mouth relatively small, slightly upturned. Lips thin. Barbels absent. Caudal fin rounded. Opercula with one sharp spine. Colour variegated with alternate belts of black and green; a bluish-black spot behind gill openings. Fins yellowish green, bluish, or dark blue; a row of dark spots along base of the dorsal fin. Attains a length of up to 8 cm.

Habitat & Ecology:

Feeds on worms, crustaceans, and insects. Occurs solitarily in shallow stretches of small streams, ponds & ditches. Also, a common occurrence in waterlogged paddy fields.

Economic Importance:

The species is a popular ornamental fish due to its unique colouration. The fish has also been preferred as a food fish.

Distribution:

NE India: Waterbodies of Ganga, Brahmaputra and Barak drainages.

Conservation Status & Threats:

Least concern (IUCN). The species is extensively used in study of fish behaviour and is in demand as an aquarium fish.

Least Concern (LC)

চন্দা (Elongate Glass-Perchlet)

Scientific Name: *Chanda nama;* Family: Ambassidae

Vernacular Name: Assamese- *Sondah , Chanda* | Bengali- *Chanda, Nama Chanda.*

Description:

Body is strongly compressed and laterally almost flat. Dorsal and ventral profile of this fish is almost equally convex. Lower jaw is longer than upper jaw. Scales are minute, thin and transparent. Caudal fin forked. Body is transparent, yellowish white with numerous tiny black dots. First dorsal and tips of second dorsal is deep black. Caudal fin is black and orange. A small black spot is found at the origin of the base of anal fin. Attains a length of about 11 cm.

Habitat & Ecology:

Feeds on fish scales (lepidophagous). Found both in lotic and lentic water bodies and inundated paddy fields. Abundant during rainy season.

Economic Importance:

Many communities use the species as an important food fish. Also used as an aquarium fish. The species could effectively be used in the control of guinea worms and for malarial control.

Distribution:

NE India: Waterbodies of Ganga, Brahmaputra and Barak drainages. Ganga drainage, Himachal Pradesh, Mahanadi river drainage.

Conservation Status & Threats:

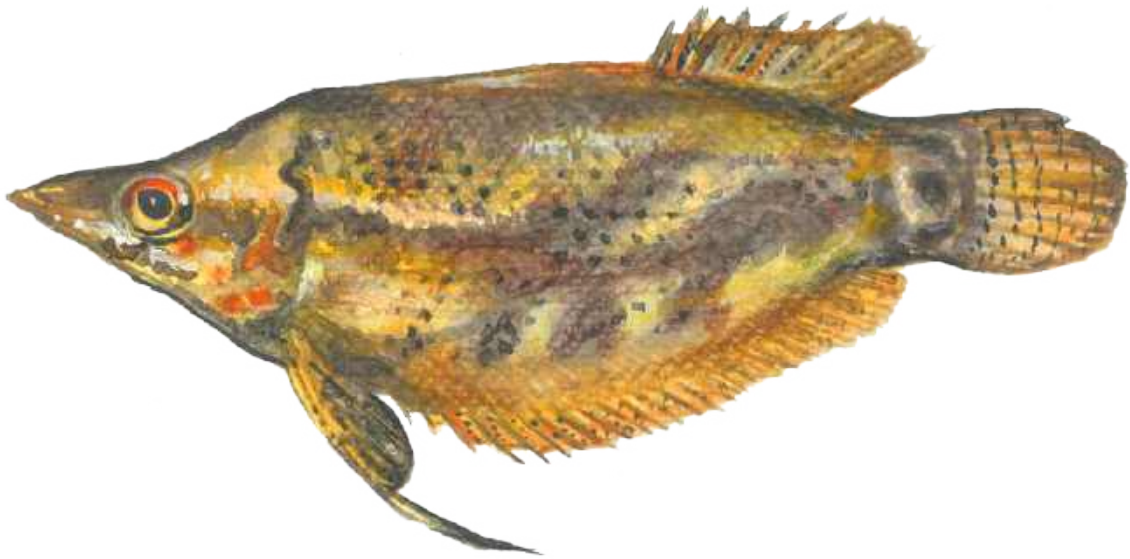
Least concern (IUCN). Major threats include habitat loss and pollution.

Least Concern (LC)

N.A (Frail Gourami)

Scientific Name: *Ctenops nobilis;* Family: Osphronemidae

Vernacular Name: N.A.



Description:

Body sagittiform (like an arrow), moderately elongate, compressed. Head length about one-fourth of total body length. Snout pointed with large eyes and terminal mouth with upturned lower lip. Fins contain both hard spines and soft rays. Head and body covered by ctenoid scales. Caudal fin round. Body mottled with dark brown on a golden-brown base. A silvery-white line mid-dorsally. Pelvic fin sometimes dark pinkish. A black light-edged ocellus at upper base of caudal fin. Attains a length of about 10 cm.

Habitat & Ecology:

Inhabits slow-running clear streams and beels camouflaged among dense aquatic vegetation. Surface-dweller; feeds on insect larvae, worms, etc. Mouthbrooding fish; the males carry and guard the fertilized eggs in their mouth till they hatch.

Economic Importance:

Has high ornamental demand. Lesser food value.

Distribution:

NE India: Specific pockets along the north bank of the Brahmaputra drainage along the Indo-Bhutan border of Assam.

Conservation Status & Threats:

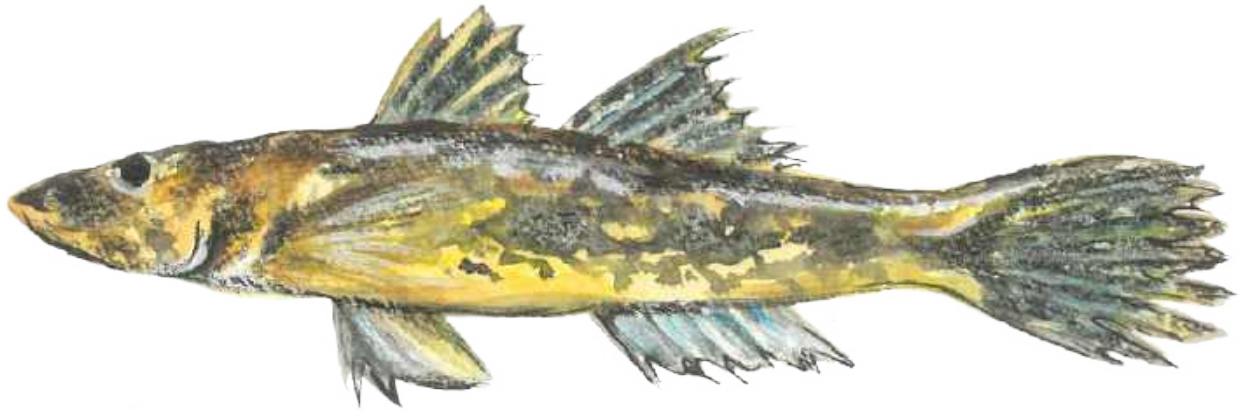
Near Threatened (IUCN). Major threats include overharvesting due to its ornamental demand, and loss of habitat due to pollution.

Near Threatened (NT)

পাটিমুতুৰা (Tank Goby)

Scientific Name: *Glossogobius giuris;* Family: Gobiidae

Vernacular Name: Assamese- *Patimutura* | **Bengali-** *Bele* | **Manipuri-** *Nailan nga* | **Tripura-** *Bailia.*



Description:

Head flattened, lower jaw projecting: body pale without longitudinal lines. Dorsal fins with small spots forming longitudinal stripes. Pelvis fins jointed but attached to the body only from their anterior part. The body is brownish yellow with 5-6 dark and rounded spots on its sides. Attains a length of up to 30 cm.

Habitat & Ecology:

Feeds on small insects, crustaceans, and small fish. Found in freshwater as well as estuaries. Also, occurs in canals, ditches and ponds.

Economic Importance:

This species has food value and is sometimes used as ornamental fish. Some community also consider the species to have medicinal values.

Distribution:

NE India: Throughout NE states
Throughout India.

Conservation Status & Threats:

Least concern (IUCN). Habitat loss and pollution are major threats.

Least Concern (LC)

গেদগেদী (Gangetic Leaffish)

Scientific Name: *Nandus nandus;* Family: Nandidae

Vernacular Name: Assamese- *Gedgedi, Bheheri.*

Description:

Body deep, strongly compressed with nearly straight belly and arched back. Head tapering, sagittiform (like an arrowhead) with pointed snout. Eyes large, round. Mouth wide, protrusible; thick lips, jaws covered with minute, sharp caniniform teeth. Head and body covered by rough ctenoid scales. Dorsal fin occupy more than three-fourths of body length, Dorsal, pelvic and anal fins supported by both sharp and strong spines as well as soft rays. Caudal fin nearly round. Body background golden brown with dark brownish to greenish irregular blotches on back that continue on sides as irregular wavy bars. Narrow oblique brownish bands on operculum. Fins dark brown to greenish. Males darker than females. Attains a length of up to 25 cm.

Habitat & Ecology:

Inhabits slow moving waters such as ponds, lakes, ditches, and flooded fields. Stays camouflaged among dead leaf litter and detritus. Carnivorous; predating on aquatic insects and fishes.

Economic Importance:

Has good demand as food fish. Also, a potential ornamental fish.

Distribution:

NE India: Floodplain areas of Brahmaputra and Barak river drainages.

Conservation Status & Threats:

Least Concern (IUCN). Threats include overfishing and habitat loss due to pollution.

Least Concern (LC)

চন্দা (Highfin Glassy Perchlet)

Scientific Name: *Parambassis lala;* Family: Ambassidae

Vernacular Name: Assamese- *Sonda* | **Bengali-** *Chanda, Lal Chanda, Kat-Chanda.*

Description:

Body small, strongly compressed, almost rounded with oblique mouth. Scales extremely thin, transparent exposing internal organs and bones. Body golden-yellow with three faint, dusky greyish, wavy bars on sides; operculum with dark strips. Dorsal, anal and caudal fins deep orange or reddish orange with blackish outer margins. Attains a length of about 4 cm.

Habitat & Ecology:

Inhabits clear streams, rivers, canals, ditches, inundated paddy fields, ponds, pools and beels. Feeds on invertebrates, small worms and crustaceans.

Economic Importance:

The species has some food value, but highly preferred as ornamental fish.

Distribution:

NE India: Floodplains of the Brahmaputra drainage in Assam, Arunachal Pradesh and Meghalaya.

Conservation Status & Threats:

Near Threatened (IUCN). Major threats include habitat loss and pollution.

Near Threatened (NT)

খলিহনা (Banded Gourami)

Scientific Name: *Trichogaster fasciata;* Family: Osphronemidae

Vernacular Name: Assamese- *Kholihona* | **Bengali**- *Khalisa.*

Description:

Body is egg shaped and strongly compressed. Dorsal and abdominal profile is almost equally convex. Eyes are comparatively large. Lips are very thick. Lateral line is interrupted. Scales present on head, body and base of soft dorsal and anal fin. Modified thread like pectoral fins can reach up to 10th spine of anal fin, sometimes up to caudal. Body colour is greenish or bluish above, pelvics with yellow-white bases and brilliant red tips. Dorsal and caudal fins spotted with orange, caudal usually cut square. Attains a length of 12 cm.

Habitat & Ecology:

Found in the streams, pools, beels and ponds. It is carnivorous. It is very hardy and can survive and breed in foul water.

Economic Importance:

The species has high demand both as food and ornamental fish.

Distribution:

NE India: Brahmaputra & Barak drainage system.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, overfishing, & pollution.

Least Concern (LC)

লালখলিহা (Dwarf Gourami)

Scientific Name: *Trichogaster lalia;* Family: Osphronemidae

Vernacular Name: Assamese- *Kholisa, Bheseli, Besa, Lalkholisa* | **Bengali-** *Kholsha.*

Description:

Body elongated, cylindrical anteriorly, tapering towards posterior. Head depressed with wide terminal mouth. Jaws with caniniform teeth. Scales are cycloid on head. Caudal fin round. Body greyish black to brown dorsolaterally, pale cream ventrally; bluish ventrally in males. Dorsal, anal and caudal fins with white margins; sometimes reddish in males. Eye spot present in juveniles near on the posteriormost end of dorsal-fin base near the caudal-fin base. Attains a length of about 6 cm.

Habitat & Ecology:

Inhabits densely vegetated, ponds, swamps, ditches, sluggish streams and irrigation canals. Omnivore; primarily feeding on small insects and larvae and graze on algal growth on rocks and plants.

Economic Importance:

One of Southeast Asia's highly demanding ornamental fish. Fetches good market price locally as food fish.

Distribution:

NE India: Floodplain region of the Brahmaputra and Barak drainages.

Conservation Status & Threats:

Least concern (IUCN). Threats include overfishing and habitat loss due to pollution.

Least Concern (LC)

TROUTS

নেউল মাছ (Snow Carp)

Scientific Name: *Schizothorax plagiostomus;* Family: Cyprinidae

Vernacular Name: Assamese- *Neul Maas.*

Description:

Elongated sub-cylindrical body. Snout short, blunt and smooth. Mouth inferior, wide and slightly arched. Barbels in two pairs. Dorsal fin inserted about opposite to pelvic fins, its last undivided ray osseous, strong and serrated posteriorly. Caudal fin deeply emarginate. Scales very small, cycloid. Attains a length of up to 42 cm.

Habitat & Ecology:

A coldwater species that inhabits upstream rivers and lakes with rocky and pebbly substrate. Grazes on algae and feeds on crustaceans and molluscs.

Economic Importance:

Preferred as food fish.

Distribution:

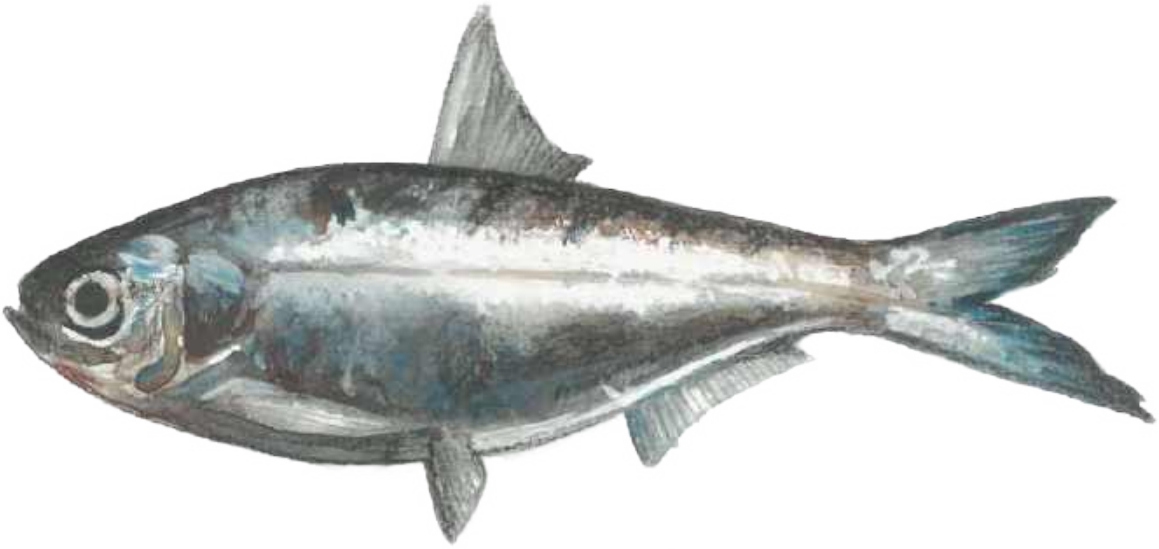
NE India: Sub-Himalayas along the Indo-Bhutan and Assam-Arunachal belt of the Brahmaputra drainage in NE India.

Conservation Status & Threats:

Vulnerable (IUCN). Threats include habitat loss due to coal and sand mining, and pollution.

Vulnerable (VU)

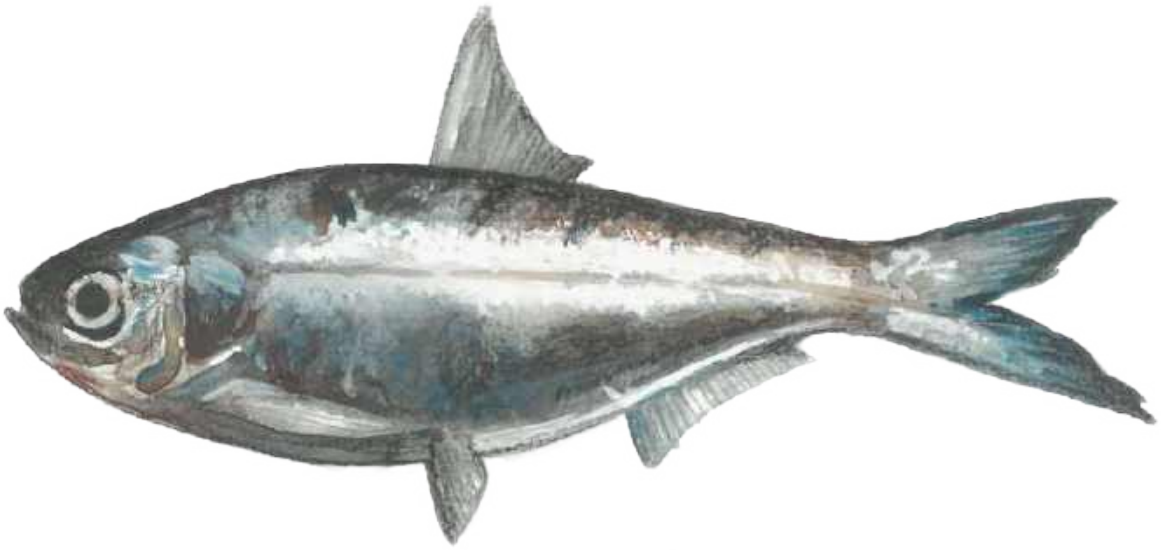
SHADS



কৰটি (Indian River Shad)

Scientific Name: *Gudusia chapra;* Family: Dorosomatidae

Vernacular Name: Assamese- *Koroti, Karati* | **Bengali-** *Coori, Khira* | **Manipuri-** *Wana manbi.*

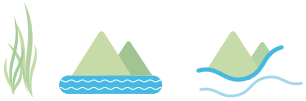


Description:

Body well compressed, oblong. Abdominal profile more convex than dorsal profile. Head short, high, compressed. Barbels absent. Eye large. caudal deeply forked, lower lobe slightly the longer. Colour silvery shot with gold, back rather dark, and edge of caudal stained darkest. Body without any cross bars on sides but with round spots. Attains a length of 20 cm.

Habitat & Ecology:

Adults are found in middle and upper reaches of rivers. Also occurs in beels and ponds. Planktonivore.



Economic Importance:

Contributes to riverine artisanal fisheries as a highly valued food fish.

Distribution:

NE India: Assam, Meghalaya, Arunachal Pradesh, Manipur, Tripura.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, & pollution.

Least Concern (LC)

ইলিশ মাছ (Hilsa Shad)

Scientific Name: *Tenualosa ilisha;* Family: Dorosomatidae

Vernacular Name: Assamese- *Hilsa, Ilish mach.*

Description:

Body fusiform, deep and compressed. Abdominal edge keeled with a row of scutes. Eye with broad adipose eyelids. Pectoral fins extend to pelvic origin and the pelvic fin originates in the anterior half of dorsal fin. Caudal deeply forked and lobes are as long as head. Colouration greenish in above with a glass of gold changing to purple and below silver. Row of four or five black spots on each shoulder and is absent in adults. A dark blotch behind gill opening. Fins are hyaline. Attains a length of up to 60 cm.

Habitat & Ecology:

Euryhaline anadromous species; marine, pelagic and schooling in coastal waters. Feeds on zooplankton and phytoplankton in the early hours of the day.

Economic Importance:

One of the most popular and high-demanding food fish.

Distribution:

NE India: Assam, Meghalaya, Tripura.

Conservation Status & Threats:

Least concern (IUCN). Major threats are overfishing, pollution, dams/barrages affecting the species migration routes.

Least Concern (LC)

EELS

নাদাল বামী (Indian Mottled Eel)

Scientific Name: *Anguilla bengalensis;* Family: Anguillidae

Vernacular Name: Assamese- *Nadal Bami, Langar Bami* | **Manipuri-** *Ngaril laina* | **Tankhul(Naga)-** *Manoi.*

Description:

Body is elongated, head conical and dorsoventrally flattened. Mouth terminal, lips prominent, narrow bands of teeth on jaws. The underparts are dull white, and the body is with pale bluish spots. Attains a total length of 200 cm.

Habitat & Ecology:

The species lives in freshwater, but also occurs in estuaries and in the sea during early life and near maturity. Occurs in freshwater streams, pools and reservoirs and commonly found in mud substrates of tanks and in deep rock pools of rivers.

Economic Importance:

The species is highly prized as food fish because of its nutritional value. The fish is used in traditional therapeutics in Assam and neighbouring states in treatment of burn injuries. The mucous of the species is reported to be used in arthritis in combination of rice or wheat flour.

Distribution:

NE India: Assam, Meghalaya, Tripura, Manipur, Arunachal Pradesh.

Conservation Status & Threats:

Least concern (IUCN). Threats include overfishing, pollution.

Least Concern (LC)

তোৰা (One-Stripe Spiny Eel)

Scientific Name: *Macrognathus aral;* Family: Mastacembelidae

Vernacular Name: Assamese- *Chital, Baan-mach, Gosi, Tora, Tura, Turi.*

Description:

Body elongated, eel-like. Dorsal and anal fin occupying more than three-fourths of body length comprising of anterior spinous half followed by soft rays; but not confluent with caudal fin. Caudal fin small and rounded. Pelvic fins are absent. Scales are minute, deeply embedded, cycloid. Eyes small. Mouth ventral, upper jaw overhanging upon lower. Body dark olive greenish to brownish dorsally. Background golden brown; a thick, prominent blackish brown stripe arising from tip of snout through the mid-lateral side ending at base of caudal fin. A series of 3-7 large black ocelli having white edges present along base of dorsal fin. Attains a length of about 25 cm.

Habitat & Ecology:

Occurs both in running and stagnant waters. A common occurrence in paddy fields. Bottom-dwellers; nocturnal feeders on insects and worms.

Economic Importance:

The species has demand as food fish. Also preferred as ornamental fish.

Distribution:

NE India: Brahmaputra and Barak drainages in all NE states.

Conservation Status & Threats:

Least Concern (IUCN). Major threats include habitat loss due to pollution.

Least Concern (LC)

তোৰা (Barred Spiny Eel)

Scientific Name: *Macrognathus pancalus;* Family: Synbranchidae

Vernacular Name: Assamese- *Turah, Tura* | **Bengali-** *Turi, Pangkal.*

Description:

Body elongate, eel-like, laterally compressed. Snout pointed with sub-terminal mouth. Upper jaw overhanging on lower. Dorsal and anal fin long but not confluent with caudal fin. Caudal small, round. No pelvic fins. Scales small, cycloid, deeply embedded. Anterior half of dorsal and anal fins with retractile spines, posterior half with soft rays. Body greenish or olive-green dorsally fading to pale or golden yellowish on sides and belly. Numerous irregular light-green to whitish spots on sides form a dusky, reticular network on entire lateral half. Yellowish fins with numerous rows of black spots. Attains a length of up to 20 cm.

Habitat & Ecology:

Inhabits slow and shallow waters of flood plains and clear streams; also recorded from inundated paddy fields. Insectivore; primarily feeding on larvae of insects and nematodes.

Economic Importance:

Has high demand as food fish. Also, a potential ornamental fish.

Distribution:

NE India: Brahmaputra and Barak drainages of all NE states.

Conservation Status & Threats:

Least concern (IUCN). Threats include overfishing, habitat destruction due to pollution and sand mining.

Least Concern (LC)

বামী (Zig-Zag Eel/ Tire-Track Eel)

Scientific Name: *Mastacembelus armatus;* Family: Mastacembelidae

Vernacular Name: Assamese- *Bami* | Bengali- *Baim maach.*

Description:

Body elongated, eel-like, slender, compressed. Dorsal and anal fins occupy more than three-fourths of body length, comprising anterior spines and posterior soft rays; both fins confluent with caudal fin. Pelvic fin absent. Tip of snout pointed formed by overhanging upper jaw; thick lips. Scales minute, deeply embedded, cycloid. Caudal fin rounded. Body background colour dull brown; belly pale brown to cream. Brown circular, tyre-track-like patterns on both lateral sides. An undulating black band is situated from eye to caudal, a similar thinner one below it. The back is dark beige while the head is silver-beige. Attains a length of about 90 cm.

Habitat & Ecology:

Inhabits both lentic and lotic waters such as rivers, streams, beels, ponds as well as inundated fields. Bottom-dweller, burrowing. Carnivorous; mainly feeding on young fish, crustaceans, tadpoles and larvae.

Economic Importance:

Highly demanded as food fish. Also, potential ornamental fish.

Distribution:

NE India: All NE states.

Conservation Status & Threats:

Least concern (IUCN). Threats include overfishing and habitat loss due to pollution, and use of destructive fishing techniques like liming, poisoning, etc.

Least Concern (LC)

কুচিয়া (Mud Eel)

Scientific Name: *Ophichthys cuchia;* Family: Synbranchidae

Vernacular Name: Assamese- *Kuchia* | **Bengali-** *Kuchia, Kuicha, Kunche.*

Description:

Body cylindrical, eel-like. Eyes small; gill-opening crescentic, greatly reduced. Rudimentary dorsal fin originating a little anterior from anus vertically. No pectoral, pelvic, anal and caudal fins. Scales distinct and longitudinally arranged. Body greenish or brown, becoming lighter on abdomen with numerous black spots. Attains a length of up to 70 cm.

Habitat & Ecology:

Inhabits shallow, well-vegetated waters. Usually, a mud-dweller that burrows holes along embankments of shallow beels and inundated paddy field. Carnivorous; feeds primarily on small fishes, tadpoles and aquatic insects. The male guards and builds nest or burrow.

Economic Importance:

Used as food fish. Believed to have medicinal value.

Distribution:

NE India: All NE states.

Conservation Status & Threats:

Least concern (IUCN). Threats limited, unknown (if any).

Least Concern (LC)

না'নীল (Hillstream Spineless Eel)

Scientific Name: *Pillaia indica;* Family: Chaudhuriidae

Vernacular Name: Garo- *Na'nil.*

Description:

Elongated, eel-like body with small pectoral fins and confluent dorsal, anal and caudal fins. Mouth wide, terminal with thick lips. Head depressed. Body dark purplish-brown on back turning pale brown or yellowish ventrally. Series of dark V-shaped marks and dark lines on sides. Fins hyaline with brownish rays. Attains a length of about 12 cm.

Habitat & Ecology:

Inhabits slow-moving, clear streams either buried in mud or clinging to submerged vegetation along the shallow embankments. Bottom-dweller; carnivore; typically feeding on small insects, larvae, etc.

Economic Importance:

Less demand for food fish. A potential ornamental fish.

Distribution:

NE India: Foothills of Assam-Meghalaya border and Indo-Bhutan border of the Brahmaputra drainage.

Conservation Status & Threats:

Endangered (IUCN). Threats include habitat loss due to sand mining and pollution, and harmful fishing practices like electric fishing, dynamiting, etc.

Endangered (EN)

PUFFERS

গংগাটোপ (Ocellated Puffer Fish)

Scientific Name: *Leiodon cutcutia;* Family: Tetraodontidae

Vernacular Name: Assamese- *Gangatope* | Bengali- *Potka, Tepa* | Manipuri- *Hangoi nga.*

Description:

Broad-head and back is tapering abruptly to tail. Mouth opening is a little inferior with two large teeth on each jaw. Eyes are large and situated slightly behind middle of head. All fins are rounded. Body colour greenish yellow above, white in the abdomen. A light band is found between eyes. A large black ocellus is surrounded by a light edge, on the side anterior to the origin of anal fin. Attains a length of up to 15 cm.

Habitat & Ecology:

Found in beels, streams and rivers.

Economic Importance:

None locally but kept as an ornamental fish.

Distribution:

NE India: Throughout the Ganga-Brahmaputra-Barak drainages.

Conservation Status & Threats:

Least concern (IUCN). Threats unknown.

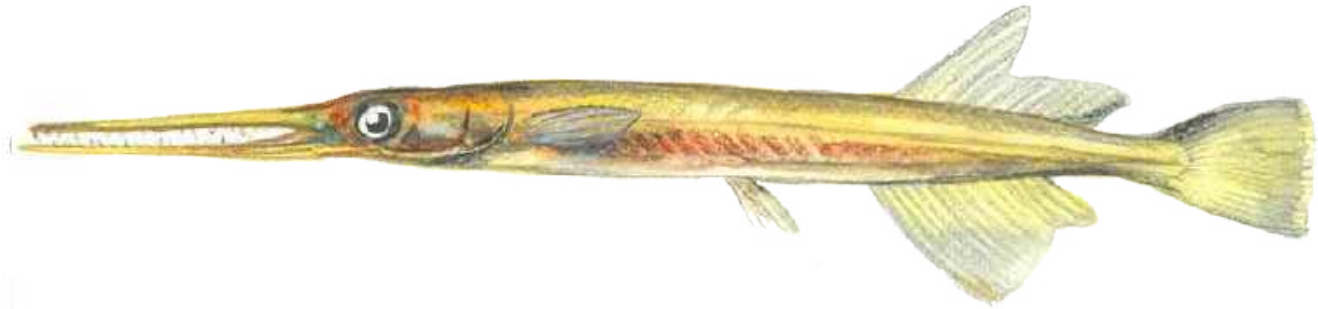
Least Concern (LC)

NEEDLEFISHES

ক'িকলা (Freshwater Garfish)

Scientific Name: *Xenentodon cancila;* Family: Belonidae

Vernacular Name: Assamese- *Kokila.*



Description:

Dorsal and anal fin is similar and arranged symmetrically near to the tail. Appearance of the general shape is torpedo-like. Eye is comparatively large. Dorsal and abdominal profiles are almost straight. Dorsal fin inserted usually anterior to a vertical through the origin of the anal fin. Green-silvery dorsally, grading to whitish below. A silvery band with a dark margin runs along the side; a series of four or five blotches (absent in young specimens) on sides between the pectoral and anal fins. Dorsal and anal fins with dark edges.

Habitat & Ecology:

This fish is surface feeder and it feeds on small animals, algae etc. Freshwater, primarily rivers, ponds, canals, beels and inundated fields.

Economic Importance:

The species is popular as food fish and many believe the species has medicinal value.

Distribution:

NE India: Brahmaputra & Barak drainage system.

Conservation Status & Threats:

Least concern (IUCN). Threats include habitat loss, overfishing, & pollution.

Least Concern (LC)

Glossary

Abdomen: Belly
Adipose: Fatty. A term often used in reference to small rayless fins and eyelids.
Anadromous: Fish that live most of their adult life in saltwater but spawn in freshwater.
Anal: Pertaining to the anus or anal fin.
Anterior: On a fish, the side of the fish that contains the head, opposite to the posterior side with the tail.
Aquatic: An adjective that describes a habitat that is surrounded by water.
Barbel: An elongated fleshy projection, usually around the snout.
Benthic: Occurring or present mostly in the bottom of the water body; bottom-dwelling.
Bony Fish: Ray-finned fishes that have skeletons made primarily of bone rather than cartilage.
Brackish: An adjective that describes a habitat that is surrounded by water that is saltier than the freshwater, but less saline than normal seawater. Brackish habitats include estuaries where rivers meet the sea and freshwater mixes with seawater.
Branchial: Pertaining to the Gills
Caniniform: Shaped like a canine tooth, conical in form.
Cartilaginous Fish: Fishes such as sharks, rays, skates and chimaeras that have cartilaginous rather than bony skeletons.
Catadromous: Fish that live most of their adult life in freshwater but spawn in saltwater, such as Anguilla.
Caudal: Pertaining to tail
Ciliated: Fringed with eyelash-like projections.
Cranium: The skull, pertaining to the skull.
Cutaneous: Pertaining to the skin.
Ctenoid: Rough-edged.
Cycloid: Smooth-edged.
Diadromous: A fish that migrates between freshwater and saltwater, regardless of when it does so in its life history, how many times or in which direction it migrates.
Dorsal: On a fish, the side of the fish that contains the back fin, opposite the ventral side with the belly.
Endemic: Species associated with a specific and restricted location rather than in many places.
Endothermy: Organisms that control body temperature through internal means such as regulating their metabolism and to maintain homeostasis.
Estuary: Place where a river meets the sea and freshwater and seawater mix.
Fusiform: Tapering towards the both ends.
Gill Opening: Opening behind each operculum, leading to the gills.

Herbivore: An animal that eats plants.
Labial: Pertaining to the lips.
Lateral line: A series of muciferous tubes forming a raised line along the sides of the body.
Mandible: The lower jaw.
Maxillary: The upper jaw
Morphology: Form and structure of an organism.
Nasal: Pertaining to the nostrils.
Omnivore: An animal with a diet that consists of both plant and animal material.
Operculum: The bony flap that covers the gills.
Orbit: The eye socket
Oviparous: A species that produces eggs that are hatched outside the body of the female.
Papilla: Small projections or bumps of skin around the lips and mouth of a fish
Pectoral: Pertaining to the breast.
Pectoral Girdle: A skeletal support to which the arms, forelimbs, or pectoral fins of vertebrates are attached.
Pelagic: Always occurring or present freely swimming in the water column
Pelvic Fin: Paired fins below the pectoral fins.
Pelvic Girdle: A skeletal support to which the legs, hind limbs, or pelvic fins of vertebrates are attached.
Perciform: Perch-like fish
Pharynx: The back part of the throat, into which the gill slits open.
Poikilotherm: an animal whose body temperature varies with the temperature of its surroundings.
Posterior: On a fish, the side of the fish that contains the tail, opposite the anterior side with the head.
Ray-finned: Fishes in the class Actinopterygii that have fins supported by internal skeletons that fan out from a point of attachment to the body.
Sexual Dimorphism: Differences in physical appearance between the sexes.
Taxonomy: The science of classifying organisms.
Thorax: The chest region, just behind the head.
Thoracic adhesive apparatus: A structure on the thorax of a fish, usually a hillstream catfish, which is formed by multiple parallel folds of skin arranged in oblique or perpendicular to the longitudinal body axis
Ventral: On a fish, the side of the fish that contains the belly, opposite the dorsal side with the back fin.
Vertebrate: The animal with a backbone.

A Handbook on

The Fishes of Assam

With more than 500 fish species, the northeastern region of India is regarded as a biodiversity hot spot for freshwater fishes. The diversity is attributed to the unusual topography of the region which consists of hills, plateaus, valleys, and plains, resulting in the major drainage systems including the Ganga-Brahmaputra, Barak-Surma, Kaladan, and Chindwin-Irrawaddy. In the state of Assam, more than 180 species have been recorded till now. In the present Handbook total of 100 species have been described keeping in mind the common readers.

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