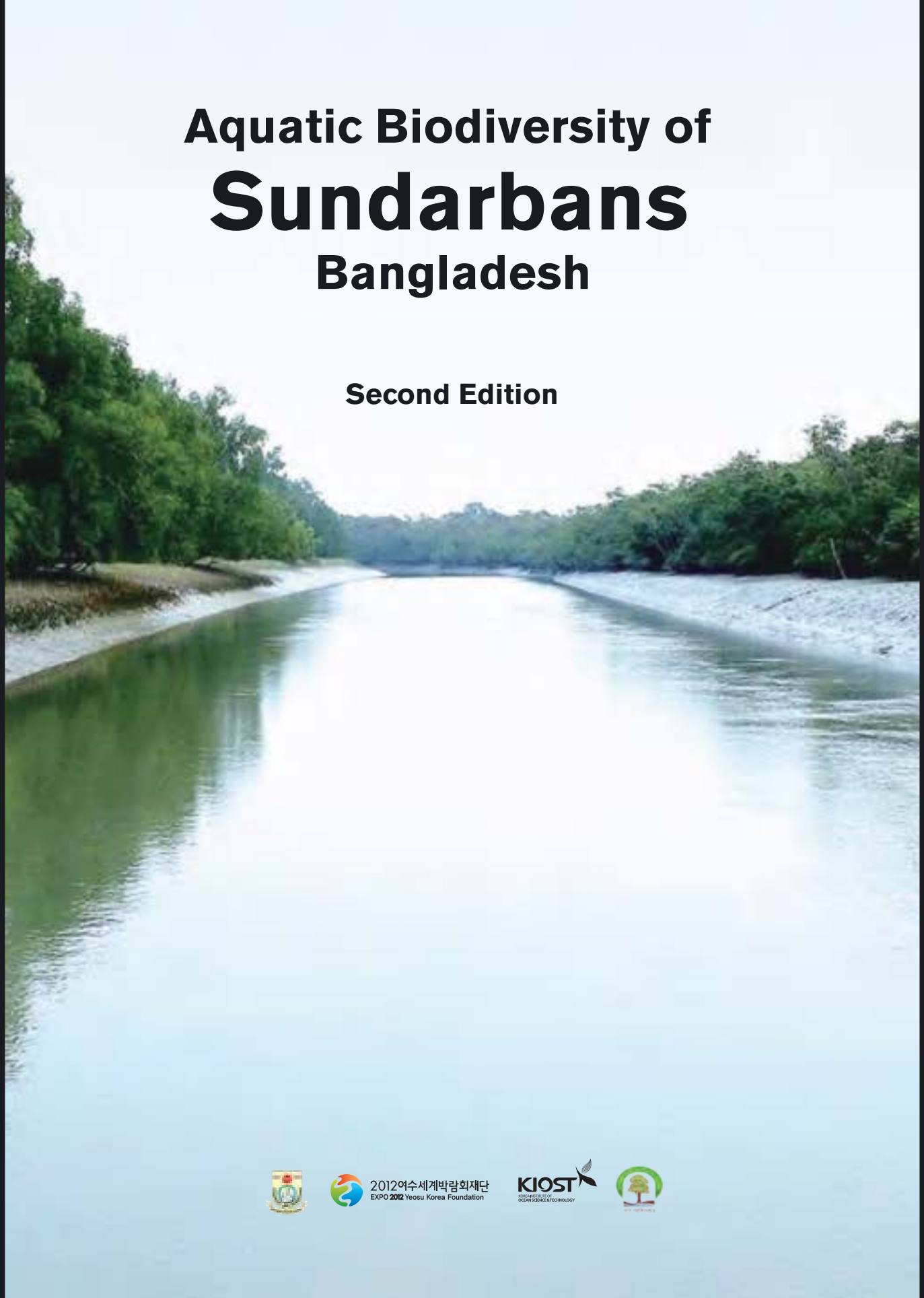
Aquatic Biodiversity of Sundarbans Bangladesh

Second Edition



2012여수세계박람회재단
EXPO 2012 Yeosu Korea Foundation

KIOST
KOREA INSTITUTE OF OCEAN SCIENCE & TECHNOLOGY

Aquatic Biodiversity of Sundarbans Bangladesh
Second Edition

Sundarbans, the largest mangrove forest of the world, is a transition zone between freshwater of the Ganges river and saline water of the Bay of Bengal, composing a large assemblage of unrivaled aquatic biodiversity. The forest was designated as a UNESCO world heritage site in 1997. This book, for the first time, comprehensively presents the aquatic biodiversity of the Sundarbans of Bangladesh which covers 309 species of fauna and 26 species of flora including Fishes (174), Molluscs (31), Arthropods (45), Cnidarians (2), Amphibians (4), Reptiles (4), Birds (8), Mammals (1), Zooplanktons (39), Mangroves (8), Seaweeds (5), and Phytoplanktons (13). The species samples were collected or observed in the creeks and adjacent sea area of the Sundarbans from September 2015 to April 2017. For each species, information on taxonomy, morphological characteristics, the habitats, and human usage as well as its photograph are described. DNA barcode information on the COI gene and/or 16S rRNA gene sequences directly obtained from the collected samples is also provided for 105 species of fishes, 11 species of prawn and shrimps, 8 species of crabs, and 6 species of mollusks. In addition, other animals and plants of the Sundarbans previously reported in the literatures are presented in summary tables which include in total 244 species of fauna and 156 species of flora: Fishes (97), Mollusks (19), Arthropods (20), Amphibians (3), Reptiles (20), Birds (64), Mammals (3), Zooplanktons (5), Mangroves (23), Seaweeds (23), and Phytoplankton's (98). The book will constitute the reference inventory of aquatic fauna and flora for the world natural heritage Sundarbans.



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Research Assistants	Najmun Nahar, Muntasir Rahman, Sharmin Akter, Jasmin Sathi, Thamina Siddiky, Md. Arefin Rahman, Arifuzzaman, Shilpi Saha, Provakor Sarkar, Ashfatuzzahan, Sabiha Islam Urmi.
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Aquatic Biodiversity of Sundarbans Bangladesh

Second Edition

Acknowledgments

We would like to thank all those people who helped during the development of this book. Their effort and input made this book come to the light. We are grateful to all of the four partner organizations of the present study viz. EXPO 2102 Yeosu Korea Foundation, Sher-e-Bangla Agricultural University (SAU), Korea Institute of Ocean Science and Technology (KIOST), Bangladesh Forest Department of the Government of the People's Republic of Bangladesh for their cooperation.

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Sincere thanks must go to the fisheries community and other stakeholders of the Sundarbans who shared their knowledge during survey. Last but not the least, we would like to pay special thanks to several peoples from various organizations who helped a lot during our field visits.

Kazi Ahsan Habib, PhD
Professor
Department of Fisheries Biology and Genetics
Sher-e-Bangla Agricultural University, Bangladesh

Choong-Gon Kim, PhD
Principal Research Scientist/Professor
Korea Institute of Ocean Science and Technology (KIOST), South Korea

October, 2018

Preface

The Sundarbans supports the world`s most diverse mangrove aquatic ecosystems - a well-known unique ecosystem of the tropics and it sits in the world's largest river delta. The Sundarbans of Bangladesh runs a significant example of on-going ecological processes as it represents the process of delta formation and the subsequent colonization of the newly formed deltaic islands and associated mangrove communities. This is also a transition zone between freshwater of the Ganges and saline water of the Bay of Bengal resulting a distinctive physiology, acting as a favorable place of habitat and breeding and nursery ground for indigenous and marine fish, as well as other aquatic lives. With an ever-expanding human population and endless extraction of the Sundarbans natural resources, the pressure on the brackish and marine water organisms and their habitat has increased manifold. As a result, many common species disappeared from their localities which are overlooked.

The book, "Aquatic Biodiversity of Sundarbans, Bangladesh" attempts to document and illustrate both macro and micro (plankton) aquatic organisms observed using morpho-molecular approaches. It is important to mention that identifying the real present status of aquatic biodiversity of the Sundarbans has not been possible due to the limited period (around 18 months) of the present study. A long term and intensive survey is needed to overcome the mentioned limitation. However, the book has accumulated and enlisted all aquatic organisms from previous studies by different scholars.

This book compiled a total of 447 Illustrated pictures viz. 309 species of fauna and 26 species of flora including Fishes (174), Molluscs (31), Arthropods (45), Cnidarians (2), Amphibians (4), Reptiles (4), Birds (8), Mammals (1), Zooplanktons (39), Mangroves (8), Seaweeds (5), and Phytoplanktons (13), which are collected during our field surveys. We sequenced DNA barcode region of COI gene or conserved partial sequence of 16S rRNA gene for accurate identification and building a reference library of DNA barcodes of the aquatic fauna of the Sundarbans of Bangladesh. It is the first barcode initiative of the aquatic life of a biome in the country.

The book also contains some illustrated pictures and list of zooplanktons, phytoplanktons, true mangrove plants, aquatic birds, reptiles, amphibians and aquatic mammals associated with the aquatic environment of the Sundarbans mangrove forest. We are very delighted to be members of the first illustration book on aquatic life of the Sundarbans in Bangladesh which has accumulated a lot of beautiful creatures of the Sundarbans water all together. We hope to publish online and upgraded paper based editions of the book in future.

We believe that, the book will be an excellent and scientific documentation with some special findings for students, educators and researchers. Hopefully it will contribute in future study and effective management of natural aquatic resources of the Sundarbans, Bangladesh. Combination of morphological and molecular profile (i.e. DNA barcodes) of aquatic species given in the book will significantly enhance our scientific knowledge about aquatic lives of Sundarbans.

We have strived to make this book scientifically accurate. However, we bear the entire responsibility for mistakes. We will appreciate any comments as well as scientific criticism to improve this book more accurately in future.

On behalf of all the authors

Kazi Ahsan Habib, PhD
Professor
Department of Fisheries Biology and Genetics
Sher-e-Bangla Agricultural University, Bangladesh

Choong-Gon Kim, PhD
Principal Research Scientist/Professor
Korea Institute of Ocean Science and Technology (KIOST), South Korea

September, 2017

Preface

It is my pleasure to write a preface for “Aquatic biodiversity of Sundarbans, Bangladesh”- an illustration book on aquatic animal and plant species of the Sundarbans. The book is designed to help understand the marine and brackish water biodiversity of the Sundarbans. The Sundarbans mangrove forest of Bangladesh is very rich in biodiversity and provides ecological, social and economic benefits to the country. This important ecosystem of Bangladesh is losing its biodiversity because of overexploitation and destruction of habitat.

The biodiversity of mangroves as well as the Sundarbans has also been a greater interest because the mangrove ecosystems are among the mostly threatened by the global climate changes, particularly the sea level rise. So, the forest remains attraction both in terms of research potential and education value on biodiversity. We are thankful to EXPO 2012 Yeosu Korea Foundation to fund the research project “Strengthening Capacity of Marine and Brackish Water Biodiversity Conservation in the Sundarbans Mangrove Forest, A UNESCO World Heritage Site, Bangladesh” under which the book has been published. More importantly a well-equipped laboratory named as “Aquatic Bioresource Research Lab” has been established in the Department of Fisheries Biology and Genetics, Sher-e-Bangla Agricultural University under the project. The lab has got the modern facilities of biodiversity research based on genetic study.

The project has also provided different field research instruments for advanced aquatic biodiversity study. The book is one of the important outcomes of both lab and field research conducted in the project. These contributions of the project obviously will be producing significant knowledge not only on the biodiversity and ecosystems of the Sundarbans but also on other important marine and brackish water environments of the country.

I would like to express my heartfelt gratitude to Korea Institute of Ocean Science & Technology (KIOST) for sharing expertise in the research and for advanced training to the faculties and graduate students of the respective departments of SAU. Also I pay thanks to Bangladesh Forest Department as well as the Ministry of Environment and Forests, Govt. of the People's Republic of Bangladesh for their support in the implementation of the project being the strategic partner.

Finally, I congratulate all of the authors and researchers who are directly involved in this project and wish them the best for their significant efforts in discovering, monitoring, cataloging and saving marine and brackish water biodiversity of the Sundarbans, Bangladesh.

I wish the book a majestic success.

Professor Dr. Kamal Uddin Ahamed
Vice Chancellor
Sher-e-Bangla Agricultural University

September, 2017

Preface

The mangrove forest of Bangladesh, locally known as the Sundarbans is located at the great delta of the Ganges, Brahmaputra and Meghna rivers at the edge of the Bay of Bengal. The Sundarbans is designated as a UNESCO world heritage named “Sundarban National Park”, being the world largest continuous mangrove forest as well as becoming the natural wonders for its Bengal tiger, chital deer, crocodile, and snakes.

This forest provides a rich nursery and breeding ground for diverse aquatic species. The aquatic bio-resources in the mangroves are characterized by very high degree of endemism and diversity.

‘Aquatic Biodiversity of Sundarbans, Bangladesh’ is designed to help understand the aquatic biodiversity of the Sundarbans, whose detailed profile of species has not been made yet. Therefore, this book has compiled a total about 300 species including 174 fishes encountered during our field survey. We included photographs, taxonomy, morphological characteristics, global IUCN red list status, and local name for each species during the range of investigation.

This illustrative book highlights much needed unique species inhabiting marine and brackish water in the Sundarbans. Its information will be used for education, scientific research, conservation and sustainable use of aquatic resources as well as raising awareness of local residences for the importance of those ecologically and commercially important key species whose livelihood depends on them.

Publication of this illustrated book of aquatic biodiversity of the Sundarbans is one of the attributions of the Yeosu project titled 'Strengthening capacity of marine and brackish water biodiversity conservation in the Sundarbans mangrove forest, a UNESCO world heritage site, Bangladesh'. The project has been supported by Yeosu Expo 2012 Yeosu Korea Foundation as a legacy of the exposition whose theme was ''The Living Ocean and Coast'.

Finally, we would like to show great appreciation to the Korea Ministry of Ocean and Fisheries, Expo2012 Yeosu Korea Foundation, Department of Fisheries Biology and Genetics of SAU, Bangladesh Forest Department and locals in the Sundarbans for their continuous support and active participation throughout the project.

Gi-Hoon Hong, PhD
President
Korea Institute of Ocean Science and Technology (KIOST), South Korea

September, 2017

Preface

The Sundarbans is the single largest mangrove forest in the world and recognized as UNESCO world heritage site for its vast biodiversity of mangrove flora and fauna both on land and water. It has a valuable ecological and economic resource including important nursery and breeding grounds for different aquatic animals including fish, crustaceans, molluscs, reptiles and aquatic mammals.

There are many research works and surveys on terrestrial biodiversity of the Sundarbans both for flora and fauna. However, very few studies have been conducted on aquatic biodiversity with lack of in-depth research especially based on genetic identification. Furthermore, there is no identification or illustration book on aquatic biodiversity of the Sundarbans of Bangladesh that includes real pictures of the species for supporting the biodiversity research. In this regard, I am very pleased to note that "Aquatic biodiversity of Sundarbans, Bangladesh" is the first illustrated book on aquatic lives (fauna and flora) of the Sundarbans. This book provides a detailed study highlighting the present status of aquatic biodiversity of Sundarbans mangrove forest of Bangladesh including species identification of different taxa both for fauna and flora. The book is intended to serve as a reliable and up-to-date reference source for students, researchers and academia who are actively involved in the fields of fisheries, marine biology, aquatic biodiversity and conservation.

There is no doubt that this book would serve as a valuable source of useful information for policy makers, coastal zone managers and large sections of people engaged in coastal research and development. The book also incorporated DNA barcode of the species which will also be useful for future management and conservation of the brackish and marine water species of the Sundarbans.

I would like to thank EXPO 2012 Yeosu Korea Foundation as well as the Government of South Korea for funding in such important work on the Sundarbans and also pay gratitude to the Korea institute of Science and Technology (KIOST) for their technical support. Bangladesh Forest Department will provide all cooperation and will also be interested to be involved as a partner in such kind of important research work on aquatic lives of the Sundarbans in future. Lastly, especial thanks to the Faculty of Fisheries and Aquaculture, Sher-e-Bangla Agricultural University, Dhaka for the initiative of this research work, and for publishing such a nice and very useful book on the Sundarbans.

Mr. Mohammed Shafiul Alam Chowdhury
Chief Conservator of Forests (CCF), Bangladesh Forest Department
Ministry of Environment and Forests, People's Republic of Bangladesh

September, 2017

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Introduction

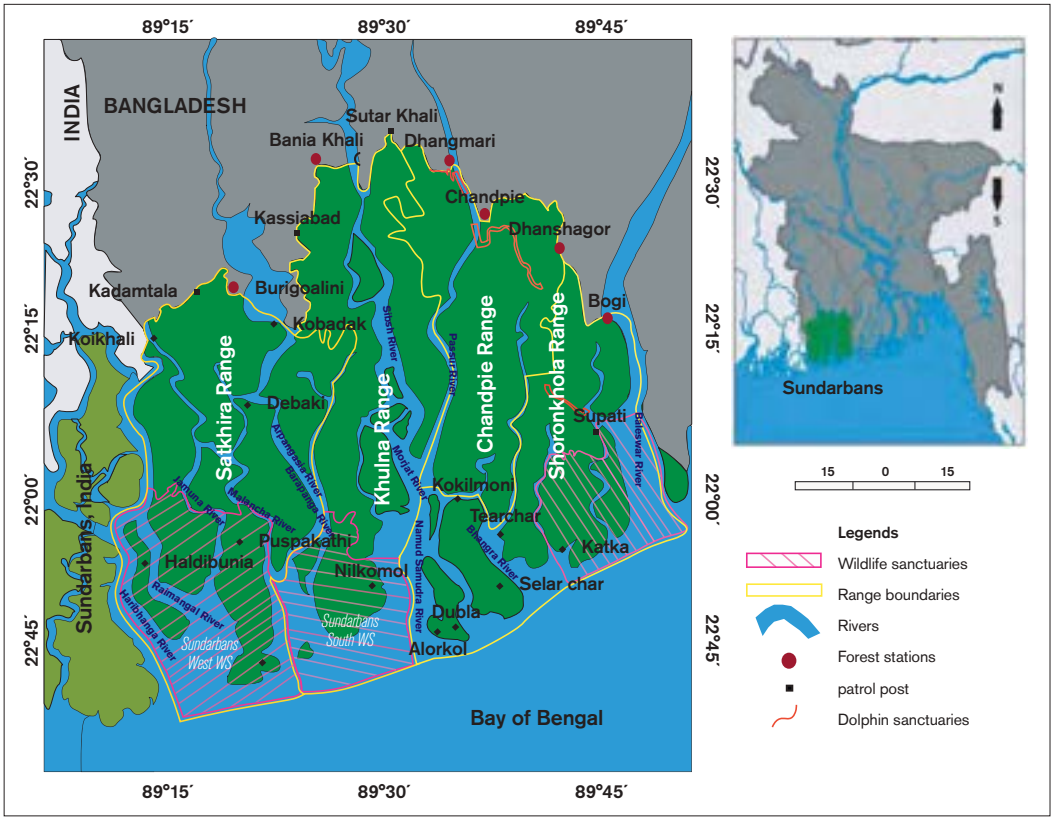
Mangrove forest is one of the primary features of coastal ecosystems throughout the tropical and sub-tropical regions of the world. These forests are also described as “Inter-tidal Forest”. Mangrove forests are the most productive and biologically important ecosystems of the world. They support a complex aquatic food web and provide a unique habitat for a variety of animals. The waters surrounding the mangroves provide rich source for diverse species of fish and shellfish. They act as a vital breeding and nursing grounds for fish and invertebrates such as oysters, shrimp, and crab due to a great amount of organic matter which is concentrated in a relatively confined area. The deep and extensive roots of mangroves typically host small marine organisms that require a hard surface. In addition, their sturdy root systems growing in a dense tangle provide stable shelter for diverse species as the tides come and go. Mangrove ecosystems have a complex ecological value. These forests provide important and unique ecosystem goods and services to human society, as well as coastal and marine systems. The forests also act as a deterrent to coastal erosion and may provide a buffer in case of extreme weather events such as tsunamis and tropical storm surge. They also provide food, medicine, fuel and building materials for local communities. Mangroves, including associated soils, could sequester approximately 22.8 million metric tons of carbon each year. Although they cover only 0.1% of the earth's continental surface, the forests account for 11% of the total input of terrestrial carbon into the ocean (Kumar et al., 2014).

The Sundarbans Mangrove Forest

The Sundarbans is the single largest continuous mangrove forest in the world, located in the delta of the Ganges, Brahmaputra and Meghna rivers on the Bay of Bengal. It is formed about 7000 years ago by the deposition of sediments from the foothills of the Himalayas through the Ganges river system (Chaudhuri and Choudhury, 1994). This deltaic mangrove forest extends across the coastal areas of India and Bangladesh, over the northern part of the Bay of Bengal. Sundarbans means the “forests of the Sundri” and the Sundri (meaning beautiful) is a dominant plant species especially in Bangladesh part of the Sundarbans. The scientific name of this plant is *Heritiera fomes*. The Sundarbans mangrove forest is located in the southwest of Bangladesh and the southeastern portion of the State of West Bengal in India with a total area of about 114,000 hectares. The Sundarbans forests tract including the Indian part covers an area 10,000 km^2 of which 66 % are land, the remain part is water. About 62% of the Sundarbans forest, is located in Bangladesh and the rest of it is in Indian region. It has been recognized as an internationally important Ramsar Wetland Site and declared as a World Heritage Site.

The Sundarbans of Bangladesh

In Bangladesh, the Sundarbans is located in the south-west of the country (districts of Bagherhat, Khulna and Satkhira) between the river Baleswar in the East and the Harinbanga in the West, adjoining to the Bay of Bengal. It occupies the area between latitude 21° 27’ & 22° 30’North and longitude 89° 02’ & 90° 00’ East. It has an area about 6017 square kilometers which



Physiography of the Sundarbans mangrove forest in Bangladesh.

account for 4.13 % of the country and 38.12 % of the state forest land. Four main seasons, including pre-monsoon, monsoon, post-monsoon and dry winter, form the tropical climate of the area are observed. Theses seasons are characterized by the hot and humid pre-monsoon season with irregular rainfall ranges from March to May and is followed by a monsoon (June to September), a post-monsoon (October to November) and dry winter (December to February). Temperature varies between 11 °C and 37 °C, while rainfall fluctuates between 1600 mm and 2000 mm. The elevation varies between 0.9 and 2.11 m above sea level. The Forest Department of Bangladesh Government has divided the Bangladesh Sundarbans into four administrative ranges which are Satkhira, Khulna, Chandpai, and Sarankhola.

The drainage system of the Sundarbans has three sub systems to the east, center and west, which formed the estuaries of Bangra, Kunga and Raimangal. The whole area is dissected by large tidal rivers, notably the Baleswar, Shibsha, Passur, Shela, Kobadak-Sibsha, Kobadak, Arpangasia and Raimangal with innumerable small channels and creeks. The maximum elevation within the Sundarbans is only 10 m above the mean sea level (Iftekhar et al., 2004; Ghose et al., 2015). Due to the existence of numerous cross connecting channels linking

catchment areas and estuaries along with the the pattern of river salinity is very complex. South and western part of this forest have higher saline condition whereas northern and eastern part has low saline intensity in river and canal waters (Rahman and Akter, 2009). Rise and fall of salinity in all of the rivers does not take place simultaneously. Hydrology of the Sundarbans is regulated mainly by high local rainfall during the monsoon and tidal inundation. The Sundarbans mangrove forests and other parts of coastal area support a wide range of biodiversity viz., mammals, birds, fishes, amphibians, reptiles, crustacean, etc.

Ramsar Site

A total of 2,279 sites with the area of 220, 453,050 hectares covering fresh water, estuarine and coastal marine habitats are recognized as a Ramsar Site including Sundarbans. Bangladesh signed the Ramsar convention in 1972 and enforced in December 1975. At first it was declared with around 596,000 hectares of total lands. The government of Bangladesh has recently updated Ramsar Information Sheet on the Sundarbans Ramsar site enlarging its area from 596,000 to 6,01,700 hectares. Now to be called "Sundarbans Reserved Forest". This Ramsar and World Heritage site is one of the most important mangrove forests in the world and has been significantly threatened from a various incidences for many years.

World Heritage Site

The immense tidal mangrove forests of Bangladeshs' Sundarbans Forest Reserve, is in reality a mosaic of islands of different shapes and sizes. These islands are perennially washed by brackish water shrilling in and around the endless and mind-boggling labyrinths of water channels. The site supports exceptional biodiversity in its terrestrial, aquatic and marine habitats; ranging from micro to macro flora and fauna. For this reason the UNESCO has declared the Sundarbans as a World Heritage Site in 1997. In turn, Govt. of Bangladesh has pledged to the international community to refrain from "any deliberate measures- direct or indirect, which might damage the Sundarbans and to take appropriate legal, scientific and financial measures to ensure its protection".

Biodiversity of the Sundarbans

The Sundarbans represents a complex estuarine ecosystem dominated by dense forest cover which may be classified as tropical moist ecosystem. The biodiversity of the Sundarbans is noticeably rich in terms of plant and animal diversity. The number of species found in the Sundarbans is nearly as many as those reported for Malaysia and Indonesia (Chapman, 1976). Patil (1962) reported that half of the total number of mangrove species found in the world occurs in Bangladesh and Indian part of the Sundarbans. The Sundarbans is the biggest delta, back water as well as tidal phenomenon of the region providing diverse habitats for several hundreds of aquatic and terrestrial species.

Floral Biodiversity of the Sundarbans

There is a range of tolerance in mangrove trees against salinity. In the Sundarbans, vegetation type, plant distribution and their density depends on the effect of salinity. A total of 528 species

of vascular plants belonging to 356 genera and 111 families are found in the Sundarbans Mangrove Forest of Bangladesh. Among these species, 24 were pteridophytes and the rest were angiosperms, of which only 24 were true mangroves and 70 were mangrove associates (Rahman et al., 2015). The most dominant plants in the Sundarbans are Sundari (*Heritiera fomes*), Cedar Mangrove (*Xylocarpus mekongensis*), Mangrove Cannonball (*X. granatum*), Large-Leafed Orange Mangrove (*Bruguiera gymnorhiza*), Sonneratia Mangrove (*Sonneratia apetala*), Indian Mangrove (*Avicennia officinalis*) and Goran (*Ceriops decundra*), etc (Chaffey et al., 1985). A recent study showed that the *H. fomes* is very sensitive to at or above 1.0 % salinity while *E. agalocha* appears to be more tolerant to moderate levels of salinity, and *Ceriops decundra* is the most salt-loving plant of the Sundarbans (Ahmed et al., 2011). Phytoplankton communities of the Sundarbans consist of a total of 98 species including nano and picoplankton. In addition, a total of 35 benthic algae have been recorded including see weeds (Aziz et al., 2012). The most spectacular species are of *Catenella*, *Caloglossa, Bostrychia* and *Cladophorella* growing on pneumatophores.

Faunal Biodiversity of the Sundarbans

The Sundarbans is a unique ecosystem for surviving of faunal community. Animals have to struggle for lives in the Sundarbans due to the forest adverse and hostile environment. Almost all species are adaptive to tolerate high salinity and brackish water for their life cycle. All resident species of aquatic mammals, reptiles and amphibians are efficient swimmers, habituated habituated for meeting food requirements partially from aquatic sources. In the Sundarbans, a total of 447 species of vertebrate wildlife are reported to occur, of which 10 are amphibians, 57 reptiles, 339 birds and 41 mammals (BFD, 2010). A number of globally threatened species of vertebrates viz., Royal Bengal Tiger (*Panthera tigris*), River Terrapin (*Batagur baska*), Olive Ridley Turtle (*Lepidochelys olivacea*), Estuarine Crocodile (*Crocodylus porosus)*, Masked Finfoot (*Heliopais personata*), Spoon-billed Sandpiper (*Eurynorhynchus pygmeus*),White-rumped Vulture (*Gyps bengalensis*), Pallas's Fish Eagle (*Haliaeetus leucoryphus*), Greater Spotted Eagle (*Aquila clanga*), Lesser Adjutant (*Leptoptilos javanicus*), Fishing Cat (*Prionailurus viverrinus*), Ganges River Dolphin (*Platanista gangetica*) and Hoary-bellied Himalayan Squirrel (*Callosciurus pygerythrus*) inhabit here. Important mammal species include spotted deer, barking deer, crab eating monkey, wild boar, jackal, Indian fishing cat, civets, Indian small mongoose, common otter, smooth coated otter, bats, Irrawady squirrel, crestless Malayan porcupine, large bandicoot rat, etc. Principal reptile species are rock python, king cobra, gecko, sea snakes, water monitor, etc. The birds include storks, herons, egrets, adjutants, little cormorant, etc. Semi-aquatic birds are plovers, red-wattled lapwing, avocet, stint, curlew, sandpiper, common greenshank, gulls, terns, etc. Several raptorial birds include the eagles, falcons, vultures, kites, harriers, etc. Some terrestrial birds are doves, kingfishers, woodpeckers, pigeons, flycatchers oriental magpie robin, red jungle fowls, owls, rose-winged parakeet, etc. Some aquatic mammals in this forest are Irrawaddy dolphins, Indo-Pacific humpback dolphins and finless porpoises (Aziz and Paul, 2015; IPAC, 2010a; Hossain, 2014; Khan, 2008).

Aquatic Biodiversity of the Sundarbans

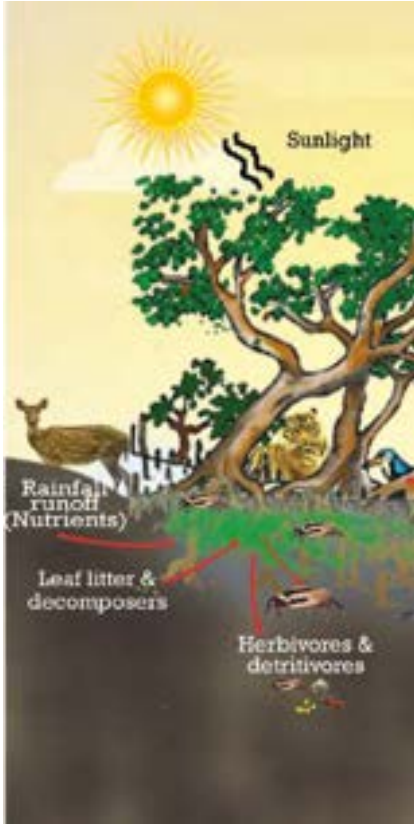
The Sundarbans is a transition between fresh water of the Ganges and saline water of the Bay of Bengal, resulting in assemblance of a unique diversified aquatic biodiversity. The water area of the Sundarbans is about 2,000 km^2, which is about 33% of the total forest. It is one of the most biologically productive of all natural ecosystems in Bangladesh, with great economic importance. The main aquatic resources of the Sundarbans include white fish, prawn & shrimp, cartilaginous fish, reptiles, crabs, molluscs, dolphins, post larvae of prawn and shrimp, dry fishery etc. Hussain and Acharya (1994) mentioned 53 species of pelagic fish under 27 families, 124 species of demersal fish under 49 families, 24 species of shrimps, 7 species of crabs, 2 species of gastropods, 6 species of pelecypods, 8 species of locust lobster and 3 species of turtles had been recorded from the Sundarbans, Bangladesh. Rahman and Asaduzzaman (2010) estimated, 20 species of shrimps, 8 species of lobsters, 7 species of crabs, 42 species of mollusks and 225 species of fish among which 120 species of commercially important fishes are available in the Sundarbans. In the Last few years, few scholars have published several articles on aquatic biodiversity of the Sundarbans, Bangladesh (Bernacsek, 2001; IPAC, 2010; Rahaman et al., 2014). However, very few studies have been conducted on aquatic biodiversity compared to terrestrial biodiversity with lack of in-depth research based on genetic identification of species in the Sundarbans.

Benthic invertebrates also act as a very good source of food for many bottom feeding fin and shell fishes which enter into the mangroves during high tide for breeding. The Sundarbans are inhabited by a variety of benthic invertebrates viz. brachyuran, polychaetes, crabs, gastropods, sipunculids, bivalves etc. Composition of these communities and their importance varies enormously from one habitat to another depending upon the sediment characteristics of the Sundarbans. Invertebrates often show marked zonation patterns, and colonize a variety of specific micro-environments.

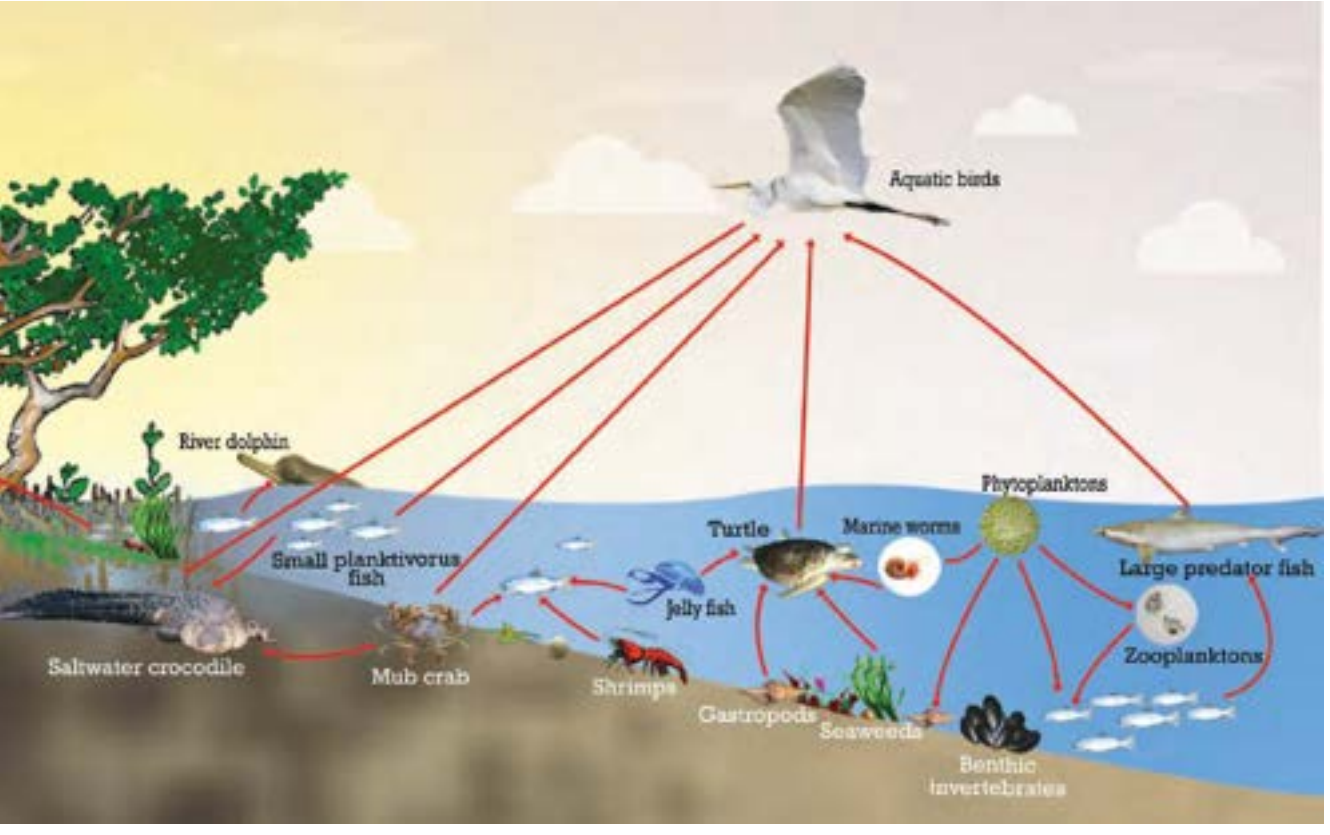
Ecological and Social Importance of the Sundarbans

The Sundarbans has also great ecological and economic importance because it provides valuable natural resources such as fish, shrimp, crab, wood, grass, honey and wax. Moreover, they are also the source of income for the local community, who resides in the buffer or periphery zones of the Sundarbans.

The Sundarbans has the highest number of biodiversity among any mangrove ecosystem, in flora and fauna. These mangroves play a vital role in the lives of people and the wildlife. The ecology of the Sundarbans is complex which has evolved for thousands of years. The high and low tides coming in and out make a big difference to the ecology. This is one of the largest remaining areas of mangroves in the world. The Sundarbans supports an exceptional level of biodiversity in both the terrestrial and marine environments.



Forests are home to millions of people worldwide, and many of these people are dependent on the forests for their survival. The Sundarbans is full of natural resources and it offers various sources of livelihood for more than five hundred thousand local inhabitants. It supports a large community of fishermen. It also supplies a major source of income for the farmers and people who depend on timber and other resources from the forest to support their families. Environmentally, the Sundarbans has a huge impact. Geomorphology of this zone indicates that the coastal belt of Bangladesh is highly prone to natural disasters such as tidal surges and tropical storms. Research has indicated that mangroves can absorb 30-40% of the total force of the cyclone and reduce the force of powerful waves before they hit the inland (Sharif, 2012). The Sundarbans, being a mangrove forest, acts like a green belt protecting the coastal area as well as the entire country from natural disasters such as Aila and Sidr. Hence, it acts as a natural shield protecting Bangladesh. Finally, the Sundarbans is very suitable for ecotourism as it has an immense value for its unique ecosystem as well as magnificent scenic beauty. Also, the mangrove vegetation and its natural components are attractive destination for travelling.



Aquatic Food Web of the Sundarbans Mangrove Forest.

Methodology

Collection of samples

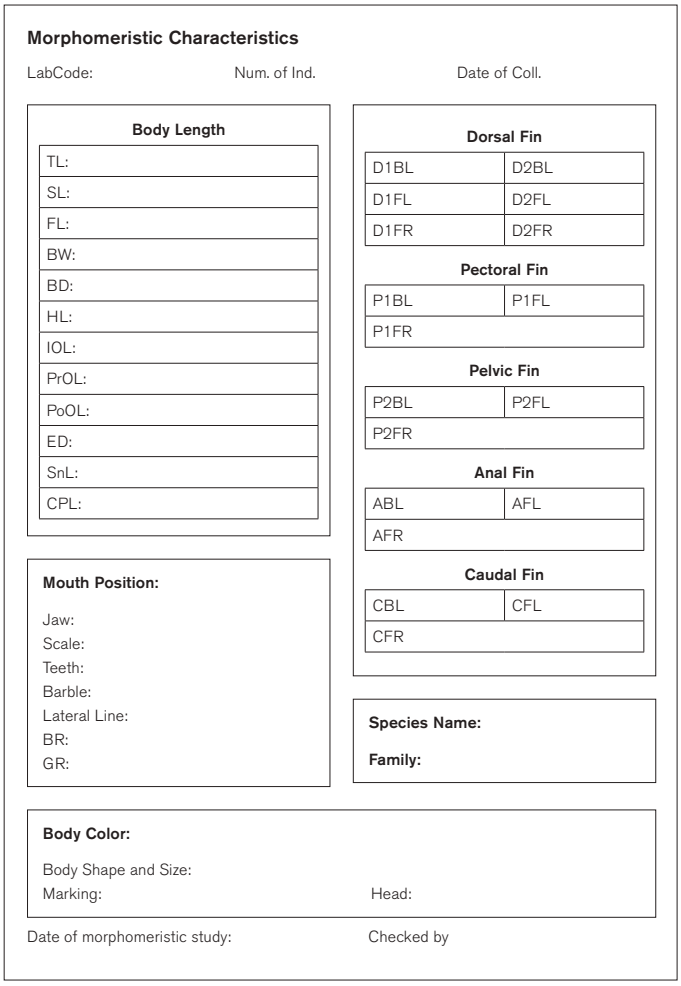
The specimen of fishes and other aquatic organisms were sampled from the major rivers of the Sundarbans viz. Baleswar, Shibsa, Passur, Shela, Kobadak, Kalindi and Kholpetua, and from few of the tidal estuaries and creeks in the Sundarbans Reserve Forest (SRF) of Bangladesh between July 2015 and June 2017. The fishes were also collected from the fishermen and fish markets inside or near the Sundarbans of Khulna, Bagherhat and Satkhira districts. The name of some markets are Sondha Bazar, Rupshaghat, Paikgacha, Mongla, Shamnagar, Koira, Shoronkhola, Jaymony, Parerhat, Koikhali, Baniakhali, Chila, etc. The fishes of the coastal and marine waters of the Bay of Bengal adjacent to the Sundarbans (>≈ 80 km offshore) were collected from Dublarchar and Alorkol during winter season from November to March of each study year. Three to five individuals were deployed to collect for each species. Upon collection and morphological sorting, fishes were identified to the extent possible in the field. The samples were also photographed in the field whenever possible for best living color representation. Collected samples were then transferred using ice box with crashed ice to the "Field Laboratory and Research Station" temporarily established for the project tenure at Nirala residential area in Khulna. After capturing the digital images and tagging of each voucher specimen, a small piece of muscle tissue or fin-clips were collected and stored in sterile 1.5 ml tube containing absolute alcohol for subsequent molecular work. The specimens were preserved at -20 °C in refrigerator. After such primary processing, all the frozen specimen and tissue samples were carried to the Aquatic Bioresource Research (ABR) laboratory in the Faculty of Fisheries and Aquaculture at SAU, Dhaka for morphometric and molecular analysis of the samples.

Morphological identification based on morphometric characteristics

Accurate species level identification was carried out at ABR Lab. investigating morphological and morphometric characters following FAO Fish Identification Sheets, Rahman et al., 2009; Devi & Rao, 2007; Talwar & Kacker, 1984, etc. All the morphological and morphometric characters observed for each specimen were written in the premade data sheet. The whole body specimens were preserved and stored in the Department of Fisheries Biology and Genetics, SAU.

Molecular identification: DNA barcoding

Genomic DNA was extracted from the collected muscle/fin tissue using a TIANamp Marine Animals DNA Kit (TIANGEN) following the protocol provided inside kit box. The concentration of genomic DNA was then measured by Qubit 3.0 fluorometer. Then the extracted DNA was stored in -20°C for further use. Polymerase chain reaction (PCR) was performed in a 25 ml reaction mixture in small reaction tubes (0.2 ml) in Thermal cycler (2720 Thermal Cycler, Applied Biosystems). The mitochondrial (mtDNA) COI barcode region and/or partial 16S rRNA gene region of morphologically identified specimens was amplified for DNA barcoding and molecular identification using the primer sets and thermal profile given in Table: 1. PCR products were visualized on 1% agarose gel (Invitrogen,



Morphomeristic Characteristics

LabCode: Num. of Ind. Date of Coll.

Body Length

TL:
SL:
FL:
BW:
BD:
HL:
IOL:
PrOL:
PoOL:
ED:
SnL:
CPL:

Dorsal Fin

D1BL	D2BL
D1FL	D2FL
D1FR	D2FR

Pectoral Fin

P1BL	P1FL
P1FR	

Pelvic Fin

P2BL	P2FL
P2FR	

Anal Fin

ABL	AFL
AFR	

Caudal Fin

CBL	CFL
CFR	

Mouth Position:

Jaw:
Scale:
Teeth:
Barble:
Lateral Line:
BR:
GR:

Species Name:

Family:

Body Color:

Body Shape and Size:
Marking: Head:

Date of morphomeristic study: Checked by

Data sheet used for keeping records of morphological and morphometric analysis.

USA) stained with ethidium bromide in gel documentation chamber (Model: Syngene InGenius3). The flow UV-ray is kept on to watch the band in the connected computer by using GeneSys software. PCR samples with a single and clear visible band were purified with the PCR Purification Kit (TIANGEN- Universal DNA Purification Kit) for sequencing. The concentration of the purified DNA has been estimated with the help of Qubit 3.0 fluorometer. Sequencing was conducted with the PCR primers by Sanger standard method in a normal automatic sequencing (Model 3730xl DNA analyzer) at Macrogen Inc. (Korea). Nucleic acid sequences were edited using the Software Geneious 9.1.5 with the help of Chromas Lit. The obtained consensus sequences were edited based on the chromatogram peak clarities. Sequences were matched using BLAST search engine provided by NCBI and Bold database. Finally, the good sequences were submitted to the NCBI GenBank. For analysis, final consensus sequences were aligned using the alignment explorer of the MEGA6. Neighbor-Joining (NJ) tree methods were used for phylogenetic analyses of different genes and gene combinations. Bootstrap values for tree were estimated using searches with 1000 replicates.

Table 1. List of primers and their thermal profile used at Aquatic Bioresource Research Lab.

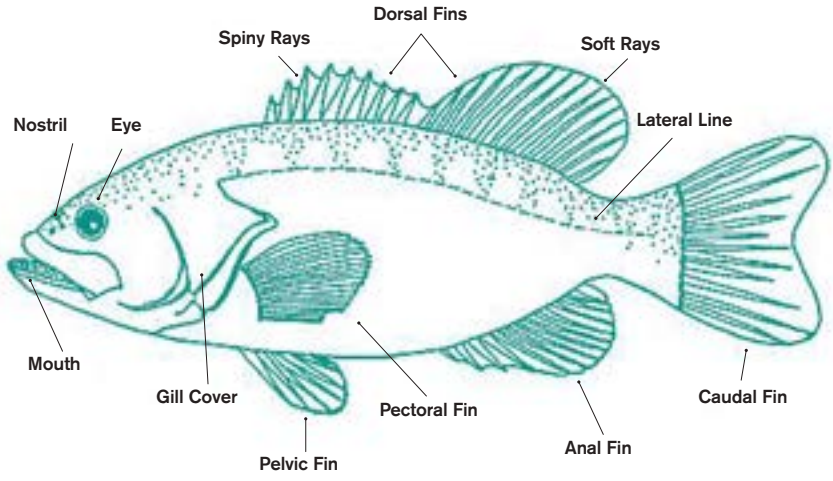
Name of Primer set	Direction	Organisms	Author
COI Primers			
FishF1 FishR1	Forward Reverse	Fish	Ward et al., 2005
FishF2 FishR2	Forward Reverse	Fish	Ward et al., 2005
VF2_t1 FR1d_t1	Forward Reverse	Fish	Ivanova et al. 2007
Primer cocktails			
FishF2-t1 FishR2-t1	Forward Reverse		
MAXF MAXR	Forward Reverse	Crab	Developed by Marine molecular genetics lab, KIOST (Unpublished)
LCO1490 HCO2198	Forward Reverse	Mollusks, shellfish, echinoderms etc.	Folmer et al., 1994
dgLCO-1490 dgHCO-2198	Forward Reverse	Mollusks, shellfish	Meyer, 2003
16S rRNA Primers			
16Sar-5' 16Sbr-3'	Forward Reverse	Fish	Palumbi, 1996

Incorporate NGS primers name, Reference and PCR condition

This section focuses on simple guidelines to identify fish by morphological observation.

1. Nostril
2. Eye
3. Spiny Rays
4. Dorsal Fins
5. Soft Rays
6. Lateral Line
7. Mouth
8. Gill Cover
9. Pelvic Fin
10. Pectoral Fin
11. Anal Fin
12. Caudal Fin

	Thermal profile
	95°C (2m), 94°C (40s), 35 cycles 54°C (40s), 72°C (1m) with final extension at 72°C for (10 min).
	95°C (2m), 94°C (40s), 35 cycles 54°C (40s), 72°C (1m) with final extension at 72°C for (10 min).
	95°C (3m), 95°C (30s), 35 cycles 57°C (40s), 72°C (1m) with final extension at 72°C for (10 min).
	95°C (5m), 95°C (30s), 35 cycles 42°C (30s), 72°C (1m) with final extension at 72°C for (10 min).
	95°C (5m), 95°C (60s), 35 cycles 52°C (60s), 72°C (90s) with final extension at 72°C for (5 min).
	94°C (5m), 94°C (45s), 35 cycles 48°C (45s), 72°C (80s) with final extension at 72°C for (7 min).
	94°C (3m), 94°C (30s), 35 cycles 52°C (40s), 72°C (1m) with final extension at 72°C for (10 min).



How to use this book

IUCN Global Red List Status 1

Local Name 2

English Name 3

Picture of Species 4

Symbol/Abbreviations

LN Local Name

EN English Name

CR Critically Engendered

EN Endangered

VU Vulnerable

NT Near Threatened

LC Least Concern

DD Data Deficient

NE Not Evaluated



Harmful/Poisonous/Venomous

Authors Name 5

Scientific Name 6

Fin Formula 7

Systematic Positon 8

Morphological Description 9

Other Supplementary Picture 10

Local Status 11

DNA Profile 12

ID of mtDNA partial COI or 16S rRNA conserved sequence submitted to NCBI 13

EN
Orange-spotted grouper

LN
Bol

NT



Epinephelus coioides Hamilton, 1822

Class **Actinopterygii**
Order **Perciformes**
Family **Serranidae**



D_1 XI/16; D_2 absent; P_1 20; P_2 I/5; A III/8. Color light greyish brown dorsally, shading to whitish on side and ventrally, with numerous brownish orange or brownish yellow spots the size of pupil or smaller on head and body; 5 slightly diagonal greyish brown bars on head and body which bifurcate ventrally, the first 4 extending basally into dorsal fin; brownish orange spots on body tend to be arranged in rows parallel to dark bars. Body elongate, not very compressed. Membranes of spinous portion of dorsal fin incised; caudal fin rounded.

Remarks New Record in Bangladesh. Not commonly found in the Sundarbans. Good as food fish when young. This grouper is one of the largest bony fishes found in the world.

DNA Barcode GenBank Accession No. MF123456



1
Fauna



Fishes 030
Mollusks 210
Arthropods 244
Cnidarians 292
Amphibians & Reptiles 296
Aquatic Mammals & Aquatic and Semi-aquatic Birds 308
Zooplanktons 322

1-1

Fishes



Chiloscyllium griseum Muller&Henle, 1838

Class	**Elasmobranchii**
Order	**Orectolobiformes**
Family	**Hemiscylliidae**

Color pale brown; 10 to 12 transverse bands on back, all broader than pale interspaces; two large, dark blotches on dorsal fins. A dermal ridge along middle of back of body. Mouth slightly arched: short labial grooves in both jaws. Origin of first dorsal fin above ends of pelvic fin bases.



Remarks Not commonly found in the Sundarbans.



Scoliodon laticaudus Müller & Henle, 1838

Class	**Elasmobranchii**
Order	**Carcharhiniformes**
Family	**Carcharhinidae**



Color bronzy grey above, white below, without conspicuous markings. A small, unmistakable requiem shark, with a very long, flat, laterally expanded, spade like snout, small eyes, small, smooth-edged bladelike teeth with oblique cusps, distal blades and no cusplets, a stocky compressed body, short, broad triangular pectoral fins, the first dorsal fin well rearward on the back with its rear tip about over the pelvic midbases, the second dorsal fin much smaller than the first and with its origin well behind the anal origin, the anal fin much larger than the second dorsal and with a straight posterior margin and a base without long preanal ridges, and a caudal fin with its post ventral margin only moderately concave, not deeply notched.

Remarks Commonly found in the Sundarbans and have commercial uses of this species. This shark is eaten by some ethnic groups. Its fins are very expensive for making a special type of soup.



Sphyrna lewini Griffith and Smith, 1834

Class	**Elasmobranchii**
Order	**Carcharhiniformes**
Family	**Sphyrnidae**

Color of *Sphyrna lewini* is uniformly gray, gray-brown, or olive on their dorsal (upper) surfaces, fading to white on their ventral (lower) surfaces and their pectoral fins are tipped with gray or black ventrally. Large sized with moderately high first dorsal fins and low second dorsal and pelvic fins. They can be distinguished by the broadly-arched front margin of their head that has a prominent median notch. The side "wings" of their heads are narrow with their rear margins swept backward.

Remarks Not commonly found in the Sundarbans. This species is economically important like as other shark species. Fins are used for making soup.



Narke dipterygia Bloch and Schneider, 1801

Class	**Elasmobranchii**
Order	**Torpediniformes**
Family	**Narkidae**

Dorsal surface color brown, ventral surface white. Head, body and pectoral fins form a round disc; mouth narrow and transverse; five pairs of gill openings on underside of disc; jaws with minute cuspidate teeth; rosttum narrow; tail short and strong; caudal fin large; no dorsal fin; disc smooth.

Remarks Rarely found in the Sundarbans. This species have minor commercial importance.



Narcine brunnea Annandale, 1909

Class **Elasmobranchii**
Order **Torpediniformes**
Family **Narcinidae**

Dorsal coloration uniform light brown without spots; ventral surface white, creamy-white or yellowish. Dorsal surface of disc intensely marked with small and large spots and blotches. Eyes small, much smaller than spiracles and over 6 in preorbital length. Eyes developed; caudal fin much less than tail; lateral tail folds wide; dorsal fins not fleshy and taller than length or their bases. Tail distinctly longer than disc length.

Remarks Rarely found in the Sundarbans . No commercial value as human food.

EN
Sharpnose guiterfish, Shovelnose

LN
Pitambori, Karanja

VU



Glaucostegus granulatus Cuiver, 1829

Class	**Elasmobranchii**
Order	**Rhinopristiformes**
Family	**Rhinobatidae**

Body brownish above; snout buff brown; ventral side whitish; dorsal and caudal fins are grey. Disc longer than wide, tapering to a pointed snout; rostral ridge joining at anterior end of snout; nostrils wide, about half width of mouth; spiracles smaller than eye; first dorsal origin behind ventral fin; no anal fin; back coarsely tuberculated; small thorns on mid-line of snout and strong thorns on middorsal side of body.

Remarks Not commonly found in the Sundarbans. Some ethnic group consumed as a food. Fins are used for making soup.



Brevitrygon imbricata Bloch and Schneider, 1801

Class	**Elasmobranchii**
Order	**Myliobatiformes**
Family	**Dasyatidae**

Color of dorsal surface of disc plain grey and ventral surface of disc entirely white in. Disc width equal to disc length. Dorsal surface of disc have a row of conical denticles on shoulder and back, along tail as far as sting, large denticles intermixed with small denticles. Tail shorter than body and several times longer than the disc. Tail whip like, scarcely as long as the body.

Remarks Commonly found in the Sundarbans. Minor fisheries importance as a food. Usually used for making fish meal and poultry feeds.

DNA Barcode GenBank Accession No. MF611582



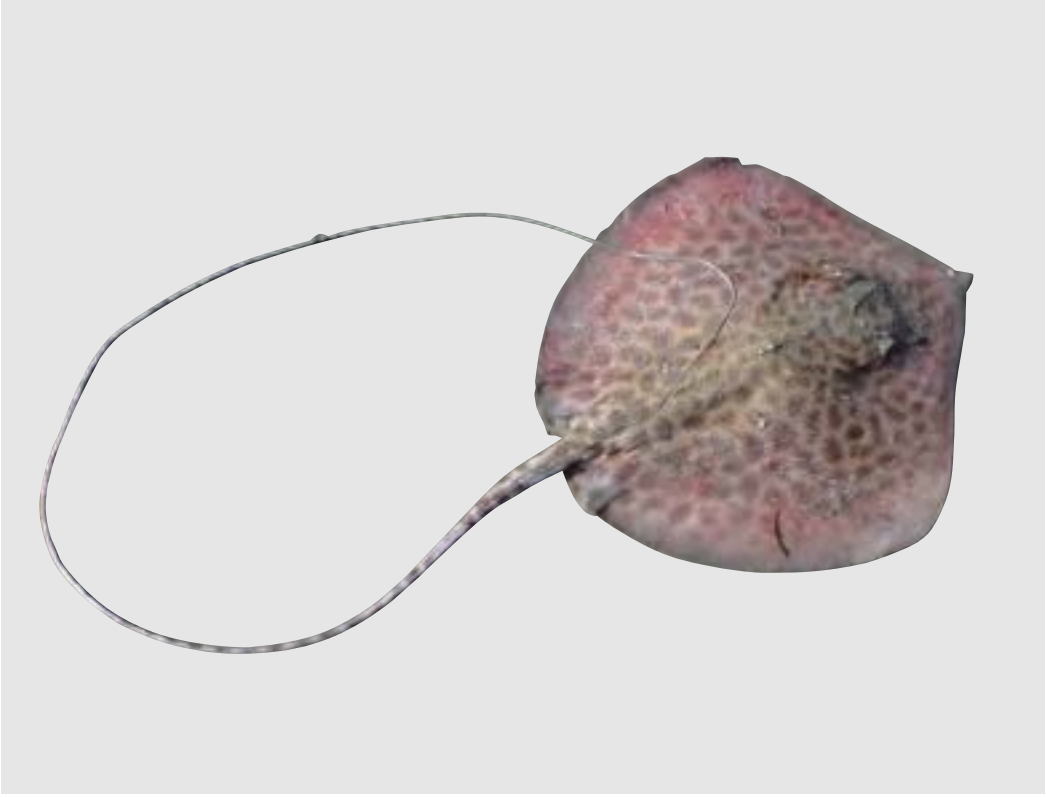
Brevitrygon walga Müller and Henle, 1841

Class	**Elasmobranchii**
Order	**Myliobatiformes**
Family	**Dasyatidae**

Color dull grey or brown above, whitish below. Disc subcircular, slightly longer than broad, or as brood as long. Spiracles nearly equal to eyes, close behind it. Mouth undulated with two buccal processes on floor of mouth. Tail whip-like, slightly longer than disc length, without upper and lower cutaneous folds, with 1 or 2 large serrated spines. A series of small spines between root of tail and caudal spine.

Remarks Commonly found in the Sundarbans. Taken commercially in small quantities.

DNA Barcode GenBank Accession No. MF595552-MF595553, MF593294



Himantura uarnak Gmelin, 1789

Class	**Elasmobranchii**
Order	**Myliobatiformes**
Family	**Dasyatidae**

Body dark brown in middle and light brown at sides with white to yellow lines on dorsal side forming a marbled or reticulated pattern; tail striped with brown and white. Disc width is greater than its length; snout angular with a sharp point; eyes large and bulging; tail long, narrow and bear a sharp serrated sting, longer than disc length, no skin fold on tail.

Remarks Commonly found in Dubla and Alorkon of the Sundarbans. Economically important as food for humans

DNA Barcode GenBank Accession No. MF614769



Telatrygon zugei Müller and Henle, 1838

Class	**Elasmobranchii**
Order	**Myliobatiformes**
Family	**Dasyatidae**

Body pale brown with small bright ocelli with blue centers and scattered black spots; under side of disc white; tail with black and white bands behind sting. Disc kite-like, wider than long; naked with few dorsal denticles; snout short and gently rounded; two oral papillae; tail about as long as disc with upper and lower cutaneous folds; a pair of sharp spines on upper surface of middle part of tail.

Remarks Commonly found in the Sundarbans. Large individuals are generally consumed by the local people. Small sized individuals are sun dried and used to poultry industries.



Gymnura poecilura Shaw, 1804

Class	**Elasmobranchii**
Order	**Myliobatiformes**
Family	**Gymnuridae**



Uniform brown or yellowish-reddish brown with scattered dark brown and light spot above, whitish below. Pectoral disc twice as wide as long; tail as long as the disc in youngs, but shorter in adults. Trunk depressed and flattened. Head broad and short, obtusely rounded and angular. Five gill openings on underside of the pectoral disc. Eyes very small, widely separated. One or two small spines on the caudal fin. About nine black bands on tail.

Remarks Commonly found in the Sundarbans. The spines of butterfly rays are very painful.

DNA Barcode GenBank Accession No. MG931938



Megalops cyprinoides Broussonet, 1782

Class	**Actinopterygii**
Order	**Elopiformes**
Family	**Megalopidae**

D_1 19; D_2 absent; P_1 16; P_2 12; A 27. Color of back blue-green and flanks silvery; lateral line golden color. Body fusiform and somewhat compressed, with smooth, unkeeled belly. Mouth superior; upper jaw extending almost to hind border of eye, lower jaw slightly projecting; gular plate present. Dorsal fins the last ray elongated and filamentous. Scales large.

Remarks Not commonly found in the Sundarbans. Taken commercially in small quantities.

DNA Barcode GenBank Accession No. MF594600-MF594602



Gymnothorax punctatus Bloch and Schneider, 1801

Class **Actinopterygii**
Order **Anguilliformes**
Family **Muraenidae**

Head, body and fins dark purplish brown covered with numerous, very small, white spots; gill opening black. Body slender and elongate; tail longer than head and trunk; Snout rather long, compressed; lower jaw slightly hooked; mouth can nearly be closed completely; anterior nostrils tubular; dorsal and anal fins well developed.

Remarks Commonly found in coastal side of the Sundarbans. No commercial value.



Gymnothorax sp. Bloch, 1795

Class	**Actinopterygii**
Order	**Anguilliformes**
Family	**Muraenidae**

Body color brownish-yellow, lighter below, with small yellow patches disappearing with increasing age. Body moderately elongate, cylindrical in front, compressed along tail; eyes very small; teeth sharp, in two rows.



Remarks Rarely found in the Sundarbans.

DNA Barcode GenBank Accession No. MF588547-MF588548, MF588552

EN
Boro snake eel

LN
Kharu

LC



Pisodonophis boro Hamilton, 1822

Class	**Actinopterygii**
Order	**Anguilliformes**
Family	**Ophichthidae**



Colouration generally uniform. Olive brown above, lighter below. Body moderately elongate and laterally compressed posteriorly. Snout moderately developed, subconical. Anterior nostril tubular, posterior before eye. Dorsal-fin origin above gill-opening. Pectoral fins moderate, broad-based. Tip of tail finless. Lateral line inconspicuous.

Remarks Commonly found in the Sundarbans. No commercial value.

DNA Barcode GenBank Accession No. MF595541, MF588551, MF588564



Moringua raitaborua Hamilton, 1822

Class	**Actinopterygii**
Order	**Anguilliformes**
Family	**Moringuidae**

Color of body olive reddish-brown above, lighter below. Body extremely elongate, threadlike body; devoid of scales; eyes, small; gill-openings are low on the body. Vertical fins are reduced to low folds, posteriorly and confluent with caudal-fin.



Remarks Commonly found in the Sundarbans. No commercial value.

DNA Barcode GenBank Accession No. MF595563



Anguilla bengalensis Gray, 1831

Class	**Actinopterygii**
Order	**Anguilliformes**
Family	**Anguillidae**



Color of body brownish dorsally mottled with darker brown, belly yellowish. Fins yellowish mottled with brown. Body snake like; cylindrical anteriorly. Mouth slightly oblique extending beyond the eye. Teeth a narrow band, toothless groove between innermost row and outer row on jaws; vomerine tooth band very narrow posteriorly. Pectoral fins well developed.

Remarks Commonly found in the Sundarbans. Highly commercial important species; marketed locally; dried fish used for crab fishing trap.

DNA Barcode GenBank Accession No. MF595540



Anodontostoma chacunda Hamilton, 1822

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Clupeidae**

D_1 III/15; D_2 absent; P_1 16; P_2 8; A 20. Body silvery with indistinct brown longitudinal lines along scale rows; a black spot on shoulder. Fin rays yellowish when live and fresh. Body deep, oval and compressed, ventral profile rounded; maxilla straight, thin and tip tapering; mouth inferior; last dorsal ray not prolonged as a filament.

Remarks Commonly found in the Sundarbans and commercially important as a dry fish.

DNA Barcode GenBank Accession No. MF593300



Escualosa thoracata Valenciennes 1847

Class **Actinopterygii**
Order **Clupeiformes**
Family **Clupeidae**

D1 16; P1 13; P2 27; A 17-19. D 16; P1 13; P27; A 17-19; Color of body semi-translucent with broad silvery midlateral stripe; inner edges of caudal fin broadly darkish. Body deeply compressed; belly strongly keeled. Mouth terminal, the upper jaw slightly notched or rounded. Anal fin branched rays. Scale small.

Remarks Commonly found in upside of the Sundarbans. High market value; usually marketed fresh and frozen in locally market.

EN
Indian river shad

LN
Chapila, Khaira

LC



Gudusia chapra Hamilton, 1822

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Clupeidae**

D_1 15-16; D_2 absent; P_1 13; P_2 7; A 22-23. Color bright silvery with a black shoulder spot. Body fairly deep and strongly compressed. A single triangular pectoral axillary scale; depressed tip of dorsal fin to behind vertical from anal fin origin. Hind margin of scales smooth. Dark blotch behind gill opening, often followed by a series of spots along flank. Gill rakers fine and numerous, increasing with size of fish. Teeth absent.

Remarks Commonly found in the Sundarbans. Commercially taken in large quantities for human food and dry fishing.



Hilsa kelee Cuvier, 1829

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Clupeidae**

D_1 3+13; D_2 absent; P_1 14; P_2 8; A 19. Color of back blue-green, flanks silvery, a dark humeral blotch (behind operculum) followed by 3 to 7 similar spots along flanks and occasionally spots along back. Tips of anterior dorsal-fin rays dusky, caudal tin tips faintly dusky. Body fairly deep and compressed, belly with distinct keel of scutes. A black spot behind gill cover, Deep-bodied Sardinella species have no notch in midline of upper jaw and no spots along flank; species of *Tenualosa* have no fronto-parietal striae.

Remarks Commonly found in marine and estuarine areas of the Sundarbans. Marketed and eaten fresh, salted, dried.

EN
Bloch's gizzard shad, Longfinned gizzard shad

LN
Borong, Khoira

LC



Nematalosa nasus Bloch, 1795

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Clupeidae**

D_1 17; D_2 absent; P_1 15; P_2 8; A 22. Color of back black greenish, flanks silvery, with a dark patch on shoulder and dark longitudinal streaks along upper row of scales. Fins yellowish. 4 black spots behind gill openings. Oblong, compressed and deep. Snout obtuse, prominent, shorter than the eye. Maxillary reaches anterior part of eye. Lower jaw strongly flared outward. Moth small, inferior. Hind edge of scales distinctly toothed. Premaxilla short, maxilla expanded s at tip and turned downward. Upper jaw with a distinct median notch. Last ray of dorsal fin prolonged, filamentous. Branchiostegal rays 6.

Remarks Not commonly found in the Sundarbans. Minor commercial value.



Sardinella fimbriata Valenciennes, 1847

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Clupeidae**

D_1 17; D_2 absent; P_1 15; P_2 8; A 19. Color of back blue-green and flanks silvery Body fusiform, compressed, belly sharp with keeled scutes; pre-pelvic scutes 17, post-pelvic scutes 12; scales cycloid; dorsal fin with numerous fine black dots.

Remarks Commonly found in the marine sides of the Sundarbans. Commercially important species; marketed mostly frozen.



Sardinella longiceps Valenciennes, 1847

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Clupeidae**

D_1 16; D_2 absent; P_1 15; P_2 8; A 18. Color of back blue-green and flanks silvery; a dark spot on hind margin of gill cover. Body elongate, cylindrical; belly rounded with scutes but without prominent keel. Head long. Gillrakers fine and numerous. Dorsal fin origin nearer snout-tip to caudal fin base. Body covered by thin cycloid scales.

Remarks Not commonly found in the Sundarbans. This species inhabits coastal regions of the Sundarbans.

DNA Barcode GenBank Accession No. MF611615



Sardinella melanura Cuvier, 1829

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Clupeidae**

D_1 15; D_2 absent; P_1 13 P_2 8; A 19. Color blue green above, sides silvery and tips of caudal fin dark black. Body fusiform, slightly compressed; belly strongly keeled with scutes. Dorsal fin origin slightly before midpoint of body; anal base slightly longer than dorsal base, its origin slightly nearer to caudal than to pelvic origin; pelvic fin origin below anterior half of dorsal fin; caudal forked; scales cycloid; pre-dorsal scales paired and overlapping.

Remarks Commonly found in the marine sides of the Sundarbans. Commercially important species; marketed mostly frozen.

EN
River shad, Hilsa shad

LN
Ilish, Ilsha

LC



Tenualosa ilisha Hamilton, 1822

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Clupeidae**

D_1 3+15; D_2 absent; P_1 1+14; P_2 1+7; A 2+18. Back blue-green, flanks silvery; a series of black blotches along flanks which may disappear in large adults. Body fusiform, its depth a little greater than head length which is 27 to 32% of standard length; belly with fairly sharply keeled scutes. Upper jaw with a distinct median notch when seen from above. Top of head covered with thick skin. No teeth in jaws. Caudal fin as long as head.

Remarks Commonly found in throughout the Sundarbans. Tenualosa ilisha has considerable economic importance in Bay of Bengal. The esteem to which the "Ilish" is held in Bengal is reflected in the many references to its quality and flavour in Bengali culture. This is one of the best known as a migratory fish ascending all the major river systems, where it is caught in considerable quantities.

DNA Barcode GenBank Accession No. MF588658, MF621554, MF588659



Tenualosa toli **Valenciennes, 1847**

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Clupeidae**

D_1 17; D_2 absent; P_1 15; P_2 I/7; A 3+17. Body silvery with yellow tinge; a diffuse dark blotch behind gill opening; fins hyaline. Body fusiform, moderately deep and strongly compressed; belly with 28 to 30 secutes; a distinct median notch in upper jaw; pre-operculum with an obtuse rounded angle; gill rakers fine.

Remarks Commonly found in marine sides of the Sundarbans. High commercial importance as as human food.



Coilia dussumieri Valenciennes, 1848

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Engraulidae**

D_1 I/13; D_2 absent; P_1VI/10; $P_2$7; A 98. Color of back brown, flanks, silvery, with distinctive longitudinal rows of golden or pearly spots on lower flanks. Body elongate, tapering evenly to very slender tail; belly rather rounded. Snout projecting, pointed; maxilla (upper jaw) tip pointed. A small, sharp, spine before dorsal fin origin. Anal fin very long.

Remarks Commonly found in the Sundarbans. Commercially taken in large quantities for dry fishing.

DNA Barcode GenBank Accession No. MF593480, MK024415



Coilia neglecta Whitehead, 1968

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Engraulidae**

D_1 11; D_2 absent; P_1 6+12; P_2 6; A 107. Body light brown: fins hyaline except black border: to anal fin. Body compressed, deepest under dorsal-fin origin, then tapering evenly to tail; belly rounded under pectoral-fin base becoming compressed and keeled towards vent. Snout equal to eye; maxilla reaching just beyond articulation of lower jaw. Dorsal fin preceded by a small acute-like spine.

Remarks Commonly found in the Sundarbans. Commercially taken in large quantities for dry fishing.



Coilia ramcarati Hamilton, 1822

Class **Actinopterygii**
Order **Clupeiformes**
Family **Engraulidae**

D_1 II/11; D_2 absent; P_1 VI/6; P_2 I/9; A+C127. Body color golden-brown with dark pigmentation behind the gill opening; fins hyaline. Body compressed, deepest under dorsal fin base, becoming keeled and more compressed behind pelvic fin base, with six pre-pelvic and ten or eleven post-pelvic scutes.



Remarks Commonly found in the Sundarbans. Commercially taken in large quantities for dry fishing.



Setipinna taty Valenciennes, 1848

Class **Actinopterygii**
Order **Clupeiformes**
Family **Engraulidae**

D_1 I/2+12; D_2 absent; P_1 I/12; P_2 I/6; A 77. Back color brown or bluish, flanks silvery. Body fusiform, strongly compressed; abdomen sharply keeled. .Snout moderately prominent, bluntly pointed; maxilla short, its tip truncate and just extending to gill-opening. Dorsal-fin origin nearer to snout-tip than to caudal-fin base.

Remarks Commonly found in the Sundarbans. Taken commercially in large quantities in the sea and estuaries of Sundarbans.

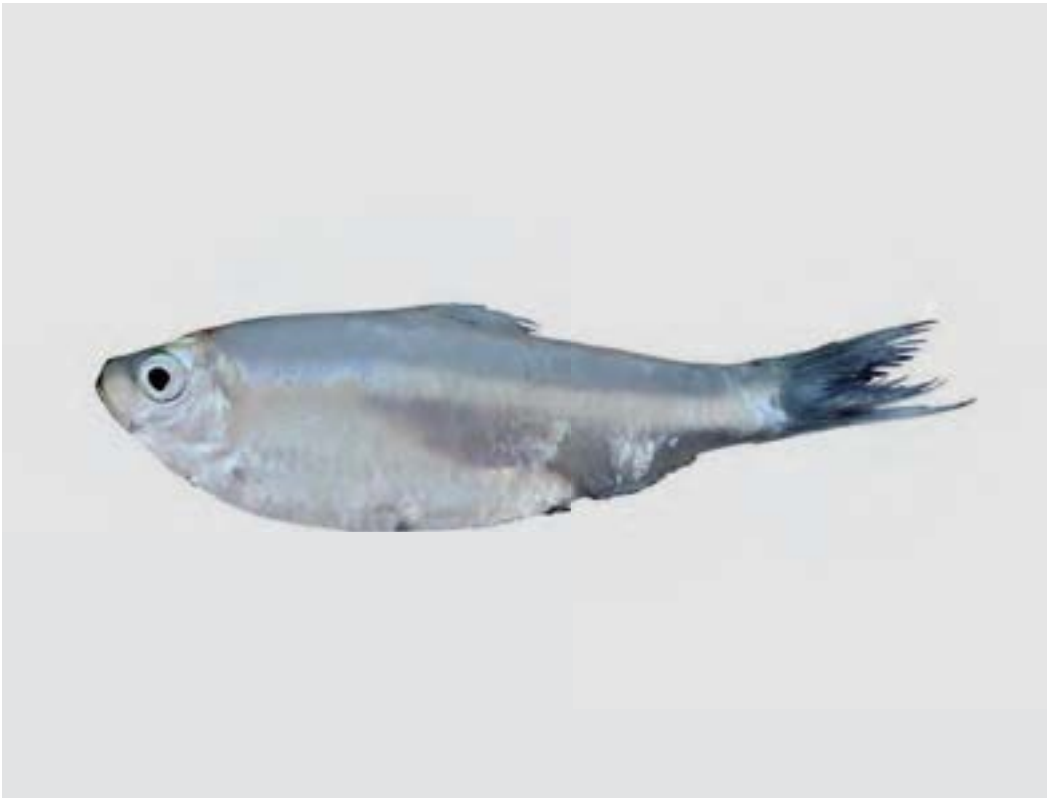


Stolephorus indicus van Hasselt, 1823

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Engraulidae**

D_1 16; D_2 absent; $P_1$15; P_2 7; A 20. Body light transparent fleshy brown, with a silver stripe down flanks; no dark pigment lines on back between head and dorsal fin. Body fusiform, nearly cylindrical; belly rounded with 3 to 5 needle like scutes between pectoral and pelvic fins; snout prominent, rather pointed; maxillary tip jointed not reaching to anterior border: of pre-operculum.

Remarks Commonly found in the Sundarbans. Taken commercially in small quantities.



Stolephorus tri Bleeker, 1852

Class **Actinopterygii**
Order **Clupeiformes**
Family **Engraulidae**

D_1 15; D_2 absent; $P_1$13; $P_2$7; A 22. Pale cream when scales lost; bright silvery stripe on flanks; a double line of small pigment spots on back behind dorsal fin. Body fusiform, somewhat compressed; belly rounded, with 6-8 needle-like scutes between pectoral and pelvic fins, and a distinctive spine on pelvic scute between fin bases. Snout projecting, bluntly pointed; maxilla tip pointed.

Remarks Commonly found in the Sundarbans. Taken commercially in large quantities in the sea and estuaries of the Sundarbans.

DNA Barcode GenBank Accession No. MF611613



Thryssa hamiltoni Gray, 1835

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Engraulidae**

D_1 I/14; D_2 absent; $P_1$12; P_2 7; A 35. Body silvery, dorsal profile blue-green; a dark blotch behind upper part of gill-opening; pigment lines along back. Body strongly compressed; head small with pointed but rounded snout, its tip at above level of eye center; maxilla short, reaching to edge of gill-cover or projecting slightly beyond.

Remarks Commonly found in the Sundarbans. Taken commercially in large quantities in the sea and estuaries of the Sundarbans.

DNA Barcode GenBank Accession No. MF595067-MF595069, MF594610



Setipinna tenuifilis Valenciennes, 1848

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Engraulidae**

D_1 I/3; D_2 absent; P_1 12; P_2 7; A 38. Color of back greenish black, flanks silvery dashed with gold. Dorsal and caudal fin margins dusky. Body fusiform, strongly compressed; abdomen sharply keeled with 17 to 21 pre-pelvic and 6 or 7 post-pelvic scutes. Maxilla short, its tip truncate, not reaching the gill-opening. Dorsal-fin origin nearer to snout-tip than to caudal-fin base.

Remarks Commonly found in the Sundarbans. Commercially important species, marketed mostly fresh and dried.



Thryssa purava Hamilton, 1822

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Engraulidae**

D_1 I/13; D_2 absent; $P_1$14; P_2 6; A 44. Back brown, flanks silvery: dark venulose area at shoulder. Fins hyaline. Body fusiform, fairly strongly compressed; belly keeled. Snout prominent, bluntly rounded; maxilla long its tip pointed, extending to or beyond pectoral-fin base; mouth strongly oblique



Remarks Commonly found in the Sundarbans. Taken commercially in large quantities in the sea and estuaries of the Sundarbans.

DNA Barcode GenBank Accession No. MF595070, MF588537



Chirocentrus dorab Forsskål, 1775

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Chirocentridae**

D_1 3+14; D_2 absent; P_1 1+13; P_2 6; A 35. Body deep blue-green, shading to brassy-gold to bright silvery on flanks; tip of dorsal fin and front of anal fin dark; caudal fin yellow. Body elongate, strongly compressed; edge of belly sharp but without scutes; scales very small, easily shed; canine teeth in both jaws, two canine teeth on pre-maxillae pointing forward; anal-fin base twice the length of dorsal-fin base; ventral fins very small.

Remarks Commonly found in the Sundarbans. Commercially important as a human food and dry fishing.

DNA Barcode GenBank Accession No. MF593287



Opisthopterus tardoore *Cuvier, 1829*

Class	**Actinopterygii**
Order	**Clupeiformes**
Family	**Pristigasteridae**

D_1 16; D_2 absent; P_1 14; P_2 absent; A 59. Color of back side blue-green and flanks silvery. Body elongate, strongly compressed; belly with 29 prominent scutes. Dorsal profile of head concave: mouth directed upwards, lower jaw very prominent. Dorsal fin short origin behind midpoint of body. Anal fin very long; pelvic fins absent. Pectoral fins longer than head.

Remarks Commonly found in the Sundarbans. This species inhabits costal and brackish water of the Sundarbans. Commercially important species; consumed locally.

EN
Guntea loach

LN
Guto baiym

LC



Lepidocephalichthys guntea Hamilton, 1822

Class	**Actinopterygii**
Order	**Cypriniformes**
Family	**Cobitidae**

D_1 2+6; D_2 absent; P_1 8; P_2 7; A 2+5. Color of body dirty yellowish; a series of dark bloches present on the body. A black ocellus presents on the upper half of caudal base. Body elongated and slightly compressed anteriorly and strongly posteriorly. Dorsal and ventral profiles are parallel. Caudal fin rounded. Lateral line absent.

Remarks Commonly found in the Sundarbans. Taken commercially in small quantities; marketed fresh and consumed locally.

DNA Barcode GenBank Accession No. MF594616



Puntius chola Hamilton, 1822

Class	**Actinopterygii**
Order	**Cypriniformes**
Family	**Cyprinidae**



D_1 2+8; D_2 absent; P_1 15; P_2 9; A 2+5. Color of body silvery with golden opercle. A black bloch on the base of caudal fin. Body deep and compressed. Mouth terminal small, contain one pair of maxillary barbels. Dorsal fin inserted equidistant between snout and base of caudal. Pectoral as long as head excluding snout. Scale large.

Remarks Not commonly found in the Sundarbans. Taken commercially in small quantities; marketed fresh and consumed locally.



Rasbora rasbora Hamilton, 1822

Class	**Actinopterygii**
Order	**Cypriniformes**
Family	**Cyprinidae**

D_1 2+7; D_2 absent; P_1 15; P_2 9; A 2+5. Color olive brown above and silvery below; black lateral stripe from the head to the base of the caudal fin; sharply defined black tip; yellowish fin. Body compressed; abdomen profile more convex than dorsal profile. Dorsal fin arises midway between the margin of the eye and the base of the caudal fin. Lateral line concave. Scale large.

Remarks Not commonly found in the Sundarbans. Taken commercially in small quantities.



Plotosus canius Hamilton, 1822

Class	**Actinopterygii**
Order	**Siluriformes**
Family	**Plotosidae**

D_1 I/4; P_1 I/10; P_2 12; Caudo-dorso-anal; 206. Color dark olive-green over head and body, sides creamy, barbels and fins grey, first dorsal and pectoral fins darker. Head moderately large, profile straight from tip of snout to dorsal fin origin; barbels four pairs; anterior nostrils located at the edge of upper lip; eyes small.

Remarks Commonly found in the Sundarbans. Highly commercial value; marketed fresh and consumed locally.

DNA Barcode GenBank Accession No. MF588561



Ailia coila Hamilton, 1822

Class	**Actinopterygii**
Order	**Siluriformes**
Family	**Ailiidae**

D_1 absent; D_2 absent; P_1 I/14; P_2 6; A 71. Body silvery or whitish in color. Body elongated and deeply compressed. Barbels 4 pairs. Upper jaw longer than lower jaw. Dorsal fin absent and adipose fin present. Caudal fin forked.

Remarks Commonly found in the Sundarbans. Commercially important fish species.

DNA Barcode GenBank Accession No. MF594618



Clupisoma garua Hamilton, 1822

Class	**Actinopterygii**
Order	**Siluriformes**
Family	**Ailiidae**

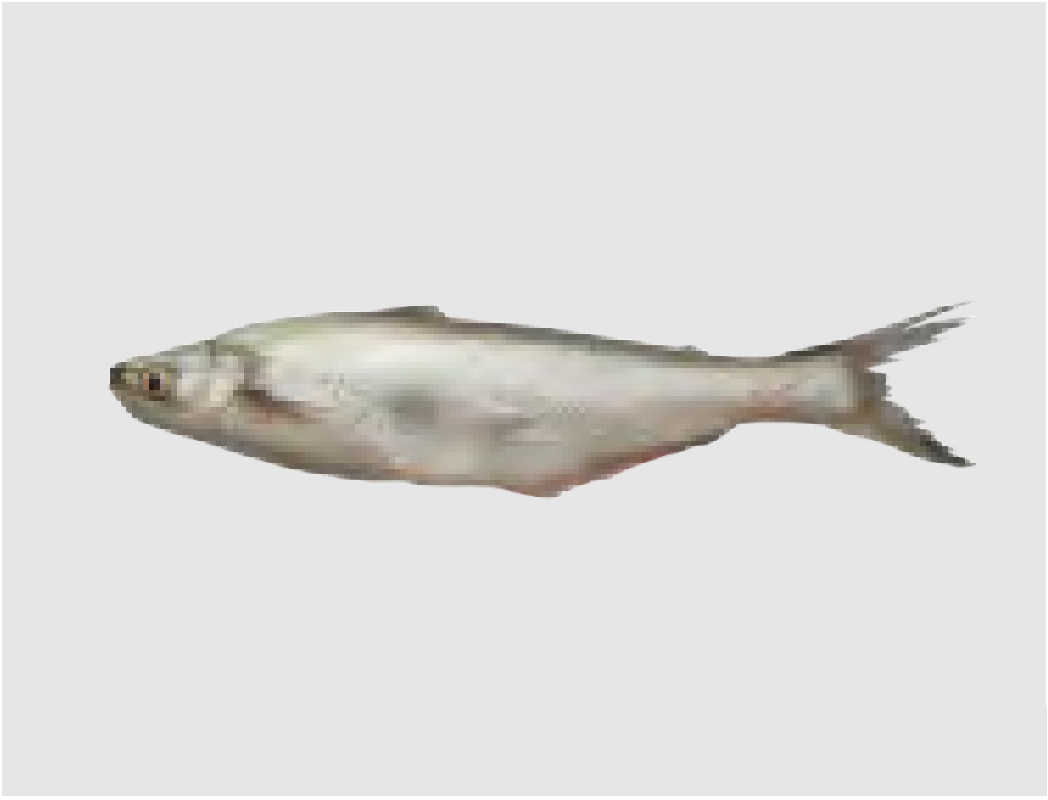
D_1 I/7; D_2 absent; P_1 I/11; P_2 6; A 3+31. Back color dark and whitish or silvery at the sides and abdomen. Body elongated and laterally compressed. Barbels 4 pairs. Upper jaw longer than lower jaw. No adipose fin present in adult. Caudal fin forked.

Remarks Not commonly found in the Sundarbans. Commercially important fish species.

EN
Silond catfish, Silondia vacha

LN
Shilong

LC



Silonia silondia Hamilton, 1822

Class	**Actinopterygii**
Order	**Siluriformes**
Family	**Ailiidae**

D_1 I/8; D_2 absent; P_1 I/12; P_2 6; A 41. Back dusky green and abdomen silvery, lips red, dorsal and pectoral fins of a light neutral tint, reddish band at the base. Body elongated and laterally compressed. Barbels 2 pairs. Upper jaw longer than lower jaw. Snout rounded. Caudal fin forked.

Remarks Not commonly found in the Sundarbans. Commercially important fish species.



Mystus tengara Hamilton, 1822

Class	**Actinopterygii**
Order	**Siluriformes**
Family	**Bagridae**

D_1 I/7; D_2 absent; P_1 I/9; P_2 6; A 11. Body color yellow or brown with a dark spot on shoulder. Body elongated and compressed. Dorsal spine long upto head. Head short, not extending to base of occipital process. Barbels 4 pairs. Mouth terminal adipose fin small. Caudal fin forked.

Remarks Commonly found in the Sundarbans upstream. Highly commercial value; marketed locally.



Bagarius bagarius Hamilton, 1822

Class **Actinopterygii**
Order **Siluriformes**
Family **Sisoridae**



D_1 I/6; D_2 absent; P_1 I/13; P_2 6; A 12. Body greyish or light yellowish with large irregular black bands and marking. Body and abdomen elongate, flattened up to pelvics. Head large, naked, osseous, rugose in regular bands and lines, greatly depressed. Snout sharply conical, not pointed. Mouth ventral, wide, crescentic. Eyes small, subcutaneous, dorsally placed at posterior half of head, not visible from below ventral surface. Lips thick. Teeth sharp. Four pairs of barbels; one pair each of maxillary, nasal, and two of mandibular.

Remarks Not commonly found in the Sundarbans. Commercially important fish species.

DNA Barcode GenBank Accession No. MF601475

EN
Treadfin sea catfish

LN
Tangra

LC



Arius arius Hamilton, 1822

Class	**Actinopterygii**
Order	**Siluriformes**
Family	**Ariidae**

D_1 I/17;D_2 absent; P_1 I/10; P_2 6; A 21. Color of body silvery steel along back, lighter on sides and below. Dorsal and pectoral fin margins posteriorly dusky; adipose dorsal fin with a well defined black spot. Body elongated and robust. Mouth subterminal and its gap narrow, 3 pairs of barbels. teeth in jaws villiform Pectoral and dorsal fin hasstrong pungent spine.

Remarks Commonly found in the Sundarbans. Highly commercial value; marketed locally.



Arius maculatus Thunberg, 1792

Class	**Actinopterygii**
Order	**Siluriformes**
Family	**Ariidae**

D_1 I/7; D_2 absent; P_1 I/10; P_2 6; A 21. Body color brown to bluish brown above, sides grey and belly whitish with dusky spots, the whole with a silvery sheen. All fins black tipped, pectoral and pelvic fins dusky, adipose dorsal fin mainly blackish. Body, elongate; head pointed; eyes fairly small. Three pairs of barbels around mouth; maxillary barbels slender, reaching to base of pectoral fin, but much shorter in older fishes. Teeth in jaws villiform; premaxilla tooth-band continuous. Dorsal and pectoral fin spines strong; pectoral fin spine shorter than dorsal-fin spine; tip of dorsal fin usually prolonged as a filament: adipose dorsal fin small.

Remarks Commonly found in the Sundarbans. Commercially important species.



Arius venosus Valenciennes, 1840

Class	**Actinopterygii**
Order	**Siluriformes**
Family	**Ariidae**

D_1 I/7; D_2 absent; P_1 I/10; P_2 6; A 21. Body dark bluish above, whitish below, adipose fin with a large dark spot. Body elongate; width of the head exceeds its height, and equals its length excluding the snout; median longitudinal groove is wide between the eyes, becomes pointed both anteriorly and posteriorly; maxillary barbel reach the middle of the pectoral spine and the outer mandibular ones its base; teeth small in an arcuate band; dorsal spine strong, caudal with pointed lobes, superior one is longer.

Remarks Commonly found in the Sundarbans. Commercially important species.



Hemiarius sona Hamilton, 1822

Class	**Actinopterygii**
Order	**Siluriformes**
Family	**Ariidae**

D_1 I/7; D_2 absent; P_1 I/12; P_2 6; A 17. Body leaden grey, paler below, the sides sometimes bluish with gold. Fins dusky to black terminally. Body elongate; head broad and depressed; three pairs of barbels around mouth. Head rather broad and flat, not extending to base of supra-occipital process; basal plate before dorsal fin narrow. Premaxillary band of teeth villiform, continuous. Dorsal and pectoral fin spines strong.

Remarks Not commonly found in the Sundarbans.

DNA Barcode GenBank Accession No. MF588532, MF588535, MF594605, MF595544



Netuma bilineata Valenciennes, 1840

Class	**Actinopterygii**
Order	**Siluriformes**
Family	**Ariidae**

D_1 I/7; D_2 absent; P_1 I/9; P_2 6; A 20. Body reddish or bluish brown with bronze iridescence over back and sides, adipose fin dark brown. Dorsomedian head groove bordered posteriorly by slightly raised frontals and forming a "V". Gill rakers usually absent. Caudal fin lobes slender and tapered. Adipose fin short-based and located posteriorly.

Remarks Commonly found in the Sundarbans. Commercially important fish species.

DNA Barcode GenBank Accession No. MF595545-MF595546



Harpadon nehereus Hamilton, 1822

Class	**Actinopterygii**
Order	**Aulopiformes**
Family	**Synodontidae**

D_1 12; D_2 absent; P_1 11; P_2 9; A 13. Color uniform light grey, speckled with black, translucid when alive; fins dark. Body elongate, somewhat compressed and soft. Eyes very small, covered by adipose membrane; snout very short. Mouth very wide, armed with slender, recurved and depressible teeth of unequal size; palatine teeth also large and depressible; lower jaw longer than upper. A conspicuous adipose fin.

Remarks Commonly found in marine side of the Sundarbans. Highly commercial species as human food and dry fishing.

DNA Barcode GenBank Accession No. MF593304



Saurida tumbil Bloch, 1795

Class	**Actinopterygii**
Order	**Aulopiformes**
Family	**Synodontidae**

D_1 I/11; D_2 absent; P_1 15; P_2 9; A 10. Body brownish above, lower sides and belly white; mottled with faint dark cross bands on back, stomach white. Mouth large; teeth in jaws in several rows; pectoral fin reaching to level of ventral fin; auxillary scale of pectoral fin long and pointed.

Remarks Not commonly found in the Sundarbans.

DNA Barcode GenBank Accession No. MF594603, MF611581

EN
Unicorn cod

LN
Unknown

NE



Bregmaceros mcclellandi Thompson 1840

Class	**Actinopterygii**
Order	**Gadiformes**
Family	**Bregmacerotidae**

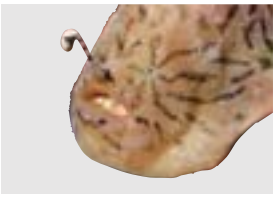
D_1 XV/18; D_2 absent; P_1 18; P_2 4; A 25. XV/18; absent; 18; 4; 25. Color of body variable, pale-brownish with speckling above and silvery below. The cheek and lower head also silver.. Body moderately elongate and relatively short head. Two dorsal fins, the first a single long ray on top of rear part of head, the second with a long base, middle rays much shorter; one long-based anal fin with middle rays much shorter; pelvic fins inserted under rear part of head, with long, thick rays that extend far beyond the beginning of the anal fin.

Remarks Rarely found in the Sundarbans coastal regions. Minor food value.



Antennarius hispidus Bloch&Schneider, 1801

Class	**Actinopterygii**
Order	**Lophiiformes**
Family	**Antennariidae**





D_1 III/12; D_2 absent; P_1 10; P_2 5; A 7.ss. Ground color of head and body light-tan with narrow blackish brown streaks. Body short, deep, slightly compressed. Eyes small, lateral. Mouth oblique with small cardiform teeth on jaws and palate. First dorsal spine about the same length as the 2nd dorsal spine, with a large tuff of filaments. All fins with blackish-brown spots. Illicium longer than next dorsal fin ray with small rounded to elongate esca. Pelvic rays unbranched. Skin very rough, covered with small spines. Ground color of head and body light-tan with narrow blackish-brown streaks. All fins with blackish-brown spots.

Remarks Rare in the Sundarbans. This species was 1st time recorded by Hussain, 1969. After that no potential records on it.

DNA Barcode GenBank Accession No. MF588557



Strongylura leiura Bleeker, 1850

Class	**Actinopterygii**
Order	**Beloniformes**
Family	**Belonidae**

D_1 17; D_2 absent; P_1 10; P_2 6; A 25. Body color greenish-brown above, silvery below; a silvery lateral band on the body which becomes wide posteriorly where it is bordered by a dark stripe. Fins yellow, caudal fin dusky. Body elongate rounded in cross-section. Eyes small. Teeth usually directed backwards, but variable and sometimes almost vertical; Caudal fin almost truncate; caudal peduncle roundish.

Remarks Commonly found in the Sundarbans and minor commercial importance.

DNA Barcode GenBank Accession No. MF629718

EN
Silver needle fish

LN
Kankila, Kakila

LC



Xenentodon cancila Hamilton, 1822

Class	**Actinopterygii**
Order	**Beloniformes**
Family	**Belonidae**

D_1 17; D_2 absent; P_1 10; P_2 6; A 17. Color silvery band with a dark margin run along the side; a series of four or five blotches on sides between the pectoral and anal fins. Dorsal and anal fins with dark edges. Body very elongate and slightly compressed. Dorsal fin inserted usually anterior to a vertical through the origin of the anal fin. Green-silvery dorsally, grading to whitish below.

Remarks Commonly found in the Sundarbans and major commercial importance.



Rhynchorhamphus georgii Valenciennes, 1847

Class **Actinopterygii**
Order **Beloniformes**
Family **Hemiramphidae**

D_1 15; D_2 absent; P_1 11; P_2 6; A 14. Body pale with a narrow lateral silvery band; fins hyaline; dorsal and caudal fin margins dusky. An elongate fish with greatly prolonged, beak like lower jaw. Height of body 10 to 13 in total length; the height of head equal to its length behind the middle of eye; pre-orbital slightly longer than height; teeth in upper jaw in a band tapering posteriorly, those on the lower jaw in a narrow band tapering anteriorly; caudal deeply forked.

Remarks Commonly found in the Sundarbans and minor commercial importance.



Zenarchopterus buffonis Valenciennes, 1847

Class	**Actinopterygii**
Order	**Beloniformes**
Family	**Zenarchopteridae**

D_1 14; D_2 absent; P_1 10; P_2 6; A 12. . Right brown dorsally, becoming silvery white ventrally; a distinct, longitudinal black line on dorsal midline of upper jaw. Upper half of the dorsal dark. Body elongate, subcyrindrical. Lower jaw much prolonged, javelin-like; upper jaw wider than long; nasal papilla elongate and pointed. Base of dorsal fin longer than anal-fin base; 4th and/or 5th dorsal ray(s) elongated. Caudal fin rounded.

Remarks Commonly found in the Sundarbans and minor commercial importance.



Exocoetus volitans Linnaeus, 1758

Class **Actinopterygii**
Order **Beloniformes**
Family **Exocoetidae**

D_1 12; D_2 absent; P_1 14; P_2 6; A 13. Color of back iridescent blue, lighter on sides and belly silvery. Dorsal fin colorless; pectoral fins blackish at base rest of fins yellowish. Body elongate and fairly robust. Snout short. Teeth very small. Pectoral fins striking long extending to base of caudal fin. Pelvic fins short. Caudal fin deeply forked. Scales rather large.

Remarks Not common in the Sundarbans. Less commercial value as human food.



Fistularia petimba Lacepède, 1803

Class	**Actinopterygii**
Order	**Syngnathiformes**
Family	**Fistulariidae**



D_1 15; D_2 absent; P_1 13; P_2 6; A 14. Body orange brown dorsally and silvery ventrally; occasionally light spots on the back and sides. Elongate bony plate along dorsal midline of body; post temporal ridge with large antrose cirri; anus close behind ventral. Body elongated, much compressed. Mouth small located at the end of a tubular snout. Skin naked, smooth to touch. Caudal forked.

Remarks Not commonly found in the Sundarbans and no commercial value.

EN
Sea horse,
Smooth seahorse

LN
Samudra ghora

VU



Hippocampus kuda Bleeker, 1852

Class	**Actinopterygii**
Order	**Syngnathiformes**
Family	**Syngnathidae**

D_1 17; D_2 absent; P_1 16; P_2 absent; A 4. Body dark brown with scattered dark spots and cross bands on tail. Body rings 11+36 without spines. Snout length 2.4 in head, cornet low, divided distally; tubercles on body rings; dorsal fin located above last two body rings and first two tail rings.

Remarks Not commonly found in the Sundarbans marine side.



Strophidon sathete Hamilton, 1822

Class	**Actinopterygii**
Order	**Anguilliformes**
Family	**Muraenidae**



D_1 rudimentary; D_2 absent; P_1 absent; P_2 absent. Body color brownish grey above, lighter below. Body moderately elongate, cylindrical in front, compressed along tail; eyes small; teeth small. head not obviously distinct from trunk although lthe profile is moderately steep; very large mouth, extending to well beyond eye; biserial sharp teeth on jaws, larger in front and in inner row; dorsal fin inserted on head before gill-opening; scales absent

Remarks New record in Bangladesh. Commonly found in the Sundarbans. Commercially important species; marketed live species; fisherman used dried fish for crab trapping.

DNA Barcode GenBank Accession No. MF595538



Macrognathus aculeatus Bloch,1786

Class	**Actinopterygii**
Order	**Synbranchiformes**
Family	**Mastacembelidae**



D_1 XX/50; D_2 absent; P_1 23; P_2 absent; A III/50. Color greenish or brownish-grey above; a light of band along with lateral line. Body with series of obliquely oriented bars. Dorsal and anal fins with a row of isolated spines followed by a long continuous soft portion, both fins extending to but not confluent with caudal fin. Pelvic fins absent. Caudal fin rounded. Scale cycloid and minute.

Remarks Commonly found in the Sundarbans. Minor food value.

EN
Striped spiny eel

LN
Guchi baim

LC



Macrognathus pancalus Hamilton, 1822

Class	**Actinopterygii**
Order	**Synbranchiformes**
Family	**Mastacembelidae**

D_1 XXV/39; D_2 absent; P_1 17-19; P_2 absent; A III/38. Color greenish- olive along above; yellowish on the belly; yellowish-white spots on the flanks often dark brown vertical stripes. Body eel like, elongated and slightly compressed. Dorsal fin and anal fins separated from the caudal fin. Lateral line completed. Scale cycloid and minute.

Remarks Commonly found in the Sundarbans. Minor food value.



Pterois russelii Bennett, 1831

Class	**Actinopterygii**
Order	**Scorpaeniformes**
Family	**Scorpaenidae**

D_1 XII+I/10; D_2 absent; P_1 13; P_2 I/5; A III/7. Head and body with numerous reddish-brown bars of variable width, separated by narrow white bars; generally brownish pectoral fins without prominent dark bands; dorsal spines free of membrane except basally; enlarged and wing-like pectoral fins with rays free of membrane distally, unbranched rays.

Remarks Not common in the Sundarbans marine side. Coral associated fish. No food value.

DNA Barcode GenBank Accession No. MF593288, MF593289, MK024422



Minous monodactylus Bloch & Schneider, 1801

Class	**Actinopterygii**
Order	**Scorpaeniformes**
Family	**Synanceiidae**

D_1 X/11; D_2 absent; P_1 10+1; P_2 I/5; A 9. Back and dorsal with large brown vertical bands. A black blotch between anterior dorsal spines. Pectoral dark. Anal with broad dark border. Body compressed, without scale. Mouth oblique, two preorbital spines. A tentacle in lower jaws. First dorsal spine minute, caudal rounded.

Remarks Not common in the Sundarbans marine side. Coral associated fish. No food value.

DNA Barcode GenBank Accession No. MF593469, MF593471



Grammoplites scaber Linnaeus, 1758

Class **Actinopterygii**
Order **Scorpaeniformes**
Family **Platycephalidae**

D_1 IX; D_2 11; P_1 22; P_2 I/5; A 12. Body grey dorsally and whitish below: black regular dots along lateral line, head and body. First dorsal fin clouded with black; soft dorsal fin and anal fin rays with rows of black dots. Caudal fins dusky and black. Body robust and subcylindrical, teeth villiform. Preopercular spine short, two dorsal fins. Lateral line spiny along its entire length.

Remarks Common in the Sundarbans. Minor food value.

DNA Barcode GenBank Accession No. MF588666, MF621550, MF621551



Kumococius rodericensis Cuvier, 1829

Class	**Actinopterygii**
Order	**Scorpaeniformes**
Family	**Platycephalidae**



D_1 IX; D_2 I/11; $P_1$20; P_2 I/5; A 12. Body color brownish above, dull white below. Spinous dorsal fin and end of caudal fin blackish: soft dorsal fin with brown spots on rays. Body depressed; top of head with ridges bearing spines; supraorbital ridges with a moderate number of spines: preopercular spine long and strong, reaching on to base of pectoral fin. Villiform teeth in both jaws. Two dorsal fins. Caudal fin slightly rounded.

Remarks Common in the Sundarbans. Minor food value.

DNA Barcode GenBank Accession No. MF614768



Platycephalus indicus Linnaeus, 1758

Class	**Actinopterygii**
Order	**Scorpaeniformes**
Family	**Platycephalidae**

D_1 IX; D_2 11; P_1 22; P_2 I/5; A 12. Body grayish above whitish below; caudal fin with two horizontal black stripes; fust dorsal fin black. Teeth on vomer in one patch; head with bony ridges; small pre-opercular and two pre-ocular spines present.



Remarks Not commonly found in the Sundarbans. Minor food value.

EN
Cloudy grouper,
Cloudy rock cod

LN
Bol

VU



Epinephelus erythrurus Valenciennes, 1828

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Serranidae**

D_1 XI/16; D_2 absent; P_1 16; P_2 I/5; A III/8. Head and body dark brown or greenish brown, marbled with irregular pale spots and blotches; 1 or 2 faint dark streaks running posteriorly from eye; no dark spots on head, body or fins. A small serranid with robust body. Teeth in narrow bands. Pectoral fins rather short, about equal to postorbital part of head. Pelvic fins not reaching to anus. Caudal fin rounded. Scales on head cycloid, on body ctenoid.

Remarks New record in Bangladesh. Not commonly found in the Sundarbans.



Epinephelus coioides **Bloch, 1790**

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Serranidae**



D_1 XI/16; D_2 absent; P_1 20; P_2 I/5; A III/8. Color light greyish brown dorsally, shading to whitish on side and ventrally, with numerous brownish orange or brownish yellow spots the size of pupil or smaller on head and body; 5 slightly diagonal greyish brown bars on head and body which bifurcate ventrally, the first 4 extending basally dorsal fin; brownish orange spots on body tend to be arranged in rows parallel to dark bars. Body elongate, not very compressed. sized. Membranes of spinous portion of dorsal fin incised; caudal fin rounded; pelvic fins not reaching anus.

Remarks New Record in Bangladesh. Not commonly found in the Sundarbans. Good as food fish when young. This grouper is one of the largest bony fishes found in the world.

EN
Terapon perch,
Three-striped tiger fish

LN
Barguni, Katkoi

LC



Terapon jarbua Forsskål, 1775

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Terapontidae**

D_1 X+I/10; D_2 absent; P_1 13; P_2 I/5; A III/8. Body color silvery with 3 to 4 curved dark brown stripes; spinous dorsal fin with black blotch between 3rd and 6th spine; anterior and posterior tips of dorsal black; caudal fin with three horizontal stripes. Body slightly compressed; jaws with strong conical teeth in outer row; spinous part of dorsal fin strongly arched and deeply notched; 3 to 5 large spines at angle of pre-operculum; lower spine very long.

Remarks Commonly found in the Sundarbans. Good as food fish and this fish is usually processed by salt-curing.

DNA Barcode GenBank Accession No. MF611617, MF601449



Terapon theraps Cuvier, 1829

Class **Actinopterygii**
Order **Perciformes**
Family **Terapontidae**

D_1 XI+I/10; D_2 absent; P_1 15; P_2 I/5; A III/9. Body dusky above, silvery below with four horizontal dark stripes; spinous dorsal fin with prominent black blotch on fin membranes between 3rd and 7th spines; soft anal fin with black blotch; pelvic fins slightly dusky; caudal fin with three horizontal stripes; tip of upper lobe black. Body compressed, slightly deep and oblong; maxilla reaching to below 113m of eye; lateral line slightly arched; anal fin origin slightly in front of the dorsal notch; caudal fin deeply emarginated.

Remarks Commonly found in the Sundarbans. Good as food fish and this fish is usually processed by salt-curing.

EN
Moontail bullseye

LN
Lal cokkha

LC



Priacanthus hamrur Forsskål, 1775

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Priacanthidae**

D_1 X/14; D_2 absent; P_1 19; P_2 I/5; A III/15. Body color red to purplish red, lighter below. Pelvic fins black or partly black, no spots but usually a dusky margin to dorsal, anal and caudal fins. Bars sometimes present on body. Body stocky and compressed: eyes large. Mouth oblique, the lower jaw prominent. Caudal fin feebly crescentic. Scales small.

Remarks Not commonly found in the Sundarbans.



Ostorhinchus fasciatus White, 1790

Class	**Actinopterygi**
Order	**Perciformes**
Family	**Apogonidae**

D_1 VII; D_2 I/9; P_1 2+13; P_2 I/5; A II/8. Body color white to dusky pinkish, 3-4 dark stripes on upper half of body; presence of broad, uniform midlateral stripe continued to caudal fin; narrower stripe above eye to upper caudal peduncle; base of dorsal fin to upper caudal peduncle with thin stripe; incomplete diffuse stripe above midlateral strip.

Remarks Rarely found in the Sundarbans.



Sillaginopsis domina Cuvier, 1816

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sillaginidae**

D_1 X; D_2 I/28; P_1 23; P_2 I/5; A II/26. Body color greenish yellow above, lower half paler to whitish; fins pale brownish. Body elongate, partly cylindrical. Head and snout greatly depressed; eyes very small. Teeth villiform. Two dorsal fins; spine filamentous and long in first dorsal fin.



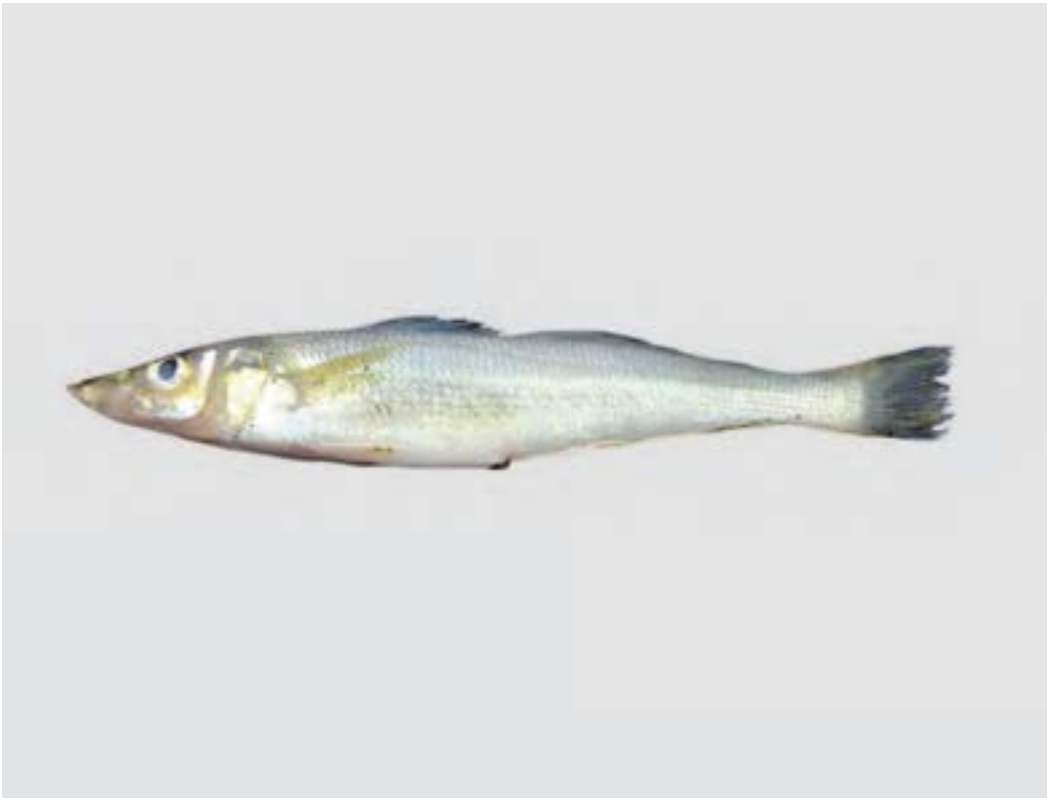
Remarks Not very commonly found in the Sundarbans. Taken commercially in small quantity.

DNA Barcode GenBank Accession No. MF594614, MF611585, MF588554

EN
Silver sillago

LN
Sundra, Hundra

LC



Sillago sihama Forsskål, 1775

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sillaginidae**

D_1 XI; D_2 I/23; $P_1$17; P_2 I/5; A II/21. Back color light blown, lower ventral flanks and belly whitish or silvery; without dark blotches. Both dorsal fins and caudal fin dusky; other fins pale. Body elongate, snout pointed; upper profile of head slightly convex. Mouth small, terminal; teeth villiform. Two dorsal fins.



Remarks Not very commonly found in the Sundarbans. Taken commercially in small quantity.

DNA Barcode GenBank Accession No. MF629720



Rachycentron canadum Linnaeus, 1766

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Rachycentridae**





D_1 VII/33; D_2 absent; P_1 21; P_2 I/5; A II/27. Back and sides dark brown, with two narrow black bands along the sides: young specimens with two sharply defined narrow silvery bands along the sides; belly yellowish. Body cigar shaped; head broad and depressed. Mouth large, terminal, with projecting lower jaw; two dorsal fins. Caudal fin lunate in adults; caudal fin rounded in young. Scales small, thick leathery skin, lateral line slightly wavy anteriorly.

Remarks Not commonly found in the Sundarbans.

DNA Barcode GenBank Accession No. MF588657-MF588559



Remora remora Linnaeus, 1758

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Echeneidae**





Ventral and lateral sides

D_1 36; D_2 absent; $P_1$20; P_2 I/5; A 35. Color nearly uniform above and below is blackish or brownish. Head is rather long and flattened. No swim bladder and uses a sucking disc on the top of its head to obtain rides from other animals such as large sharks, and sea turtles. The sucking disk, developed from a transformed spinous dorsal fin. The lower jaw projects past the upper jaw and the teeth, located in jaws and vomer in a villiform patch, are sharply pointed. The scales are small and cycloid.

Remarks Not commonly found in the Sundarbans. No food value.

DNA Barcode GenBank Accession No. MF611614, MF588549

EN
Razorbelly scad

LN
Mouri

LC



Alepes kleinii Forsskal, 1775

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**

D_1 VIII; D_2 I/24; P_1 20; P_2 I/5; A III/21. body silvery green dorsally, silvery white ventrally; a large black spot on upper margin of opercle. . Body oval, strongly compressed; ventral profile more convex than dorsal profile. Snout pointed; adipose eyelid well developed on posterior half of eye; Straight part of lateral line entirely with scutes (35-45), longer than curved part. Caudal fin forked. Scales on body moderate.

Remarks Commonly found in marine areas of the Sundarbans. Taken commercially in small quantities.

DNA Barcode GenBank Accession No. MF588543-MF588545



Alepes melanoptera Swainson, 1839

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**

D_1 VIII; D_2 I/24; P_1 21; P_2 I/5; A III/21. Body color blue black above, silvery yellow below. Spinous dorsal fin distinctly black, other fins pale yellow; juveniles with a number of dusky bands from back to midline of body. Body oblong and moderately compressed, the dorsal and ventral profiles equally and evenly convex. Teeth villiform. Two dorsal fins. Pectoral fins falcate.

Remarks Commonly found in marine areas of the Sundarbans. Taken commercially in small quantities.

DNA Barcode GenBank Accession No. MF611622



Atropus atropos Bloch and Schneider, 1801

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**



Young *A. atropos*

D_1 I+VII; D_2 I/22; P_1 22; P_2 I/5; A II+I/18. Body color bluish-green above, silvery below. Pelvic fins deep black, other fins pale or light yellow. Body deeply ovate and strongly compressed, eyes strongly convex. Abdomen with a deep median groove between bases of anal and pelvic fins. Teeth in jaws are villiform. Two dorsal fins. Pectoral fins falcate. Scales small, lateral line strongly curved; scutes along straight part of lateral line.

Remarks Commonly found in marine areas of the Sundarbans. Taken commercially in small quantities.

DNA Barcode GenBank Accession No. MF611592, MF588662, MF588663, MK024418



Carangoides armatus Forsskal, 1775

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**

D_1 I+VIII; D_2 I/18; P_1 22; P_2 I/5; A II+I/17. Color dusky or bluish above, silvery white bellow; black sort on operculum; occasionally darker bands across body in juveniles., Fins pale or yellow; pelvics of juveniles dark, becoming paler with growth. Body strongly compressed and very deep; head profile very steep. Teeth villiform. Two dorsal fins. Pectoral fins long and falcate. Scales small; breast naked in a large triangular area to behind pelvic fin and up the pectoral fin base but not above it. Lateral line anteriorly with a moderate.

Remarks Commonly found in marine areas of the Sundarbans. Taken commercially in small quantities.

DNA Barcode GenBank Accession No. MF595558, MK024419

EN
Bigeye trevally

LN
Moori

LC



Caranx sexfasciatus Quoy & Gaimard,1852

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**

D_1 V III ; D_2 I/19 ; P_1 20 ; P_2 I/5 ; A II+I/15 Body blue green above, silvery below a small, black spot on upper edge of opercle; tips of soft dorsal and anal fins white; caudal fin yellowish. Body oblong; upper and lower profiles, equal, nape, elevated; 32 to 34 strong scutes on lateral line; breast completely scaled.

Remarks Rarely found in the marine areas of the Sundarbans. Taken commercially in small quantities; fresh and dried salted.



Carangoides hedlandensis Whitley, 1934

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**

D_1 VIII; D_2 I/22P $_1$19; P $_2$I/5; A II+I/17. Body color bluish-green above and silvery white below; dorsal fin dusky; filamentous soft rays black, soft dorsal fin yellow; pectoral and anal fins silvery; caudal fin yellowish green; pectoral-fin dusky. A black opercular spot present. Body strongly compressed and very deep. Eye diameter about equal to or larger than snout length. Central rays of dorsal and anal fins elongated. Scales small; breast naked. Lateral line anteriorly with a moderate regular arch.

Remarks New record to Bangladesh. Rarely found in the marine areas of the Sundarbans. Taken in small quantities for dried.

DNA Barcode GenBank Accession No. MF588553, MF614771, MK024417

EN
Giant trevally, Giant kingfish

LN
Nilambori, Moori

LC



Caranx ignobilis Forsskål, 1775

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**

D_1 VIII+I; D_2 I/20; P_1 20; P_2 I/5; A II+I/16. Color of head and body bluish dusky above, silvery below; larger specimens with small, fine dots on body, head and operculum. Dorsal fins dusky with tip of first ray white, anal fin dusky or yellow with tip of first ray white; in large specimens males markedly darker. Body deep, slightly compressed and robust head profile strongly curved above eyes. Straight part of lateral line with 26 to 38 strong scutes; breast naked ventrally, typically with a small patch of pre-pelvic scales.

Remarks Commonly found in marine areas of the Sundarbans. Taken commercially in small quantities.



Decapterus kurroides Bleeker, 1855

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**

D_1 VIII; D_2 I/29; P_1 21; P_2 I/5; A III/24-26. Body color bluish green above, silvery below; caudal fin bright red. Sometimes a yellow mid-lateral stripe. Opercle with a small black spot. Body elongate, compressed and slender. Upper jaw with minute teeth. Margin of opercular membrane smooth. 31-38 scutes. Two separate dorsal fin.

Remarks Not commonly found throughout the Sundarbans.

EN
Torpedo scad

LN
Kauwa, Konkona, Lohamouri

LC



Megalaspis cordyla Linnaeus, 1758

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**

D_1 I+VII; D_2 I/11+8; P_1 22; P_2 I/5; A II+I/10+6. Body bluish grey to green above and silvery below; a prominent dark spot on upper edge of operculum; all fins light yellow. Body slightly compressed and elongated; head scaleless except for upper part of operculum and cheeks; breast naked; mouth terminal and small with prominent lower jaw; straight part with 54-56 strong and large scutes; caudal peduncle very slender.

Remarks Commonly found in marine areas of the Sundarbans. Taken commercially in small quantities.

DNA Barcode GenBank Accession No. MF611596, MF611609



Parastromateus niger Bloch, 1795

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**



Young *P. niger*

D_1 V/43; D_2 absent; P_1 22; P_2 absent; A III/39. Body color grey-brown, with a blue/grey tinge; lower portion or head and body lighter; fins brownish with dark edge. Young individuals with dorsal and anal fins black; caudal fin yellowish/black. Body diamond-shaped, fairly deep and compressed. Dorsal and anal fins long, spines present only in young specimens. Pectoral fins long, falcate; pelvic fins absent in adults. Caudal fin forked.

Remarks Not commonly found in marine areas of the Sundarbans.

DNA Barcode GenBank Accession No. MF593290, MF593297, MF614767



Scomberoides commersonnianus Lacepède, 1801

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**

D_1 VII; D_2 I/21; P_1 19; P_2 I/5; A II/17. Body color dusky green above and silvery below with 6 to 9 large oval blotches above on lateral line; 1st two blotches intersecting lateral line; color of pectoral fin pale with dusky blotch; ventral fins white. Body compressed with blunt snout and depression over eyes; upper jaw extending well beyond eye; no scutes; posterior soft dorsal and anal with semi-detached finlets.

Remarks Commonly found in marine areas of the Sundarbans. Highly commercial value as a fresh and dried salted; consumed locally.

DNA Barcode GenBank Accession No. MF593298, MF611620

EN
Queen fish

LN
Bom maittya

NE

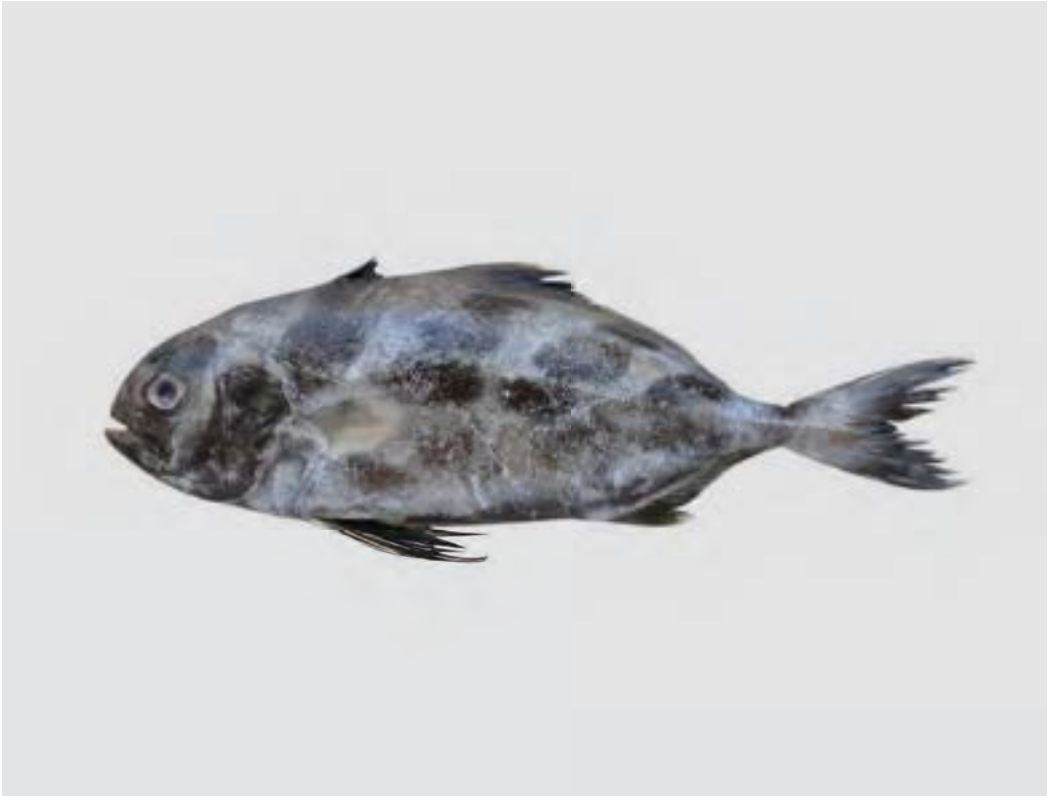


Scomberoides tol Cuvier, 1832

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**

D_1 VII; D_2 I/21; P_1 19; P_2 I/5; A II+I/18. Body color silvery, the flanks with 4 to 8 vertically elongate blotches, most of them intersecting lateral line. Dorsal and anal fins uniformly pigmented. Dorsal profile of body more convex than ventral profile; cleft of mouth commences opposite to middle of eye; no scutes.

Remarks Not commonly found throughout the Sundarbans.



Seriolina nigrofasciata Rüppell, 1829

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**



D_1 VI; D_2 I/33; P_1 18; P_2 I/5; A II/16. Body bluish-gray to black above and silvery gray below with 5-6 dark oblique bands on upper half of body; spinous dorsal black and soft dorsal ; anal fins dusky brown; tips white; caudal and ventral fins yellowish. Body oblong and moderately compressed; head profile steep in front of eye, becoming convex above eyes. Teeth villiform. Lateral line straight above pectoral fin: no scutes in adults.

Remarks Not commonly found throughout the Sundarbans. Have commercially value for food fish.

DNA Barcode GenBank Accession No. MF611587

EN
Longrakered trevally

LN
Unknown

LC



Ulua mentalis Cuvier, 1833

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Carangidae**

D_1 IX/21; A III/18. Color of body olive green above and silvery white below; dusky patch present behind corner of mouth; color of lower jaw white. First dorsal fin hyaline, other fins greenish with darker anterior margins. Body deep, oval and strongly compressed. Head profile strongly arched above eyes. Single row of minute teeth in jaws. Pectoral fins falcate, extending to middle of anal fin base. Breast naked. Lateral line moderately arched joins lateral line straight under 8th to 11th soft dorsal rays.

Remarks New record from Bangladesh. Commonly found in the marine sides of the Sundarbans. Minor commercial value.

DNA Barcode GenBank Accession No. MK024416



Mene maculata Bloch and Schneider, 1801

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Menidae**

D_1 IV/44; D_2 absent; P_1 15; P_2 I/5; A 32. Body color dark blue above and silvery white below; three rows of dark spots immediately above and below lateral line. Dorsal and caudal fin color dusky. Body highly compressed and disc like with sharp breast; mouth protrudes upwards with minute teeth; dorsal and anal fins very long and low, the rays are short; first two rays of ventral fin fused and elongate; scales small, barely visible.

Remarks Not commonly found throughout the Sundarbans. Minor commercial significance; marketed as frozen; consumed locally.

DNA Barcode GenBank Accession No. MF593285, MF588546

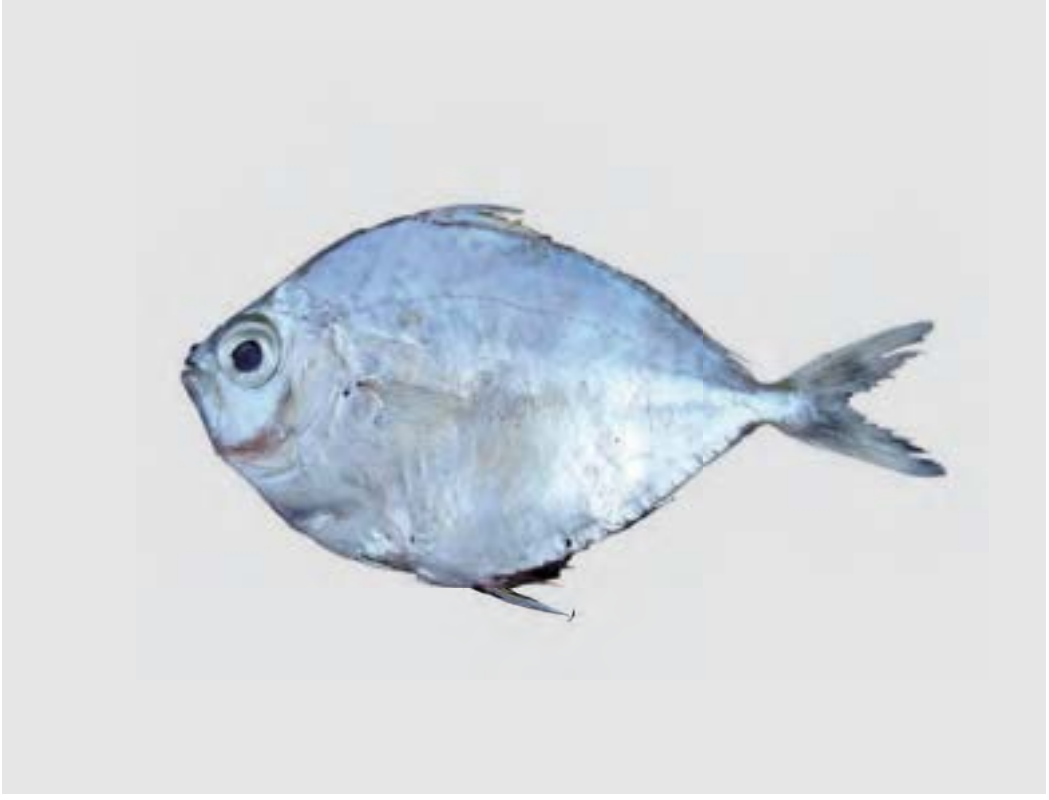


Gazza minuta Bloch, 1795

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Leiognathidae**

D_1 VIII/16; D_2 absent; P_1 16; P_2 I/5; A III/13. Color of body silvery with brownish wavy lines on upper half; spinous dorsal fin membrane black edged; soft portion of dorsal fin and anal fin edged gray; caudal fin yellowish, hind margin dusky. Body oval shaped and somewhat compressed, its dorsal and ventral profiles equally convex. Mouth small and protractile. Eye diameter about equal to interorbital width. Scales on body very small, no scales on head and breast.

Remarks Commonly found in the marine sides of the Sundarbans. Dried fish taken commercially for poultry industries.



Photopectoralis bindus Valenciennes 1835

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Leiognathidae**

D_1 VIII/16; D_2 absent; P_1 15-16; P_2 I/5; A III/14. Color of body silvery, with dark grey irregular vermiculate marks on back; snout dusky. Tips of dorsal and anal fins orange; pectoral axil with dark spot. Body deep and strongly compressed. Mouth small, pointing. Teeth small, in a single row in both jaws. Head naked, scales on body small but conspicuous. Small scales on breast.

Remarks Not commonly found throughout the Sundarbans. Minor commercial significance; marketed as frozen; consumed locally.

DNA Barcode GenBank Accession No. MF611612, MF614770



Lutjanus johnii Bloch, 1792

Class **Actinopterygii**
Order **Perciformes**
Family **Lutjanidae**



D_1 X/14; D_2 absent; P_1 16; P_2 I/5; A III/8. Body color silvery green with a distinct dark spot on each scale, appearing as longitudinal brown lines along each scale row; a large black blotch usually present above lateral line. Dorsal, anal and caudal fins dusky; pectoral and pelvic fins hyaline. Body oblong, compressed and deep with convex dorsal profile and straight ventral profile; mouth large, terminal and slightly protractile with thick lips; tongue with a patch of granular teeth; fourth and fifth dorsal spines longest; caudal fin very slightly concave. Scales fairly large; soft parts of dorsal and anal fins with a scaly. sheath; longitudinal scale-rows above lateral line parallel to it and those below lateral line horizonta.

Remarks Not commonly found in the Sundarbans. Fresh fish taken commercially in locally.



Datnioides polota Hamilton, 1822

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Datnioididae**

D_1 XII/13; D_2 absent; P_1 19; P_2 I/5; A III/9. Color highly variable; pale green adove and white bellow; up to 7 full vertical bars on body, sometimes with 1 to 4 partial bars between full bars. Body oblong and laterally compressed. Pre-dorsal profile strongly concave; total gill rakers on first arch 20-23; scales large. Caudal fin rounded.

Remarks Commonly found in the Sundarbans. Good as food fish and this fish is usually processed by salt curing.



Gerres filamentosus Cuvier, 1829

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Gerreidae**

D_1 IX/10; D_2 absent; P_1 15; P_2 I/5; A III/7. Body highly compressed and elevated; second dorsal spine longer than head and filamentous, five scale rows between lateral line and fifth dorsal spine; pectoral fin very long, tip of fin reaching to a level of origin of first anal spine. Body silvery with seven to ten vertical series of ovoid bluish spots on sides; pectoral, pelvic, anal and caudal fins dusky, dorsal fin hyaline, end of the filamentous spine black.

Remarks Non commonly found throughout the Sundarbans. Fresh fish taken commercially in locally.

DNA Barcode GenBank Accession No. MF595562



Gerres sp. Quoy & Gaimard, 1824

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Gerreidae**

D_1 X/9; D_2 absent; P_1 17; P_2 I/5; A III/7. Body silvery with seven to ten vertical series of ovoid bluish spots on sides; pectoral, pelvic, anal and caudal fins dusky dorsal fin hyaline, end of the filamentous spine black. Body highly compressed and elevated; second dorsal spine not longer like other gerres species.

Remarks Non commonly found throughout the Sundarbans. Fresh fish taken commercially in locally.

DNA Barcode GenBank Accession No. MF593468, MK024424



Pomadasys argenteus Forsskål, 1775

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Haemulidae**

D_1 XII/14; D_2 absent; P_1 I/16; P_2 I/5; A III/7. Color of body silver-mauve above and white below; plain or scattered charcoal scale spots on back and upper sides; Spots only on body, absent on head and snout; snout is dark brown; operculum charcoal or purplish. Body ovate; head profile almost straight. Mouth small; lips not thickened;

Remarks Commonly found in the Sundarbans. Much commercially important species; marketed fresh and locally consumed.



Pomadasys maculatus Bloch, 1793

Class **Actinopterygii**
Order **Perciformes**
Family **Haemulidae**

D_1 VIII/14; D_2 absent; P_1 2+14; P_2 I/5; A III/7. Body color silvery white, nape and back with series of incomplete variable cross bars on upper half of body; spinous dorsal fin large with black blotch; caudal fin dusky distally. Body compressed; head and dorsal profile convex; mouth small and slightly oblique; narrow bands of small pointed teeth in the jaws. Dorsal and anal fin spines strong; caudal fin emarginated. Scales ctenoid, moderate; present on head excluding snout. Lateral line slightly arched.

Remarks Not commonly found in the Sundarbans. Commercially important species; marketed fresh and consumed locally.

DNA Barcode GenBank Accession No. MF588664, MF588665

EN
River bream

LN
Sada datina

LC



Acanthopagrus berda Forsskål, 1775

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sparidae**

D_1 XI/10; D_2 absent; P_1 15; P_2 I/5; A III/7. Color grey above, silvery white below; dorsal and anal fins with dusky markings; soft dorsal, anal and ventral fins blackish; pectoral fins yellow. Body fairly deep and compressed; head large rather pointed; scales large; inter-orbital without scales; second anal spine distinctly longer than third spine; caudal fin forked.

Remarks Not commonly found in the Sundarbans. Taken commercially in small quantity.



Nemipterus japonicus Bloch, 1791

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Nemipteridae**

D_1 VII/9; D_2 absent $P_1$15; P_2 I/5; A III/7. Body color rosy above and below silvery; brown saddle present on top on head; 1 to 3 longitudinal yellow streaks above lateral line, 7 to 9 below, and a yellow band along belly; a bright orange blotch near origin of lateral line. Dorsal fin rosy; anal fin milky white, wavy, yellow lines. Body slightly compressed. Pectoral fins reaching to or beyond level of origin of anal fin; upper lobe of caudal fin with moderately long filament, about equal to head length. Caudal fin forked, its upper lobe prolonged into a distinctive filament; no filaments in other fins. Scales fairly large.

Remarks Rarely found in the Sundarbans. Minor food value.



Chrysochir aureus **Richardson, 1846**

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sciaenidae**

D_1 X+I/26; D_2 absent; P_1 17; P_2 I/5; A II/7. Color of body metallic blue above, shading to silvery below. Pectoral fins yell ow, other fins greyish. A small species with an acute snout and large, nearly horizontal and inferior mouth. Teeth villirorm jaws, in upper jaw the outer row enlarged with two pairs of canines at tip; in lower jaw teeth in inner row slightly enlarged.

Remarks Commonly found in the Sundarbans. Taken commercially in small quantities; marketed fresh and salted.

DNA Barcode GenBank Accession No. MK024425



Johnius borneensis Bleeker, 1851

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sciaenidae**

D_1 X+I/26; D_2 absent; $P_1$17; P_2 I/5; A II/7. Color of body silver-white. Outer two-thirds of spinous portion of dorsal fin blackish. Pectoral, pelvic and anal fins pale yellow. Body moderately elongate; no barbel on chin. Mouth large; oblique. Dorsal fin spines not prolonged. Caudal fin rhomboid. Cycloid scales on head, ctenoid on body.

Remarks Commonly found in the Sundarbans. Minor commercial importance; consumed locally; fresh and salted.



Otolithoides biauritus Cantor, 1849

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sciaenidae**

D$_1$ X+I/28; D $_2$ absent; P $_1$ 17; P $_2$ I/5; A II/8. Color of head and back greyish, flank silvery with golden tinge. Belly paler, lateral line golden-yellow. Large in size. Body slender, snout pointed but not projecting. Mouth large, teeth on both jaws Teeth villiform. Scales cycloid on head and back elsewhere ctenoid.

Remarks Not commonly found in the Sundarbans. Taken commercially in small quantities; marketed locally; fresh and dried.



Johnius coitor Hamilton, 1822

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sciaenidae**

D_1 XI+I/31; D_2 absent; P_1 16; P_2 I/5; A II/7. Color of body light golden yellow with a light purple sheen; spinous dorsal fin with a dusky edge; dul green color anal and caudal fins. Body elongated; mouth inferior. Caudal fin rhomboid shaped. Scales small; lateral line with scale. Lateral line up to tip of caudal fin.

Remarks Commonly found in the Sundarbans. Taken commercially in small quantities; fresh and frozen.



Johnius plagiostoma Bleeker, 1849

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sciaenidae**

D_1 X+I/30; D_2 absent; P_1 17; P_2 I/5; A II/8. Color dark grey on back, silvery on flanks and belly. Fins are grey or light grey, sometimes lightly mottled. Body rounded, eye large. Teeth villiform; teeth well differentiated into large and small in both jaws Caudal fin rhomboid. Scales cycloid on breast, elsewhere ctenoid.

Remarks Commonly found in the Sundarbans. Minor commercial value; marketed locally; fresh and salted.

DNA Barcode GenBank Accession No. MF593481



Protonibea diacanthus Lacepède, 1802

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sciaenidae**

D_1 X+I/26; D_2 absent; P_1 17; P_2 I/5; A II/7. Color brownish- grey , silvary bellow. Head glossed with purple. Fisn yellowish with black dots. 3-5 bars along the sides. Many small black spots on upper half of the body. Sleender body, large sized. Head bluntly pointed. Mouth size modarate, teeth villiform on both jaws. Coudal fin rhomboid.

Remarks Commonly found in of the Sundarbans. Taken commercially in small quantities.



Macrospinosa cuja Hamilton, 1822

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sciaenidae**

D_1 X+I/27; D_2 absent; P_1 18; P_2 I/6; A II/7. Color of body greenish above and silvery below. Dorsal fin have multiple dusky spots and rest of fin pale color. Body elongated; mouth terminal. Dorsal profile covex. Caudal fin rhomboid. Second anal spine very long and robust. Scales large. Sacale on lateral line.

Remarks Not commonly found in the Sundarbans. Taken commercially in small quantities; consumed locally and marketed freshly.



Otolithes ruber Bloch&Schneider, 1801

Class **Actinopterygii**
Order **Perciformes**
Family **Sciaenidae**

D_1 X+I/28; D_2 absent; P_1 17; P_2 I/5; A II/7. Body silvery; color of anal, pectoral and ventral fins yellowish. Body elongate and slender; mouth large and terminal; lower jaw slightly projecting; inter-orbital space flat; opercle with two flat spines; no pores or barbels on chin; caudal fin rhomboid. Scales cycloid, but with a few ctenoid on lower part of hind end of body.

Remarks Commonly found in the Sundarbans. High commercial values; marketed fresh and frozen.

DNA Barcode GenBank Accession No. MF621552

EN
Pama croaker

LN
Poa

NE



Otolithoides pama **Hamilton, 1822**

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sciaenidae**

D_1 IX+I/43; D_2 absent; P_1 17; P_2 I/5; A II/7. Color of body brown along lback and white beneath; fin yellowish. Body elongated; head ovoid; rounded snout. Size of eye small; mouth large terminal. Dorsal fin weakly notched and dorsal fin rather weak. Body size medium Scales small cycloid on head and breast, elsewhere weakly ctenoid.

Remarks Commonly found in the Sundarbans. Taken commercially in small quantities; fresh and dried; consumed locally.

DNA Barcode GenBank Accession No. MF621553



Pennahia anea Bloch, 1793

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sciaenidae**

X+I/25; D_2 absent; P_1 18; P_2 I/5; A II/7. Body grey above, flanks and belly silvery; upper half of spinous dorsal dusky; diffused blotch on pectoral fin axil. Mouth large, terminal and oblique; no canines; two or three pairs of pores on front of chin, the first pair separated by symphysis of lower jaw; swim bladder carrot shaped, its appendages wing like without dorsal limb; caudal fin truncate.

Remarks Not commonly found in the Sundarbans. Taken commercially in small quantities; Marketd fresh and dried.

DNA Barcode GenBank Accession No. MF593302



Pterotolithus maculatus Cuvier, 1830

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sciaenidae**



D_1 X+I/30; D_2 absent; P_1 17; P_2 I/5; A I/10. Color of body greyish above, silvery on flanks and belly, upper part of body and dorsal fin with numerous black patches. Body size large and slender species, with head profile low and only slightly curved; mouth large and strongly oblique, lower jaw projecting. Caudal fin rhomboid. Scales cycloid and in very irregular rows; lateral line scales reaching to tip of caudal fin.

Remarks Rarely found in costal sides of the Sundarbans. Taken commercially in small quantities; locally consumed; marketed fresh and frozen. .

DNA Barcode GenBank Accession No. MF593301, MK024423



Eleutheronema tetradactylum Shaw, 1804

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Polynemidae**

D_1 VIII; D_2 I/15; P_1 4+17; P_2 I/5; A III/17. Color of upper sides of head and trunk with slight darkish silver tinge, becoming lighter on lower sides. Anterior margins of first and second dorsal fins blackish, remaining parts translucent and slightly blackish, respectively; pectoral fin vivid yellow. Body elongate and compressed. Snout projecting; mouth very large with small teeth. Two widely separated dorsal fins. Pectoral fin rays unbranched, the lower four rays free and filamentous. Longest pectoral filament not reaching origin of anal fin. Scales small, ctenoid.

Remarks Not commonly found in of the Sundarbans. Taken commercially in small quantities; marketed freshly and consumed locally.

DNA Barcode GenBank Accession No. MF601473



Leptomelanosoma indicum Shaw, 1804

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Polynemidae**



D_1 VII; D_2 I/13; P_1 14; P_2 I/5; A II/12. Color of head and upper sides of trunk tinged slightly blackish brown; snout and abdominal regions blackish; membranes of first and second dorsal fins and caudal fin blackish, distal part of these fins black; pectoral-fin membrane deep black; pelvic-fin origin dusky yellowish, other parts dusky white. Body and head elongate. Adipose eyelid moderately developed; eye diameter approximately equal to or greater than snout length. Teeth villiform. Pectoral filaments 5; first filament shortest, not reaching to level of pelvic-fin origin; fifth filament longest. Caudal fin deeply forked, upper and lower caudal-fin lobes very long, filamentous. Scales small, ctenoid.

Remarks Commonly found in the Sundarbans. Taken commercially in a high quantities; marketed locally; fresh and salted.

DNA Barcode GenBank Accession No. MF593470, MK024430



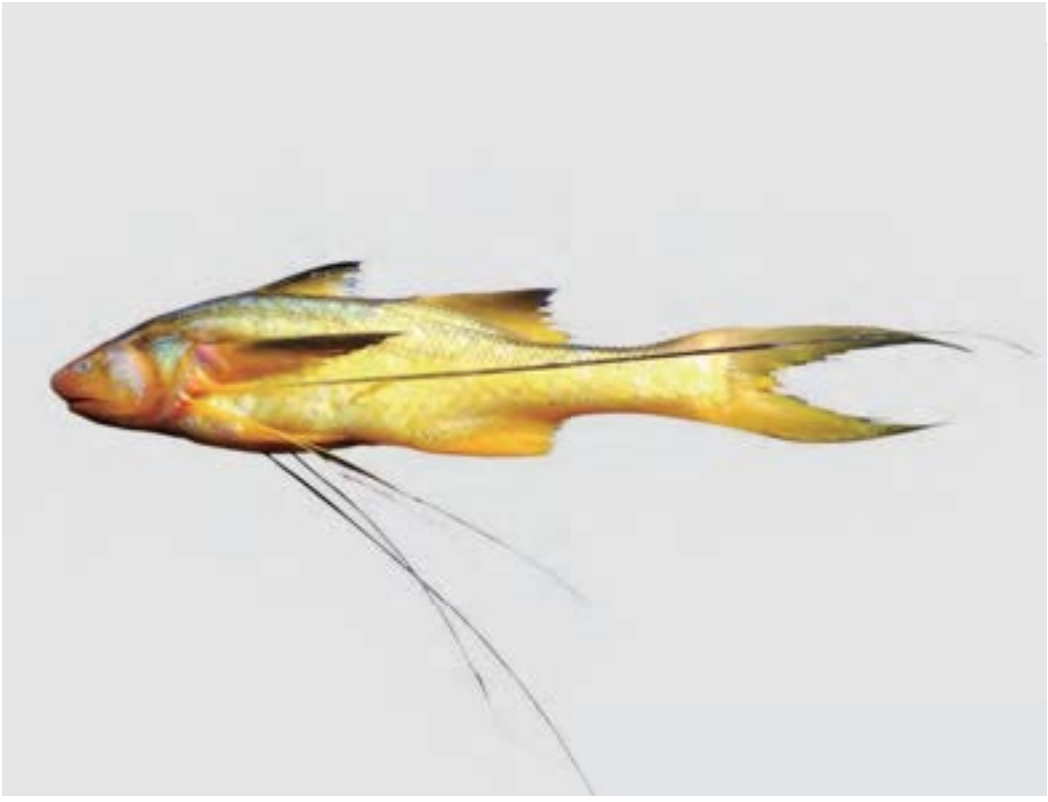
Polydactylus sextarius Bloch & Schneider, 1801

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Polynemidae**

D_1 VIII; D_2 I/13; P_1 14 + 6; P_2 I/5; A II/13. Color of body golden-olive above and silvery on sides and below; a large black blotch at beginning of lateral line. Fins yellowish with black spots. Body oblong and sliglhtly compressed. Snout projecting; mouth, large, with small teeth in jaws and palatines, no teeth on vomer. Eye large. Pectoral fin in two parts, upper part with nearly all rays branched, lower part with 6 free filamentous rays of which the upper 2 are longest and extending; to tip of pelvic fin. Caudal fin forked. Scales small, ctenoid.

Remarks Rarely found in the Sundarbans.

DNA Barcode GenBank Accession No. MF593299, MK024429



Polynemus paradiseus Linnaeus, 1758

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Polynemidae**

D_1 VII; D_2 I/15; P_1 16+7; P_2 I/5; A II/12. Body color generally golden, with a shade of grey along back; fins greyish. Body elongate and slightly compressed. Snout projecting; mouth large, with small teeth. Pectoral-fin rays unbranched, the lower 7 free and filamentous of which the upper 3 longest. Caudal fin deeply forked, the upper lobe longer. Scales small, ctenoid.

Remarks Commonly found in the Sundarbans. High commercial value; marketed fresh and frozen; dried fish also popular; consumed locally and people of others districts.

DNA Barcode GenBank Accession No. MF595063, MF595064, MF595065, MF595066



Parupeneus forsskali Fourmanoir&Guézé, 1976

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Mullidae**

D_1 VII; D_2 I/8; P_1 17; P_2 I/5; A I/6. Dark longitudinal stripe from the snout, through the eye, proceeding to below the end of the second dorsal fin base and a dark spot on the upper caudal peduncle. The first dorsal, pectoral and pelvic fins pink color while the second dorsal, anal and caudal fins are rather yellowish. Body elongate, compressed. Two long unbranched barbels on chin; mouth low on head. Two well-separated dorsal fins. Caudal fin deeply forked, Teeth in jaws moderately large, blunt, in a single row. Lateral line scaled.

Remarks Rarely found in the Sundarbans. Taken commercially in small quantities.

DNA Barcode GenBank Accession No. MF593472



Upeneus moluccensis Bleeker, 1855

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Mullidae**

D_1 VIII; D_2 9; P_1 15; P_2 I/5; A I/7. Color of head and back brown-red, sides and belly white; a distinct lemon yellow longitudinal band runs from anterior profile of head. Both dorsal fins yellow, with 3 red: horizontal stripes; anal fin whitish no marks; caudal fin with 5 or 6 dusky cross-bars on upper lobe. Body elongate. Chin with two stout, thin barbels. Pectoral fins much longer than pelvic fins. Caudal peduncle moderately deep. Scales ctenoid.

Remarks Rarely found in the Sundarbans.



Upeneus sulphureus Cuvier, 1829

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Mullidae**

D_1 VIII; D_2 9; P_1 16; P_2 I/5; A I/7. Body color grayish-bronze; head reddish; lower sides and belly pale with two yellowish horizontal stripes on sides; tip of first dorsal fin black; no bars on caudal and anal fins. Body elongate and slightly compressed; dorsal profile of head convex. One pair of short and thin barbels. Scales ctenoid; pre-orbital scales absent.

Remarks Rarely found in the Sundarbans. Taken commercially in small quantities.

DNA Barcode GenBank Accession No. MF611589, MK024428



Upeneus taeniopterus Cuvier, 1829

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Mullidae**

D_1 VIII; D_2 9; P_1 16; P_2 I/5; A I/7. Body color light grey on back, sides and belly yellowish; three light yellow bands on sides sometimes it found two; spinous dorsal with two bands, the tip black; 4-8 black bars on upper caudal-fin lobe; the proximal bars slightly curved 3-6 bars on lower lobe; the bars on both lobe tips black and other bars mostly red or brown becoming black at distal inner margins of lobes usually 2 lateral body stripes, one pale brown at mid-body from snout or eye to caudal-fin base. One pair of barbel reaching hind margin of pre-operculum; yellow color when fresh; Body deep and compressed, elongate and rather robust. Scales ctenoid; pre-orbital scales absent.

Remarks Rarely found in the Sundarbans



Toxotes chatareus Hamilton, 1822

Class **Actinopterygii**
Order **Perciformes**
Family **Toxotidae**

D_1 V/12; D_2 absent; P_1 13; P_2 I/5; A III/16. Color of silvery white with a pattern of dark bars; a series of 6 to 7 alternating large and small black blotches on upper side of body; all fins dusky. Medium sized fish; oval to rhomboidal shaped, moderately compressed body. Eye large; mouth moderately large, protractile. Caudal fin truncate to slightly emarginated. Scale moderate to relatively large and ctenoid, extending onto head and median fins.

Remarks Not commonly found in the Sundarbans. Minor commercial value; marketed fresh; consumed locally.

DNA Barcode GenBank Accession No. MF611586



Drepane longimana Bloch&Schneider, 1801

Class **Actinopterygii**
Order **Perciformes**
Family **Drepaneidae**

D_1 VIII-IX/21; D_2 absent; P_1 17; P_2 I/5; A III/18. Color of head and body silvery with 4-10 vertical dark bars usually visible on dorsal part of body from head to caudal-fin base. Body very deep, strongly compressed. Snout profile straight or concave; mouth terminal and protrusible, forming a downward-pointing tube when protruded. Pectoral fins long, falciform, reaching caudal peduncle.

Remarks Commonly found in coastal sides of the Sundarbans. Taken commercially in small quantities; dried fish usually used in poultry industries.

DNA Barcode GenBank Accession No. MF595547, MF595554, MF595555, MF589754, MF593293



Chelon parsia Hamilton, 1822

Class **Actinopterygii**
Order **Perciformes**
Family **Mugilidae**

D_1 IV; D_2 I/8; P_1 14; P_2 I/5; A III/9. Color of head and body silvery, greenish brown dorsally; a gold spot on upper part of operculum; caudal fin yellowish with dusky narrow margin. Body slender; head moderately wide, flattened on top. Teeth labial, two rows of short teeth in upper lip. Preorbital wide, filling space from lip to eye, notched anteriorly. Two widely separated dorsal fins. Caudal fin slightly forked. Scales on body cycloid in juveniles, ctenoid in adults.

Remarks Commonly found in the Sundarbans. High commercial values; marketed fresh; consumed locally.

DNA Barcode GenBank Accession No. MF588536



Moolgarda cunnesius Valenciennes, 1836

Class **Actinopterygii**
Order **Perciformes**
Family **Mugilidae**

D_1 IV; D_2 I/8; P_1 16; P_2 I/5; A III/9. Color of back dark grey, flanks and belly silvery; dark spot on base of pectoral fin. Body moderately robust; head wide, flattened above. Teeth labial, short and scattered in upper lip, long, ciliate and spaced in lower lip. Preorbitals wide, filling the space between lip and eye, notched anteriorly. Pectoral fins long, equal to or slightly shorter than head length. Long axillary scale. Caudal fin forked. Scales ctenoid.

Remarks Commonly found in upside of the Sundarbans. High commercial values; marketed fresh; consumed locally.



Mugil cephalus Linnaeus, 1758

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Mugilidae**

D_1 IV; D_2 I/8; P_1 15; P_2 I/5; A III/8. Color back blue or green, flanks and belly pale or silvery; scales on back and flanks usually streaked to form longitudinal stripes; dark pectoral axillary blotch. Body stout, cylindrical in cross-section, slightly compressed; head broad and flattened. Well developed adipose eyelid. Labial teeth of upper jaw small, straight, dense, usually in several rows; mouth cleft ending below posterior nostril. Two dorsal fins. Scales ctenoid.

Remarks Commonly found in the Sundarbans. High commercial values; marketed fresh; consumed locally.



Planiliza subviridis Valenciennes, 1836

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Mugilidae**

D_1 IV; D_2 I/9; P_1 15; P_2 I/5; A III/9. Color of head and body silvery, darkened dorsally; dusky longitudinal stripes on body; caudal fin bluish with dusky narrow margin. Body moderately robust and compressed posteriorly; no elongate scale above pectoral-fin base. Head width subequal to depth, flattened dorsally; adipose eyelid weakly developed posteriorly, not covering iris. Second dorsal and anal fins pointed but not falcate; caudal fin emarginate. Scales ctenoid.

Remarks Commonly found in upside of the Sundarbans. High commercial values; marketed fresh; consumed locally.

EN
Corsula mullet

LN
Parse, Korsula bata

LC



Rhinomugil corsula Hamilton, 1822

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Mugilidae**

D_1 IV; D_2 I/8; P_1 15; P_2 I/5; A III/9. Color of body dull olive-brown dorsally, silvery below. Fins with a golden tinge. Body rather stout; head moderate, concave between eyes, the latter projecting above this level. Eyes without adipose eyelids. Mouth distinctly ventral and protrusible. Teeth indistinct. Caudal fin slightly emarginate. Scales ctenoid.

Remarks Commonly found in upside of the Sundarbans. High commercial values; marketed fresh; consumed locally.

DNA Barcode GenBank Accession No. MF594609

EN
Yellowtail mullet

LN
Parse, Kachki bat

LC



Sicamugil cascasia Hamilton, 1822

Class **Actinopterygii**
Order **Perciformes**
Family **Mugilidae**

D_1 IV; D_2 I/8; P_1 14; P_2 I/5; A III/8. Body color grayish above and minute black dots on upper third body; sivery below; opercle golden. Body compresses; anterior modaderately and posterior deeply. Head flat above. Caudal fin slightly emarginate. Lateral line absent. Scales ctenoid.

Remarks Commonly found in the Sundarbans. High commercial values; marketed fresh; consumed locally.

DNA Barcode GenBank Accession No. MF588533, MF588534



Uranoscopus cognatus Cantor, 1849

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Uranoscopidae**



D_1 IV; D_2 14; P_1 18; P_2 5; A 14. Body without distinctive colour marks. Upper edge of opercle descending backward. Both nasal valves long and tubular. Two basipterygial processes; a short black cirrus on eye; Spinous dorsal fin separate from soft- rayed part of fin; large spine just above base of pectoral fin. Lateral line runs close to back and base of dorsal fin.

Remarks New record in Bangladesh. Rarely found in the Sundarbans. No commercial value of this species.



Butis butis Hamilton, 1822

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Eleotridae**

D_1 V+I; D_2 I/8; P_1 22; P_2 5; A I/8. Color of body dark, head and body with reddish spots, first dorsal black with red tip; other fins dusky; base of pectoral with black spot. Body elongate, slightly compressed; head pointed and depressed; lower jaw prominent; maxilla extend to below anterior margin of eye; teeth in many rows; outer rows in both jaws enlarged; 2-3 pores on posterior margin of pre-opercle. Caudal fin obtuse. Body scaly; ctenoid scales between eye and orbital crest.

Remarks Commonly found in the Sundarbans. High commercial values; marketed locally; fresh and frozen.

DNA Barcode GenBank Accession No. MF594611



Butis humeralis Valenciennes, 1837

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Eleotridae**

D_1 VI; D_2 I/9; P_1 19; P_2 I/5; A I/8. Body color brownish. A scarlet spot at a lower base of the pectoral. Head and body with dark spots. Body elongated and anteriorly cylindrical, compressed posteriorly. Head depressed, pointed. Teeth villiform. Mouth opens above the level of the eye. Head and snout scaled.

Remarks Not commonly found in of the Sundarbans. Taken commercially in small quantities; marketed fresh and consumed locally.

DNA Barcode GenBank Accession No. MF611584



Eleotris fusca Bloch&Schneider, 1801

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Eleotridae**

D_1 VI; D_2 I/8; P_1 17; P_2 I/5; A I/8. Color of head, body and fins dark brown; numerous dark horizontal lines on body. Body elongate and compressed; mouth oblique; maxilla extend to below middle of eye. Teeth villiform. Caudal fin rounded. Scales of body ctenoid posteriorly and cycloid anteriorly; head scaled above between and behind eye, on cheeks and opercles; snout and below eye naked.

Remarks Commonly found in the Sundarbans. Taken commercially in small quantities; marketed fresh.

DNA Barcode GenBank Accession No. MF611583



Boleophthalmus boddarti Pallas, 1770

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Gobiidae**

D_1 V; D_2 27; P_1 20; P_2 10; A 25. Body grayish-green dorsally with 6-7 oblique bands; greenish-white ventrally; head and trunk with small white spots; brown spots on head and nape; dorsal fin bluish green with small white spots; pectoral fin with dark margin. Body elongate and little compressed; base of dorsal and anal fins long; pelvic frenum well developed; teeth in single row on jaws. Caudal fin lanceolate. Scale cycloid.

Remarks Commonly found in the Sundarbans. Inhabitant in mangrove habitats. Minor commercial value.

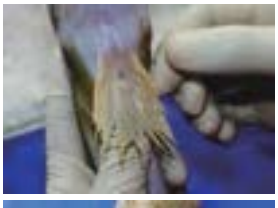
DNA Barcode GenBank Accession No. MF588541



Glossogobius giuris Hamilton, 1822

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Gobiidae**

D_1 VI; D_2 I/10; P_1 22; P_2 6; A I/10. Body color pale with small spots forming longitudinal stripes; first dorsal fin with one black spot; rays of dorsal, pectoral and caudal fins with black spots. Body elongate, anteriorly cylindrical; lower jaw prominent; maxilla extends to below anterior part of eye; lips thick.





Remarks Commonly found in the Sundarbans. High commercial value; marketed locally; fresh and frozen.

DNA Barcode GenBank Accession No. MK024414



Odontamblyopus rubicundus Hamilton, 1822

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Gobiidae**

D_1 VI/39; D_2 absent; P_1 30; P_2 I/5; A I/35. Color greenish-oblive above and lighter below; Caudal fin black, other fins reddish. Body very elongated, eel like. Head sub-cylindrical compressed. Eye small. Mouth oblique; teeth biserial on upper jaw with 4 canines on each side. A row of 3 short barbels on each side below head. Anal and caudal fin continuous; caudal fin long and pointed. Caudal blackish.

Remarks Commonly found in the Sundarbans. High commercial values of this species; marketed fresh and locally.



Pseudapocryptes elongatus Cuiver, 1816

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Gobiidae**

D_1 V; D_2 I/29; P_1 20; P_2 12; A I/29. Ground color dorsally yellowish to pale brown to reddish brown and ventrally white; 6-8 dark brown diagonal saddle-like bars are frequently visible on flanks and dorsum; caudal fin yellowish to brownish with many brown speckles; anal, pectoral and pelvic fins translucent to yellowish to orange. Body elongate and little compressed; base of dorsal and anal fins long. Scale longitudinal, cycloid.

Remarks Commonly found in the Sundarbans. Minor food value.

DNA Barcode GenBank Accession No. MF594617



Scartelaos histophorus Valenciennes, 1837

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Gobiidae**

D_1 V; D_2 I/26; P_1 20; P_2 6; A 27. Ground color on dorsum and flanks greenish grey and dorsally darker; venter pale blue to whitish; 4-8 dark grey to bluish, narrow vertical bars frequently visible on flanks; caudal fin grey with 3-5 black wavy, broken lines, posterior margin black; anal fin transparent; pectoral and pelvic fins dusky. Body elongated, sub-cylindrical anteriorly and compressed posteriorly. Head slightly depressed. Eye close together, lower eyelid free, well developed. 2nd dorsal fin long. Caudal lanceolate. Scale of body small, rudimentary.

Remarks Commonly found in the Sundarbans. Inhabitant in mangrove habitats. Minor commercial value.

DNA Barcode GenBank Accession No. MF588538



Stigmatogobius sadanundio Hamilton, 1822

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Gobiidae**

D_1 VI; D_2 I/7; P_1 18; P_2 absent; A I/8. Body olive-green with black spots in two rows on sides; first dorsal with black blotch between third and sixth spines; soft dorsal, caudal and anal fins with dark spots. Head sub-cylindrical; mouth oblique; lower jaw prominent; inter-orbital broader than eye diameter. Caudal fin rounded. Scales large.

Remarks Not commonly found in the Sundarbans. Minor commercial value; consumed locally.

DNA Barcode GenBank Accession No. MF594606



Trypauchen vagina Bloch&Schneider, 1801

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Gobiidae**

D_1 XI/49; D_2 absent; P_1 20; P_2 I/5; A 49. Body color reddish. Body compressed; eyes very small, covered by skin; mouth oblique, lower jaw prominent; maxilla extends to behind eye; head, nape and breast naked; teeth in many rows and pointed; pectoral fin half of head length; caudal fin rounded and equal to head length; body covered with cycloid scales.

Remarks Commonly found in the Sundarbans. High commercial value; marketed fresh and frozen; consumed locally.

DNA Barcode GenBank Accession No. MF588539, MF588540



Callionymus sagitta Pallas, 1770

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Callionymidae**



D_1 IV; D_2 9; P_1 16; P_2 5; A 8.Color of body sand yellow covered with numerous small white spots. Ventral side's whitish. Dorsal fin black, first membrane often (at least basally) whitish. Size small. Body elongate, Moderately depressed. Head broad and depressed. Eyes large, directed dorsally. Teeth villiform. Opercle without a free flap of skin. Preopercular spine with a slightly upcurved main tip, preopercular spine with 5 slightly recurved dorsal tips (additionally to main tip) at its dorsal margin; opercle and subopercle spineless. Sides of body without small dermal cirri; no cirri on the dorsoposterior edge of eye.

Remarks New record in Bangladesh. Rarely found in the Sundarbans.

DNA Barcode GenBank Accession No. MF595565



Ephippus orbis Bloch, 1787

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Ephippidae**

D_1 I+IX/19; D_2 absent; P_1 17; P_2 I/5; A II+I/15. Body silvery with 4 to 5 vertical bands on body from dorsal fins almost to belly. Soft dorsal have margins, anal, pelvic and caudal fins dusky black. Body strongly compressed, rounded in shape. Mouth small not protractile. Pectoral fins short and rounded. Scales smooth; operculum covered with scales almost to its ventral edge.

Remarks Rarely found in the Sundarbans. Low commercial value.

DNA Barcode GenBank Accession No. MF593296, MK024427



Parambassis ranga Hamilton, 1822

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Ambassidae**

D_1 VII+I/11; D_2 absent; P_2 I/5; A III/15. Color of body and fins are primarily silvery transparent with a pale amber to green iridescence. Spine and other bones and internal organs are clearly visible. Body deeply compressed and comparatively short. Head also short and snout sharp. Lateral line partly distinct and partly absent. Caudal fin forked. Scale small.

Remarks Rarely found in marine areas of the Sundarbans.

EN
Spotted scat,
Spotted butterfish

LN
Bishtara

LC



Scatophagus argus Linnaeus, 1766

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Scatophagidae**

D_1 XI/17; D_2 absent; P_1 17; P_2 I/5; A IV/15. Body color dusky brown above and silvery below; numerous large round brown spots on body except for breast and belly, these spots may extend onto the soft dorsal fin; all fins slightly dusky. Body quadrangular and strongly compressed; forehead steep. Mouth small with brush like teeth. A procumbent spine present before dorsal spine; dorsal fin notched; caudal truncate. Scales ctenoid.

Remarks Commonly found in the Sundarbans. High commercial values; marketed locally; fresh and frozen.

DNA Barcode GenBank Accession No. MF593284, MK024413



Siganus canaliculatus Park, 1797

Class **Actinopterygii**
Order **Perciformes**
Family **Siganidae**

D_1 I+XIII/10; D_2 absent; P_1 15; P_2 II/3; A VII/9. Color of body silver-grey above and silvery below; nape and upper surface of head olive-green; head and body with pearly white round or oval spots, some are elongate; a black patch below origin of lateral line; soft dorsal and anal fins slightly dusky. Body elongate; spines slender and pungent. Head profile slightly concave above eyes. Pectoral shorter than head. Caudal fin forked in adults, emarginated in young. Scale minute.

Remarks Rarely found in coastal areas of the Sundarbans. No commercial value; often dried fish is used for poultry industries.

DNA Barcode GenBank Accession No. MF593295



Sphyraena chrysotaenia Klunzinger, 1884

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sphyraenidae**

D_1 V; D_2 I/9; P_1 15; P_2 I/5; A II/8. Color of body brown-grey above, silvery below; tips of first dorsal and caudal fins blackish, second dorsal, pectoral and caudal fins yellowish. Body oblong, jaws elongate, lower jaw projecting; strong canine-like teeth. Pelvic fins inserted in front of first dorsal fin; pectoral fins above pelvic fins, their tips extending beyond origin of first dorsal fin.

Remarks New record in Bangladesh. Not commonly found in the Sundarbans. Taken commercially in small quantities; marketed freshly and salted.

DNA Barcode GenBank Accession No. MF588550



Sphyraena jello Cuvier, 1829

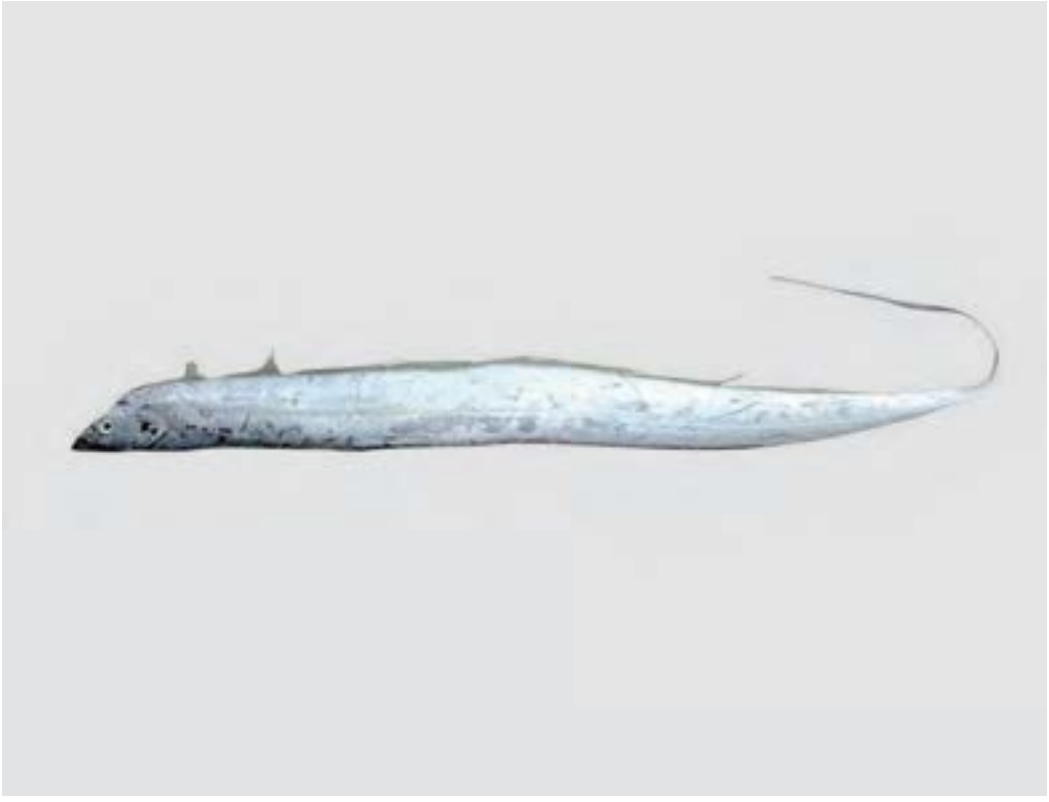
Class	**Actinopterygii**
Order	**Perciformes**
Family	**Sphyraenidae**



D_1 V; D_2 1+9; P_1 2+13 ; P_2 I/5; A II/8. Color of head and body dusky yellow-green above, silvery below; 10 to 20 vertical dusky cross-bars of a serpentine pattern on back; fading below lateral line. All fins dusky, except pelvic fins. Body elongate, fusiform and slightly compressed; head large with long pointed snout. Edge of preoperculum smoothly round, no produced flap. Mouth targe, the maxilla reaches to level of front edge of eye. Two widely separated dorsal fins. Caudal fin typically forked.

Remarks Not commonly found in the Sundarbans. Taken commercially in small quantities; marketed freshly and salted.

DNA Barcode GenBank Accession No. MK024421



Eupleurogrammus muticus Gray, 1831

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Trichiuridae**



D_1 145; D_2 absent; P_1 12; P_2 absent. Color of body steely blue with metallic reflections, becoming silvery gray after death. Body extremely elongate, compressed and tapering to a point. Posterior edge of opercle rounded. Anal fin reduced to minute spinules buried in skin; caudal fin absent; pelvic fins present but reduced to a scale-like process. Lateral line running almost straight along midbody or slightly nearer the ventral contour. Scale minute.

Remarks Commonly found in marine side area of the Sundarbans. Have high commercial values as a dried fish and expensive; marketed locally and exported to foreign countries.



Lepturacanthus savala Cuvier, 1829

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Trichiuridae**



D_1 145; D_2 absent; P_1 12; P_2 absent. Color of body steely blue with metallic reflections, becoming silvery gray after death. Body extremely elongate and compressed, ribbon-like; mouth large, lower jaw projecting; teeth strong, fang-like in front of upper jaw. Anal fin reduced to a separate spines; ventral and caudal fin absent; post anal scute prominent and dagger-like. Scale minute.

Remarks Commonly found in marine side area of the Sundarbans. Have high commercial values as a dried fish and expensive; marketed locally and exported to foreign countries.

DNA Barcode GenBank Accession No. MF594612, MF601472

EN
Mackerel tuna

LN
Kawa, Maitta

LC



Euthynnus affinis Cantor, 1849

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Scombridae**

D_1 XVI; D_2 11+8; P_1 24; P_2 I/5; A 12+7. Color of back of the body bluish black, with a complicated striped pattern which does not extend forward beyond middle of first dorsal fin; lower Sides and belly silvery; small dark spots below level of pectoral. Pelvic fins blue black, except on inner edges of lighter hue. Body robust, elongate and fusiform. Two dorsal fins, narrowly separated. Pectoral fin short, its tip not extending to interspace between dorsal fins. Caudal peduncle very slender. Lateral line is simple and scale.

Remarks Commonly found in coastal areas of the Sundarbans. Highly commercial value; marketed fresh and frozen; consumed locally.

DNA Barcode GenBank Accession No. MF611593

EN
Island mackerel

LN
Kawa, Maitta

DD



Rastrelliger faughni Matsui, 1967

Class **Actinopterygii**
Order **Perciformes**
Family **Scombridae**

D_1 X; D_2 12; A 12. Color of back bluish-green, belly yellowish silvery; two rows of black spots on back below dorsal-fin base from origin of first dorsal fin to caudal peduncle; outer margins of dorsal and pectoral fins dark. Body fusiform; head longer than body length. Gill rakers very short, shorter than snout, when mouth is opened wide the rakers do not extend far into mouth. Teeth in a single series, minute and pointed in both jaws. Two dorsal fins, widely separated. Scales small and ctenoid.

Remarks New record in Bangladesh. Not commonly found in the Sundarbans. Marketed fresh and frozen; consumed locally.

EN
Indian mackerel

LN
Kawa, Maitta

LC



Rastrelliger kanagurta Cuvier, 1816

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Scombridae**

D_1 X; D_2 11+5; P_1 19; P_2 I/5; A 12+5. Color of back blue-green, flanks silvery with golden tint; two rows of small dark spots on sides of dorsal-fin bases, narrow dark bands on upper part of body and a black spot on body near of pectoral fin. Dorsal fins yellowish with black tips; caudal and pectoral fins yellowish; other fins dusky. Body fusiform; head length longer than body. Teeth minute and pointed, in a single row in both jaws. Two dorsal fins, widely separated. Scales small, ctenoid.

Remarks Commonly found in coastal areas of the Sundarbans. Highly commercial value; marketed fresh and frozen; consumed locally.

DNA Barcode GenBank Accession No. MF594607, MF601476

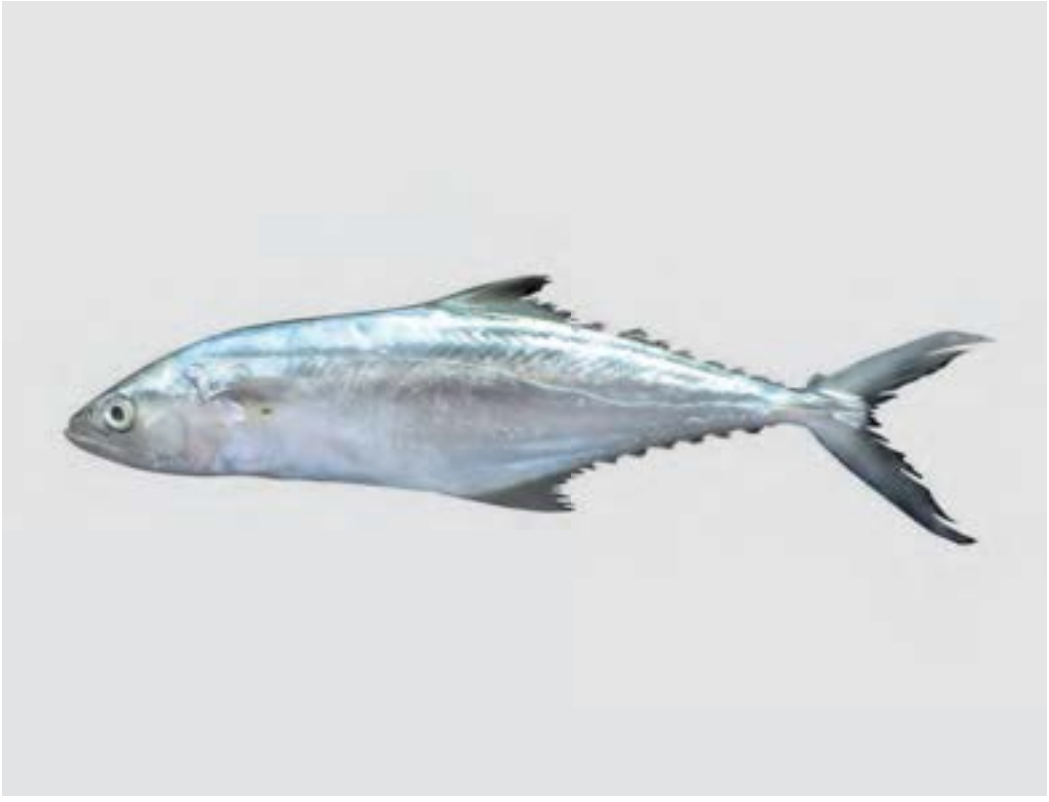


Scomberomorus commerson Lacepède, 1800

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Scombridae**

D_1 XVI; D_2 16+9; P_1 21; P_2 I/5; A 17+9. Color of head and body bluish silver dorsally, silvery-white ventrally. Many vertical dark bars presents on body. Body elongate, strongly compressed. Upper jaw reaching to or extending slightly beyond posterior margin of eye. Teeth on jaws strong with finely serrated edge. Caudal peduncle with a large lateral keel and caudal-fin base with 2 small keels. Two dorsal fins scarcely separated. Pectoral fins short, pointed. Body covered with small scales.

Remarks Commonly found in coastal areas of the Sundarbans. Highly commercial value; marketed fresh and dried; consumed locally.



Scomberomorus guttatus Bloch&Schneider, 1801

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Scombridae**

D_1 XV; D_2 20+9; P_1 18; P_2 I/5; A 22+7. Color of sides silvery white with several longitudinal rows of round dark brownish spots. First dorsal fin membrane black white posteriorly, with the distal margin black; pectoral, second dorsal and caudal fins dark brown pelvic and anal fins silvery white. Body elongate and strongly compressed. Head pointed. Adipose eyelid present. Snout pointed. Teeth moderately compressed. Two dorsal fin, 2nd have 8-10 finlets. Anterior part of 2nd dorsal fins followed by 7-9 finlets. Lateral line branches anteriorly. Scale small, cycloid.

Remarks Commonly found in coastal areas of the Sundarbans. Highly commercial value; marketed fresh and dried; consumed locally.

DNA Barcode GenBank Accession No. MF611610, MF611621



Pampus argenteus Euphrasen, 1788

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Stromateidae**



D_1 VIII/42; D_2 absent; P_1 24; P_2 absent; A V/38. Color of back grey, merging to silvery white towards belly; very small black dots all over body. Dorsal, anal and caudal fins with dark edges and all fins faintly yellow. Body very deep and compressed. Eye with feeble adipose lid. Teeth small in a single row in both jaws. Single dorsal fin, falcate; anal fin falcate; median fins preceded by a series of 5 to 10 blade-like spines with anterior and posterior points. No pelvic fins. Caudal fin deeply forked, the lower lobe longer.

Remarks Commonly found in marine sides of the Sundarbans. Highly commercial value; marketed fresh and frozen; consumed locally.

DNA Barcode GenBank Accession No. MF595542, MF595543



Pampus chinensis Euphrasen, 1788

Class	**Actinopterygii**
Order	**Perciformes**
Family	**Stromateidae**

D_1 46; D_2 absent; P_1 25; P_2 absent; A 43. body grey-brown on back, merging to silvery white towards belly. Fins dusky. Body very deep and compressed. Eye with narrow adipose lid. Small teeth in a single row in both jaws. Single dorsal fin; dorsal and anal fins not falcate. No spines before the median fins. Caudal fin emarginate, slightly forked in adults.

Remarks Commonly found in coastal areas of the Sundarbans. Highly commercial value; marketed fresh and frozen; consumed locally.



Lates calcarifer Bloch, 1790

Class **Actinopterygii**
Order **Perciformes**
Family **Latidae**

D_1 VIII/11; D_2 absent; P_1 17; P_2 I/6; A III/8. Color of body olive-brown above with silvery sides and belly; no spots or bars present on fins or body. Eyes bright pink. Body elongate and moderately conlpressed, with a deep caudal peduncle. Head pointed. Operculum with a small spine. Mouth large and slightly oblique, the upper jaw extending to behind eye. Teeth villiform in jaws. Pectoral fins short and rounded. Caudal fin rounded. Scales ctenoid, large.

Remarks Commonly found in the Sundarbans. This is one of the most important fish species of Bangladesh; taken commercially in a high quantity; fresh and frozen; marked locally and exported to foregin country.



Pseudorhombus javanicus Bleeker, 1853

Class	**Actinopterygii**
Order	**Pleuronectiformes**
Family	**Paralichthyidae**

D_1 71; D_2 absent; P_1 12; P_2 6; A 54. Body brownish, a distinct, large dark blotch at junction of straight and curved parts of lateral line and a smaller blotch on middle of straight section of lateral line, many dark rings scattered on body. Body oval and flat, with eyes on left side which are sepantled by a bony ridge. Teeth in jaws in one row, rather strong, sometimes caninoid; no teeth on palate. Upper profile of head without notch in front of eye. Scales of ocular side more or less ctenoid anteriorly, mostly cycloid posteriorly; upper profile of head scarcely notched, usually evenly curved.

Remarks Commonly found in the Sundarbans. Minor commercial value; often dried fishes used in poultry industries.

DNA Barcode GenBank Accession No. MF595557



Dagetichthys commersonnii Lacepède, 1802

Class	**Actinopterygii**
Order	**Pleuronectiformes**
Family	**Soleidae**

D_1 78; D_2 absent; P_1 7; P_2 7; A 63. Body color brownish, without white spots. Body elongate, broad anteriorly and tapering posteriorly. Eyes separated by a scaly interspace. Anterior part of snout with a bony process. Dorsal and anal fins confluent with caudal fin. Pectoral fins well developed, symmetrical. Pelvic fins short, connected to anal fin. Scales ctenoid; lateral line scales cycloid; scales on head and nape of ocular, side larger than those on body

Remarks Commonly found in the Sundarbans. Minor commercial value; often dried fishes used in poultry industries.

DNA Barcode GenBank Accession No. MF595561, MF595566



Brachirus orientalis Bloch & Schneider, 1801

Class	**Actinopterygii**
Order	**Pleuronectiformes**
Family	**Soleidae**

D 63; A 51. Color of body tinged yellow on blind side. Fins color darker and black, pale blotches on dorsal side. Body oblong; flat. Small size mouth. Dorsal and anal fins are confluent with caudal fin. Scale ctenoid.

Remarks Not commonly found in the Sundarbans. Minor commercial value; often dried fishes used in poultry industries.



Cynoglossus arel Bloch&Schneider, 1801

Class	**Actinopterygii**
Order	**Pleuronectiformes**
Family	**Cynoglossidae**



D_1 100-110; P_1 absent 7; P_2 4; A 76-80. Body uniform brown towards ocular side, with a dark patch on gill cover, blind side white. Body flat and elongate, dorsal and anal fins confluent with caudal fin; both the eyes on left side of body, two lateral lines on eyed side, none on blind side; scales ctenoid on eyed side and cycloid on blind side.

Remarks Commonly found in the Sundarbans. Minor commercial value; often dried fishes used in poultry industries.

DNA Barcode GenBank Accession No. MF594608, MF629719



Triacanthus biaculeatus Bloch, 1786

Class	**Actinopterygii**
Order	**Tetraodontiformes**
Family	**Triacanthidae**



D_1 IV; D_2 24; P_1 14; P_2 I; A 20. Color of dorsal of the body silvery light brown and ventral half silvery white; a large black blotch beneath spiny dorsal-fin base; soft dorsal and anal fins pale; pectoral and caudal fins yellow. Body oblong and compressed; snout concave; first dorsal spine strong and much longer than second spine. Pelvis not distinctly tapered to a point posteriorly. Dorsal profile of head from first dorsal-fin spine to above eye slightly convex. Caudal peduncle depressed.

Remarks Rarely found in the Sundarbans. No food value.

DNA Barcode GenBank Accession No. MF629719



Ostracion cubicus Linnaeus, 1758

Class	**Actinopterygii**
Order	**Tetraodontiformes**
Family	**Ostraciidae**



D_1 10; D_2 absent; P_1 10; P_2 absent; A 10. Body yellowish brown, with rounded bluish spots except on ventral side; all fins light yellow; caudal fin with small scattered bluish spots. Head and body encased in a four ridged carapace formed by large hexagonal plates with a feeble spine on middle of back; sides of body concave, ventral surface somewhat rounded; profile of snout almost vertical; lateral and pelvic ridges rounded; frontal spine horn-like, long and slender, directed forward; pelvic ridge terminating posteriorly in a backwardly directed spine.

Remarks Rarely found in the Sundarbans. No food value.



Chelonodontops patoca Hamilton, 1822

Class	**Actinopterygii**
Order	**Tetraodontiformes**
Family	**Tetraodontidae**

D_1 10; D_2 absent; P_1 17; P_2 absent; A 10. Color greenish-gray to brown on back with large round to ovate white spots; a broad yellow band running from chin to lower caudal-fin base. A patch of spinules on back from behind interorbital nearly to dorsal fin and another on throat and abdomen. Nasal organ in the form of a depression with slightly raised margin expanded before and behind into a pair of elongate flaps.

Remarks Not commonly found in the Sundarbans. No food value.



Diodon hystrix Linnaeus, 1758

Class	**Actinopterygii**
Order	**Tetraodontiformes**
Family	**Tetraodontidae**

D_1 12; D_2 absent; P_1 21; P_2 absent; A 12. Body brownish dorsally with small black spots; fins yellowish with dark spots. Body flabby; eyes large; head and body with long pointed spines; no downward pointed spine below eye; no barbels on chin. Pectoral fins broad. Caudal fin rounded.



Remarks Rarely found in the Sundarbans. No food value.

DNA Barcode GenBank Accession No. MF594615



Dichotomyctere fluviatilis Hamilton 1822.

Class	**Actinopterygii**
Order	**Tetraodontiformes**
Family	**Tetraodontidae**



D_1 15; P_1 22; A 13. Body color greenish-olive above, and sides and below white; large black blotches present in back and side of D. fluviatilis. That could be variable in different ages. Irregular light cross bands between eyes and on back; abdomen with black blotches and spots. Edge of caudal fin black. Body flabby and small, eye large; spinules on body except on posterior part of body; caudal fin truncate.

Remarks Not commonly found in the Sundarbans. No food value.

DNA Barcode GenBank Accession No. MF595549, MF595550, MF611605, MF611606



Lagocephalus guentheri Miranda Ribeiro, 1915

Class	**Actinopterygii**
Order	**Tetraodontiformes**
Family	**Tetraodontidae**

D 22-23; P_1 14; P_2 6; A 19-21. Color of dorsal side of the body brown with several dark bands crossing over the back; A silver-white band running on the side of the body as found in the holotype. The dorsal fin dusky. The caudal fin dark brown or almost black with the dorsal and ventral white tips. The pectoral and anal fins pale. Body stout and small sized fishes, covered with small spinules on back, abdomen and throat; caudal fin rounded.

Remarks New record in Bangladesh. Rarely found in the Sundarbans. No food value.

DNA Barcode GenBank Accession No. MF588654, MF588655, MF588656



Lagocephalus lunaris Bloch and Schneider, 1801

Class	**Actinopterygii**
Order	**Tetraodontiformes**
Family	**Tetraodontidae**

D_1 13; D_2 absent; P_1 16; P_2 1; A 11. Color of upper side a uniform grey or greenish grey, sides mostly silver, belly white. Blunt-headed fish with heavy jaws. Dorsal and anal fins set far back near caudal fin; caudal fin distinctly concave; pelvic fins absent. Prickles covering much of the belly, usually absent on the back; no lappets on head or body.

Remarks Commonly found in the Sundarbans. No food value.

DNA Barcode GenBank Accession No. MF588660, MF588661, MF588653



Takifugu oblongus Bloch, 1786

Class	**Actinopterygii**
Order	**Tetraodontiformes**
Family	**Tetraodontidae**

D_1 13; D_2 absent; P_1 16; P_2 absent; A 11. Color of body brown dorsally and white ventrally; many transverse white bands on back from snout to caudal peduncle. Body relatively elongate covered with spinules. Nostrils with 2 openings.



Remarks Rarely found in the Sundarbans. No food value.

DNA Barcode GenBank Accession No. MF589753, MF611607, MF601471, MF601471



Allenbatrachus grunniens Linnaeus 1758

Class	**Actinopterygii**
Order	**Batrachoidiformes**
Family	**Batrachoididae**

D_1 III/22; D_2 absent; P_1 24; P_2 5; A 17. Color of body color variable; usually brownish dorsally and posteriorly, often with spots, saddles, bars or other markings. Head broad in dorsal view and depressed, often with barbels and fleshy tentacles around jaws. Mouth large and terminal. Opercle and sub-opercle with spines. Gill opening small, restricted to sides of body. Pectoral fin large, broad based and rounded. Body with scales or naked; lateral line multiple.

Remarks Not commonly found in the Sundarbans. Minor food value. The local peoples of the Sundarbans believes, this species can increase the milk production of women.

DNA Barcode GenBank Accession No. MF595548

Table 2. **List of fishes previously reported in the Sundarbans of Bangladesh other than the present study.**

Order	Family	Scientific Name	English Name	Local Name	Reference
Orectolobi formes	Cracharinidae	*Carcharhinus melanopterus*	Blacktip reef shark	Kala hangar	IPAC, 2010a
		Scoliodon sorrakowah	Dog fish	Thutte hangar	
		Scoliodon walbeehmii	Scoliodon walbeehmii	Kamot hangar	
Rhinobatiformes	Sphyrnidae	*Eusphyrna blochii*	Hammerhead shark	Haturi hangar	
	Rhynchobatidae	*Rhynchobatus djddensis*	Gulter fish	Pitambari	
Myliobatiformes	Dasyatidae	*Himantura fluviatilis*	Gangetic stingray	Saplapata	
Clupeiformes	Clupeidae	*Escualosa thoracata*	White sardine	Hichiri	
		Sardinella gibbosa	Gold stripe sardine	Chandana	
		Hilsa filigera	Bigeye ilish	Chouka	
		Hilsa melastoma	Indian ilisha	Chaukka	
	Engraulidae	*Dussumieria acuta*	Rainbow sardine	Nailla	
		Raconda russelliana	Smooth back herring	Phasa	
		Setippina phasa	Gangetic hairfin anchovy	Phasa	
	Chirocentridae	*Chirocentrus nudus*	Wolf herring	Karati chela	
Elopiformes	Elopidae	*Elops machnata*	Tenpounder,tarpon	Elope	
Anguilliformes	Muraenesocidae	*Congresox tale*	Yellow pike conger	Kamila	
		Muraenesox cineneus	Daggertooth pike conger	Kamila	
Siluriformes	Bagridae	*Mystus gulio*	Long-whiskered catfish	Guilla,nuna tengra	
	Schilbeidae	*Pangasius pangasius*	Fatty cat fish	Pangas	
	Ariidae	*Arius caelatus*	Engraved cat fish	Mad	
		Arius thalassinus	Giant sea cat fish	Mad	
	Plotosidae	*Plotosus lineatus*	Striped ell tail cat fish		
Batrachoidi formes	Batrachoididae	*Batrichthys grunniens*	Gangetic toad fish		
Beloniformes	Hemiramphidae	*Zenarchopterus ectuntio*	Ectuntio half beak		
Syngnathiformes	Fistularidae	*Fistularia villosa*	Rough flute mouth	Bongshi	
Scorpaeniformes	Scorpaenidae	*Pterois miles*	Miles lion fish	Rongilla	
	Platycephalidae	*Platycephalia crocodilus*	Spotted flat head	Fotta murbaila	
		Rogadius asper	Thorny flat head	Kata mur baila	
Perciformes	Centropomidae	*Lates calcarifer*	Seabass	Bhetki, koral	
	Ambassidae	*Chanda nama*	Elongate glassy Perchlet	Nama chanda	

Table 2. Continued

Order	Family	Scientific Name	English Name	Local Name	Reference
Perciformes	Ambassidae	*Pseudambassis baculis*	Himalayan glassy Perchlet	Kata chanda	IPAC, 2010a
	Serranidae	*Cephalopholis miniatus*	Grouper	Bol	
		Epinephalus fasciatus	Grouper	Bol	
		Epinephalus tauvina	Grouper	Bol	
	Apogonidae	*Apogon novemfasciatus*	Nine-banded Cardinalfish	Duidea	
	Carangidae	*Alectis indica*	Threadfin trevally	Pakham mouri	
		Selar boops	Oxeye scad	Moori, salar	
		Selar crumenophthalmu	Bigeye scad	Boro choka	
		Seriolina nigrofasciata	Black-bandid trevally	Kalo dora, moori	
	Lactariidae	*Lactarius lactarius*	False trovally	Sadha	
	Leiognathidae	*Leiognathus bindus*	Orangefin ponyfish	Taka chanda	
		Leioghnathus equulus	Common ponyfish	Taka chanda	
		Leioghnathus brevirostris	Shortnoso ponyfish	Taka chanda	
		Leiognathus fasciatus	Striped ponyfish	Taka chanda	
		Secutor ruconius	Deep pugnose pony fish	Taka chanda	
		Secutor insidiator	Pugnose pony fish	Taka chanda	
	Lutjanidae	*Lutjanus sanguineus*	Blood snapper	Ranga choukya	
		Lutjanus malabaricus	Malabar red snapper	Choukya	
		Pinjalo pinjalo	Pinjalo snapper	Choukya	
		Nemipterus nematophorus	Double whip threadin bream	Sonabam	
	Lobotidae	*Lobotes surinamensis*	Tripletail	Sagor koi	
	Gerreidae	*Pentaprion longirnanus*	Longfin silvr biddy	Jagiri	
	Lethrinidae	*Lethrinus ornatus*	Ornate emperor	Choikka	
	Sparidae	*Argyrops spinifor*	Ongspine seabream	Lal datina	
		Acanthopagrus latus	Yellow seabrem		
	Sciaenidae	*Astrobucca nibe*	Blackmouth croaker	Kala poa	
		Johnius argentatus	Silver croaker	Lal poa	
		Otolithes parna	Pama croaker	Lambu	
		Otolithes cuvierl	Lesser tiger toothed croaker	Poa	

Table 2. **Continued**

Order	Family	Scientific Name	English Name	Local Name	Reference
Perciformes	Sciaenidae	*Johnius carutta*	Karut croakor	Poa	IPAC, 2010a
	Siganidae	*Siganus javus*	Streaked rabbitfish		
	Mullidae	*Parupeneus heptacanthus*	Goatfish	Sonali batai	
	Toxotidae	*Toxotes jaculatrix*	Banded archerfish		
	Drepanidae	*Drepane punctatus*	Spotted sickle fish	Pan	
		Ephippusus orbi	Spadefish	Hatir kaa	
	Mugilidae	*Liza tade*	Tade grey mullet	Gool bata	
	Sphyraenidae	*Sphyraena barracuda*	Barracuda	Darkuta	
		Sphyraena putnamiae	Sawtooth barracuda	Darkuta	
	Polynemidae	*Polydactylus sexfilis*	Golden threadfin	Sona tailla	
	Priacanthidae	*Priacanthus tayenus*	Purple spotted big eye	Parl	
	Uranoscopidae	*Uarmosopus guttatus*	Stargazer	Tara gazar	
		Ichthyscopus lebeck	Stargazer	Buturn	
	Gobiidae	*Brachygobius nunus*	Bumblebee goby	Nuna baila	
		Glossogobius giurus	Tankqoby	Baila	
		Pogonogoibius planiformes	Goby	Baila	
		Parapocryptes batoides	Goby	Chewa, chirin	
		Pseudapocryptes lanceolatus	Goby	Chewa, chirin	
		Periophalmodon schlossed	Mudskipper	Dahuk	
		Periophthalmus koelreuteri	Mudskipper	Dahuk	
	Gobioididae	*Odontamblyopus rubicandas*	Irubicundus ee!goby	Lal chewa	
	Kuridae	*Kurtus indicus*	Indian lamphead	Juti	
	Trichiuridae	*Trichiurus leopturus*	Ribbon fish	Buri	
	Scombridae	*Rastrelliger brachysoma*	Indian mackerel	Champa	
		Sarda orientalis	Striped bonito	Bom maitya	
		Auxis rochi	Buulet tuna	Bom maitya	
	Stromateidae	*Psettodes erumei*	Indian halibut	Samudra serboti	
Pleuronecti formes	Paralichthyidae	*Pseudorhombus arius*	Large tooth flounder	Serboti	
		Pseudorho mbus elevatus	Deep flounder	Serboti	
		Pseudorhombus malayanus	Malayflounder	Serboti	
	Soleidae	*Synaptura pan*	Sole	Serbotit	
		Zebreas altioinnis	Zebra sole	Serboti,katal	

Table 2. Continued

Order	Family	Scientific Name	English Name	Local Name	Reference
Pleuronecti formes	Cynoglossidae	*Cynoglossus billneatus*	Fourlined tongueso'le	Kukurjib	IPAC, 2010a
		Cynoglossus cynoglossus	Gangetic tonguesole	Kukurjib	
		Cynoalossus lingua	Long tonguesole	Kukurjib	
		Cynoglossus versicolor	Tongusole	Kukurjib	
		Paraplagusia bilineata	Double lined tonguesole	Kukurjib	

1-2

Molluscs



Idiopoma dissimilis O. F. Müller, 1774

Class	**Gastropoda**
Order	**Architaenioglossa**
Family	**Viviparidae**

Shell color blackish-brown with yellowish-brown marking. Shell size small, ovately conical, broadly ovate, body. whorl indistinctly angulated; spire swollen and suture deeply impressed, without dark spiral bands, body whorl with one slightly elevated ridge or broad and obscure, pale spiral band; sculpture with fine spiral striae; greenish with blackish peristome; rim of the aperture often black, operculum thicker and muscular scar better developed. Edge of the mantle smooth in the adult.

Remarks Found commonly on muddy bottom of the ponds, ditches, canals and rivers. Used as poultry feed and people of the Sundarbans area also eat it as a delicacy. The Sundarbans these are used as food by a section of people mainly the tribal and lower economic people.



Pila globosa Swainson, 1822

Class	**Gastropoda**
Order	**Architaenioglossa**
Family	**Ampullariidae**

Shell color lemon yellow, brownish or even blackish. Calcareous shell large, thin elongate dextral with thick globose spacious and hollow cone spirally coiled round a central axis suture not deep spire depresses apex rounded at the tip, aperture large, expanded surface of the whorl obliquely flattened umbilicus open. Head prolonged into two sides, labial palps or anterior tentacles. Mouth narrow medium and vertical slit at cusps, largest third or central one and reduced innermost. Eyes on the small stalks arising on the outer side of the base of the tentacles. Whorls 5.

Remarks Found commonly in brackish water in low salinity rivers of the Sundarbans. Used as shrimp and poultry feed and for lime production. The Pila spp. is commonly used as food by the people of the Sundarbans mostly the people of tribal and lower economic.

EN
Apple snail

LN
Shamuk

LC



Pila scutata Mousson, 1848

Class	**Gastropoda**
Order	**Architaenioglossa**
Family	**Ampullariidae**

Color varies from light to dark brown, sometimes slightly green. Shell opening oval. Umbilicus narrow and almost closed. Lip somewhat thickened and surface of the shell smooth. Operculum 2 times higher than wide and calcified.

Remarks Not commonly in brackish water in low salinity rivers of the Sundarbans. Used as shrimp and poultry feed.



Cerithidea obtusa Lamarck, 1822

Class	**Gastropoda**
Order	**Caenogastropoda (Subclass, unassigned)**
Family	**Potamidae**

Color pale pinkish, lip and columella white, aperture light brown with dark brown bands. Shell elongate, robust, solid with 7-8 whorls., body whorl as broad as high; sculpture with spiral threads crossed by prominent transpiral ridges, aperture strongly spherical, wide with expanded and recurved outer lip; columella weak; .outer lip thick, 'flattened, interior smooth; operculum circular, multi spiral with a central nucleus; sculptured with 6-7 spiral ridges and 8-10 axial ribs;

Remarks Found commonly crawling on the mud or plants which get wet during the spring tide in the Sundarbans. It was also seen on the mangrove plants upto the height of 1.5 meters above the ground.



Pirenella alata Philippi, 1849

Class	**Gastropoda**
Order	**Caenogastropoda (Subcalss, unassigned)**
Family	**Potamidae**

Color greyish brown and inner white. Shell thick, with 12-13 whorls; suture distinct; aperture elongately ovate, outer lip and inner lip meet posteriorly at a point beyond the shell plane; siphonal sinus hollow and :short, outer lip reflects over the sinus; sculpture with rounded, somewhat rectangular, close set axial nodules, three on each whorl.

Remarks Found commonly crawling on the mud throughout the Sundarbans. This species closely resembles *P. cingulata* in shell characters but can easily be differentiated by its typically detached aperture and sculpture.



Pirenella cingulata Gmelin, 1791

Class	**Gastropoda**
Order	**Caenogastropoda (Subcalss, unassigned)**
Family	**Potamidae**

Color dark brown often with a whitish band above the suture, nodules dirty white or sometime brown. Shell size elongate, thick, with 13-15 whorls, flattened; sculpture with spiral ridges, tuberculated; aperture oblique., outer lip expanded broadly with distinct anterior canal, columella straight; outer lip thick anterior siphonal canal distinct :and short; color dark brown, often with a whitish and above the suture, nodules dirty white interstices brown, interior of aperture white; operculum spherical with a central nucleus.

Remarks A common and dominating species of the Sundarbans areas young ones found crawling on the mud mainly near the low water marks with the adults gradually replacing them towards high water mark. Eggs lay in capsules in the form of mass of gelatinous threads.



Telescopium telescopium Linnaeus, 1758

Class	**Gastropoda**
Order	**Caenogastropoda (Subcalss, unassigned)**
Family	**Potamididae**

Color dark brown to almost black with a paler spiral band near the suture. Shell size large, thick heavy trochoid in shape, conically elevated with more or less 16 whorls; sculpture with 3 larger and, narrow spiral cordon whorls; columella twisted and channeled, labial lip acutely curved. Feeds on organic detritus and surface algae.

Remarks Found commonly on the exposed areas of small ditches, shallow pools or canals with a little flow of water during low tide or at extreme high tide mark in the soft mud of the Sundarbans. Eggs are laid in gelatinous mass.

DNA Barcode GenBank Accession No. MF693397



Ficus gracilis G. B. Sowerby I, 1825

Class	**Gastropoda**
Order	**Littorinimorpha**
Family	**Ficidae**

Color of body surface is light brown; long dark brown lines runs from top to bottom; aperture chestnut brown, with pale blue grey outer lip and columella. Shell size large, thin, elongate body whorl, spire slightly elevated. Body surface sculptured by longitudinal and circular threads, causing roughness, circular threads thicker than the longitudinal threads. Aperture long and wide, outer lip very thin and almost straight; columella almost straight with a curve in the centre; long and broad siphonal canal.

Remarks Found in Bay of Bengal. Rarely found in shore of costal areas of the Sundarbans.



Bufonaria echinata Link, 1807

Class	**Gastropoda**
Order	**Littorinimorpha**
Family	**Bursidae**

Color of outer surface light to pale brown. Shell large, spire high; high whorl elongated; aperture narrowly ovate, outer lip edge, frilled, with strong irregular transverses teeth, columella with absolute liration; siphonal canal small and shallow; body sculptured with spiral ridges and spinose nodes, elongate outwardly directed spines, 4 spine on the outer lip edge, 2 long, 2 small, arranged alternately.

Remarks Commonly found in the marine side of Bay of Bengal. Collected for food and shell trade.



Bufonaria rana Linnaeus, 1758

Class	**Gastropoda**
Order	**Littorinimorpha**
Family	**Bursidae**

Color dull white or cream, irregularly maculated with brown, aperture white or brown, often with three dark brown bands, one on the penultimate whorl and two on the body whorl. Shell size medium, spire conical and elevated; body whorl higher than broad. Aperture obliquely ovate, outer lip grooved and with 13 denticulations; columellar callus poorly developed, spiral threads on the body whorl continue on the columella, siphonal canal relatively long. Upper part of the body whorl is with two rows of nodulose spiral cords, the one below smaller, one row on the penultimate whorl, rest of the shell surface with granulose spiral threads and spinose nodes.

Remarks Commonly found in subtidal to deep sea in the marine side of the Sundarbans. Collected for food and shell trade.

DNA Barcode GenBank Accession No. MF588671, MF693400



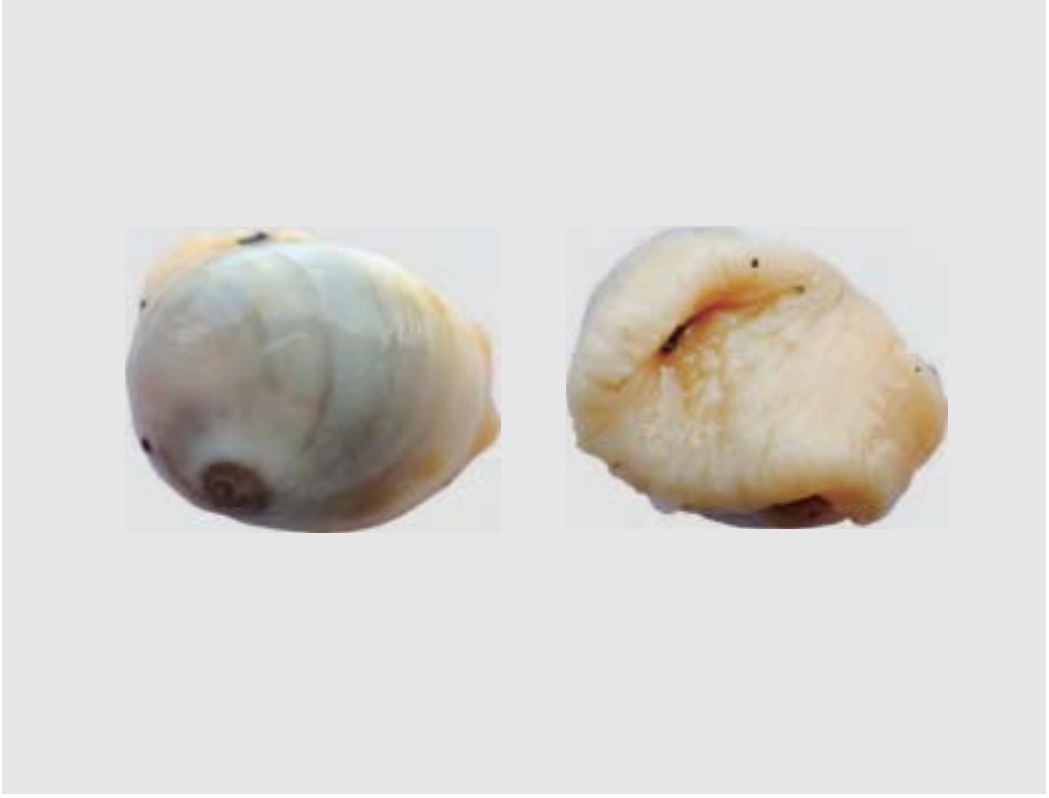
Babylonia japonica Reeve, 1842

Class	**Gastropoda**
Order	**Neogastropoda**
Family	**Babyloniidae**

Color creamy white with spiral bands of crescent shaped, brown patches alternating with bands of brown. Aperture both lips and columella are white. Shell size medium ovate and solid. Spire short, 3 to 4 whorls, suture distinct but not deep; apex pointed. Body whorl large, smoothly rounded shoulder more moderate sculpturing. Aperture oval; outer lip thick, no teeth, inner lip smooth; less callous columella; anterior siphonal canal shallow, smaller umbilicus.

Remarks Commonly found in the marine side of the Sundarbans. Collected for food and shell trade.

DNA Barcode GenBank Accession No. MF588671, MF693399



Mammilla melanostoma Gmelin, 1791

Class	**Gastropoda**
Order	**Littorinimorpha**
Family	**Naticidae**

Color brownish body surface-white, obscurely banded with flesh-brown; columella white; umbilicus and callus dark chocolate brown. Operculum corneous and dark reddish- brown. Smooth, thick, fusiform swollen, medium sized shell. Short spire with blunt apex; whorls oblique, rudely striated and impressed with very fine spiral striae. Aperture large, oblong, semilunar; outer lip slightly expanded from the body and rounded. Umbilicus is wide and deep.

Remarks Rarely found in sandy beaches in the Sundarbans. Collected its dead shell for shellcraft.



Nerita balteata Reeve, 1855 (*Nerita articulata* Gould, 1847; nomen dubium)

Class	**Gastropoda**
Order	**Cycloneritimorpha**
Family	**Neritidae**

Color dark reddish grey, aperture yellowish white, outer lip margin fringed with black. Shell thick, oblong ovate, semi globular with numerous growth striae, semicircles and crossed by finer spiral lines; whorls 2 and half rounded and narrow; spire represented by elevated portion of the body whorl; aperture, crescent shaped, with smooth, well developed, porcellaneous columellar callus; columella concave with 3-4 short teeth in the middle, outer lip margin with a deep inward slope, inner side thickened with 17-20 longitudinal elongated teeth, posterior two teeth larger and rest are knob shaped; sculpture with 25-35 purple black fine, oblique spiral ribs;

Remarks Found commonly attached to Avicennia plants of the Sundarbans; also found on wooden pillars, bricks, crevices of the dykes. Young ones observed during the month of May under bark of mangrove plants.



Neritina smithii W. Wood, 1828

Class	**Gastropoda**
Order	**Cycloneritimorpha**
Family	**Neritidae**

Color white or dull brown with black longitudinal, interrupted lines and brands, wavy and close set lines. Shell oval, solid, white or dull brown, with strong black, longitudinal, undulating and interrupted lines and bands, rarely with very fine, wavy and close set black lines; aperture broad; Columellar callus small and smooth; operculum semi lunar.

Remarks This species is primarily a brackish water species occasionally extending into freshwaters. Also found in the crevices of mud or under surface of bricks, on mangrove roots and trunks.



Potamacmaea ouviatilis Blanford, 1868

Class	**Gastropoda**
Order	**Ptellogastropoda**
Family	**Lottiidae**

Shell of true limpet thin, cup shaped; apex anterior, spire absent, periosttacum color olive brown with a number of radiating striae; aperture large in proportion to the size of the shell.

Remarks Found mostly attached to the stem of different plants above the ground; also found in costal beach.



P. ouviatilis using shrimp shell as substratum.



Volegalea cochlidium Linnaeus, 1758

Class	**Gastropoda**
Order	**Neogastropoda**
Family	**Melongenidae**

Color exterior light brown to brown or deep cream or reddish brown with dark brown large spots on the body whorl. Aperture, lips and columella orange creamy. Shell variable, large, bursifonn to pear shape with high acute spire; covered with brown periostracum; whorls angulated, body whorl large; shoulder with tubercles; aperture ovately oblong; columella smooth, without plaits; aperture large wide with thickened and smooth outer lip; sculpture not very conspicuous.

Remarks Found commonly crawling on the mud throughout the Sundarbans. Operculum of *V. cochlidium* is used for the preparation of certain ayurvedic medicines. Collected for food and shell craft industry.

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- Egg sac of *V. cochlidium*
- *V. cochlidium* shell used as substratum of other molluscs



Semiricinula tissoti Petit de la Saussaye, 1852

Class	**Gastropoda**
Order	**Neogastropoda**
Family	**Muricidae**

Color creamy-white to light brown lines on the teeth, inner lip columella White. Shell small (omit these words), solid, elongate ovate. Spire elevated, consists of 4 spinose whorls; suture obscure; apex pointed. Body whorl medium with flat nodules at shoulder, contains 3-4 blunt spiral cords. Aperture narrowly ovate; outer lip thick, solid and with 3 to 5 teeth at the inner edge; inner lip and folded columella smooth; posterior siphonal canal deep and broad.

Remarks Found commonly in jetties, in backwaters, rivers mouth attached to bricks, boulders, pillars and decomposed of the Sundarbans. Common predator on bivalves drilling a hole through the shell of the victim and sucking out the contents using their narrow eversible proboscis.



Turricula javana Linnaeus, 1767

Class	**Gastropoda**
Order	**Neogastropoda**
Family	**Clavatulidae**

Color of shell unicolored, dull purplish brown or brownish yellow to creamy buff, with peripheral paler nodules. Shell size moderately large, fusiform, spire turreted and moderately long, siphonal canal slightly curved. All whorls (10-11) strongly carinate and nodose. Numerous spiral cords closely placed and crossed on the peripheral cord by strong oblique nodules, 22-27 on the last whorls; 2 strong cords located below the suture, sinus deep.

Remarks Rarely found in the shore of costal areas of the Sundarbans. Active predators with needle like teeth charged with venom. Used as potential resources for fisheries in south region of Bangladesh.



Achatina fulica Férussac, 1821

Class	**Gastropoda**
Order	**Stylommatophora**
Family	**Achatinidae**

Color generally brown to pale yellowish with irregular darker streaks running transversely across the whorl. A light coffee color is common. Narrow, conical shell, which is twice as long as it is wide and contains 7 to 9 whorls when fully grown. Shell somewhat glossy moreless irregularly decorated with fine spirals, except on the last whorl. Spire convex, suture impressed, apex acute. Elongated foot, pointed at the rear. Head with retractile tentacles; eyes at the end of the lower pair of tentacle, also retractile, but much shorter.

Remarks The species occurs commonly in agricultural areas, coastal areas and wetlands, disturbed areas, natural and buffer zones of the Sundarbans. *L. fulica* has an economic importance as a medicinal and protein source in tribal peoples.



Cassidula sp.

Class	**Gastropoda**
Order	**[unassigned] infraclass: Pulmonata)**
Family	**Ellobiidae**

Color cream or fawn ornamented with brown bands. Shell ovate, with short spire and convex body whorl, angular at the shoulder; apex purplish brown; sculpture with sharp, fine, incised striae on the body whorl; Aperture elongate, outer lip thick, often reduced in size due to pr1es1ence of teeth. Columella with folds and teeth, Outer lip with one to several teeth, surface generally smooth but sometimes with striations.

Remarks Found commonly attached to the stem of mangrove, crawling on the mud, prefers shady area in the Sundarbans.



Ellobium gangeticum L. Pfeiffer, 1855

Class	**Gastropoda**
Order	**Pulmonata (Infraclass, unassigned)**
Family	**Ellobiidae**

Outside color of whitish or straw colored under the dark brown periostracum. Aperture porcelaneous-white. Shell relatively slender, ovate, fusiform, not shouldered. Slightly expanded aperture, spire short, up to 6 whorls, whorl tumid, columella with two plaits, thin axial striae on the surface.

Remarks Smaller than *Ellobium aurisjudae*. Common on the mangrove stems and also in the holes and crevices of the mud flats of the Sundarbans.





Pythia plicata Férussac, 1821

Class **Gastropoda**
Family **Ellobiidae**

Color usually light purple to brown with a white band along the outer lip. Shell ovate, compressed, light purple with white band along the outer lip; spire acute, body whorl large; suture impressed; aperture narrow; outer lip margin reflected, dentate in side; columella calloused with three conspicuous folds, umbilicus deep; color light purple with white band along the outer lip.

Remarks Commonly found on mud of mangrove areas, sometimes found attached on the trunk of mangrove plants during the high tide in the Sundarbans.



Onchidium tenerum Stoliczka, 1869

Class	**Gastropoda**
Order	**Systellommatophora**
Family	**Onchidiidae**



Color of dorsal surface greenish grey, decorated with irregular fine granules and dark spots, eyes black. Moderate sized animal, elongated during movement, usually ovate-elongate, flabby with soft mantle. Eye bearing tentacles stout at the base with distinctly swollen granular tips, situated centrally in the transverse fold.

Remarks Commonly found in brackish water river banks in the Sundarbans but tough to spotting for their camouflage coloration. They are omnivorous. Feeding on minute invertebrates, algae, detritus etc. Used as a fish bait by the anglers.



Solen vagina Linnaeus, 1758

Class	**Bivalvia**
Order	**Adapedonta**
Family	**Solenidae**

Color olive brown, white sharply tinged pink posterior to umbones. Shell flattened, almost straight, tapering slightly at posterior end; posterior margin sub truncate; anterior margin distinctly angled; sculpture with prominent growth lines. Posterior adductor scar relatively broad.

Remarks Uncommon in the mud of low tide onwards in the Sundarbans, in the small creeks leading to the main rivers.



Meretrix meretrix Linnaeus, 1758

Class **Bivalvia**
Order **Venerida**
Family **Veneridae**

Shape and color highly variable which leads to description of several varieties. Shell large, heavy, thick, ventricose; umbo pointed, elevated and slightly anterior in position; anterior margin rounded, ventral margin convex, posterior margin angulated; sculpture with concentric growth lines, anterior adductor scar elongately ovate, posterior adductor scar broader posteriorly and pointed anteriorly; pallial sinus shallow. Posterior lateral teeth in the left valve and corresponding depr1ession in the right valve are finely denticulate or striate.

Remarks Commonly found at costal areas in the Sundarbans. This is commercially important species. Tonnes of shells of this species were collected from the mud and river mouth, used as poultry feed after crushing them into powder.

DNA Barcode GenBank Accession No. MF593482





Donax carinatus Hanley, 1843

Class	**Bivalvia**
Order	**Cardiida**
Family	**Donacidae**

Color variable, outer surface purple with white bands, inner purplish, violet spot on the posterior margin near the umbo. Shell small, thick, equivalve, laterally compressed, trigonal or wedge- shaped, concentric growth lines crossing with the radial ribs, ventral margin crenulated. Umbones opisthogyrate. Hinge with two small cardinal teeth, less developed lateral teeth. Pallial sinus deep. Interior smooth.

Remarks Commonly found in coastal areas of the Sundarbans. Usually used as shell craft industry and muscle for poultry feed.



Tegillarca granosa Linnaeus, 1758

Class **Bivalvia**
Order **Arcida**
Family **Arcidae**

Outside color of shell white under yellowish-brown periostracum, inner side white, often tinged light yellow towards the umbonal cavity. Shell orbicularly-ovate, equivalve, side slightly angulated. Sculpture radiately ribbed; ribs upto 20, tuberculate and crenulated.

Remarks Commonly known as Ark shell, occurs on the muddy substratum of the Sundarbans. Shell burrower and lives partly buried in the sediment and because of this is most frequently found in sheltered conditions, with the umbonal margin directed upwards.

DNA Barcode GenBank Accession No. MF693398

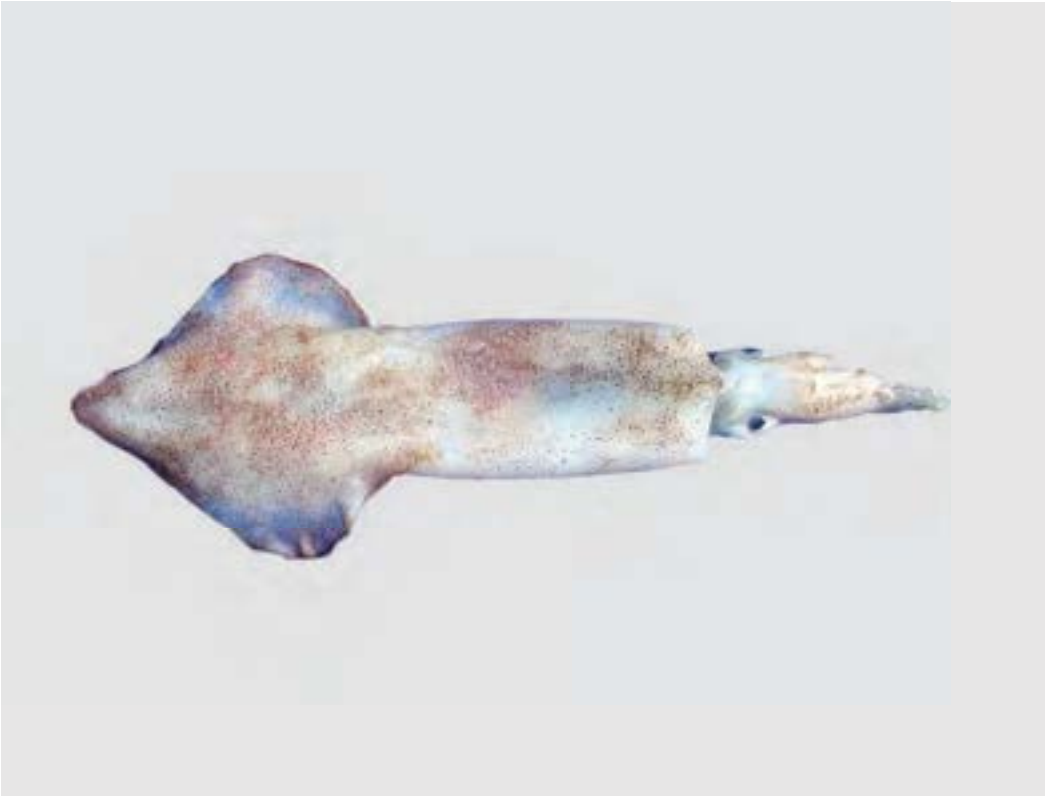


Tellinimactra edentula Spengler, 1798

Class	**Bivalvia**
Order	**Cardiida**
Family	**Tellinidae**

Color of *Tellinimactra edentula* is smooth white. Shell small or medium, ovate, thin but solid, compressed; umbones towards the posterior end forming a winged, posterodorsal fold separated by an abtuse rib. Umbones towards the posterior part of the. Inner surface smooth.

Remarks Found commonly on sand and mud bottoms of the intertidal zones in the Sundarbans. Animal dioecious, mostly abundant in marine and estuaries.



Uroteuthis duvaucelii d'Orbigny [in Férussac&d'Orbigny], 1835

Class **Cephalopoda**
Order **Myopsida**
Family **Loliginidae**

Color reddish brown chromatophores on pale white background, chromatophores dark and closely set on the head above the eyes. Body elongate, mid-rib of gladius clearly visible through mantle skin; fin length in adults up to 60 per cent of mantle length; tentacular clubs large median manal sucker ring with 14-17 teeth; Arm sucker rings with broad, large, square teeth (5 to 9) on the distal margin; in males, more than half the length (up to75 %) of the left ventral arm hectocotylized, papillae not fused.

Remarks Commonly found in coastal areas of the Sundarbans. This species highly valued for human consumption.



Amphioctopus fangsiao d'Orbigny, 1839

Class	**Cephalopoda**
Order	**Octopoda**
Family	**Octophodidae**



Body pale in color. Ocelli present, containing gold-colored iridescent ring. Skin sculpture of dorsal mantle, head and webs continues onto oral surface of shallow dorsal web. 4 to 6 dark bars shown on mantle and arm crown in some color patterns, continuing as narrow dark lines along leading edges of arms 1 to 3. Small to moderate-sized, robust species. Pale oval to dumbbell-shaped patch present on head between eyes. Web deepest on lateral arms; webs between dorsal arms shallowest. Web margins extend to arm tips. Interbrachial web pouches absent. Two rows of suckers on each arm. Funnel organ W-shaped, limbs of approximately equal length. Anal flaps present.

Remarks Commonly found in coastal areas of the Sundarbans; no commercial importance; usually used as a bait for finfish fishing.



Sepia aculeata Van Hasselt [in Férussac & d'Orbigny], 1835

Class **Cephalopoda**
Order **Sepiida**
Family **Sepiidae**

Color of dorsal mantle dark-pigmented, transverse, reticulate pattern, a pale reflective line along bases of fins. Mantle about half as broad as long; tentacular club long. About 12 normal suckers (3 series) proximally followed by about 5 or 6 series of very small suckers in ventral longitudinal rows, corresponding suckers of dorsal longitudinal rows extremely minute (or absent) in a deep, smooth groove, suckers normal distally.

Remarks Commonly found in costal sides of the Sundarbans. Usually used as human consumption. Mostly found in Dublar Char and Alorkon area of the Sundarbans of Sarankhola upazila as a dried fish for feed of poultry industry.

Table 3. List of molluscs previously reported in the Sundarbans of Bangladesh other than the present study.

Order	Family	Species	Reference
Archeogastropoda	Neritidae	*Neritina cornucopia*	IPAC, 2010a
		Neritina violacea	
Archieopulmonata	Ellobiidae	*Cassidula multiplicata*	
		Cassidula aurisfelis	
Neogastropoda	Muricidae	*Cymia tissoti*	
Unionoida	Unionidae	*Lamellidens marginalis*	
	Corbiculidae	*Polymesoda bengalensis*	
Mesogastropoda	Littorinidae	*Littoraria melanostoma*	
	Planorbidae	*Indoplanorbis exustus*	
	Lymnaeidae	*Lymnaea acuminata*	
		Lymnaea luteola	
	Thiaridae	*Melanoides tuberculata*	
	Viviparidae	*Bellamya bengalensis*	
Veneroida	Mactridae	*Mactra antiquata*	
Myoida	Pholadidae	*Pholas* sp.	
Ostreina	Ostreidae	*Crassostrea gigas*	
		Crassostrea gryphoides	
		Ostera sp.	
Arcoida	Arcidae	*Anadara* sp.	

1-3

Arthropods



Charybdis affnis Dana, 1852

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Portunidae**

Color of carapace is yellowish grey. Carapace is hexagonal and concave. Frontal, cardiac and mesobranchial ridges are absent. Anterolateral margin is with 6 teeth. Last anterolateral tooth is elongated. Chelipeds swollen, surface finely pubescent. There is no spine on posterior border of carpus of last pair of legs and the merus of cheliped with poorly developed spines.

Remarks Commonly found in the Sundarbans. Used as feed of poultry industries.



Charybdis feriata Linnaeus, 1758

Subphylum **Crustacea**
Class **Malacostraca**
Order **Decapoda**
Family **Portunidae**

Color of dorsal surface is with six distinctive patterns of longitudinal stripes of dark brown or maroon and white, usually with distinct white cross on median part of gastric region. Legs and pincers are with numerous scattered white spots· First tooth of anterolateral borders obliquely truncate on outer border; palm with 4 sharp spine in all. Anterolateral teeth are broad at base, first anterior lobe bifid; 3 spines on anterior borders of arm; a cross on carapace.

Remarks Not commonly found in the Sundarbans. Less important to human consumption.

DNA Barcode GenBank Accession No. MF594622



Charybdis hellerii A. Milne-Edwards, 1867

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Portunidae**

Color dark green except for light purple area on upper and inner surface of palm, and dark purple on distal surfaces of distal four segments of walking and swimming legs. Carapace is with pale green or whitish areas on frontal, hepatic and epibranchial regions. Fngers of chelipeds is dark purple in color. Carapace pubescent, with transverse granular lines on frontal, protogastric and mesogastric regions, epibranchial line interrupted only at the cervical groove; front with 6 subequal triangular distally rounded teeth; antero-lateral borders with 6 teeth, first and second smaller than the following ones and subequal, last one slightly more prominent than proceeding teeth; postero-lateral junctions rounded. Antennal flagellum excluded from orbit. Cheliped merus with 3 spines on anterior border, posterior border smooth; carpus with a strong internal spine, outer border with 3 spines; palm with 4 spines on upper border. Merus and carpus of swimming leg each with a posterior spine, propodus with 6-12 denticles on posterior border.

Remarks Not commonly found in the Sundarbans of Bangladesh. The spine of the posterior margin of the fifth leg separates this crab from other species.



Portunus pelagicus Linnaeus, 1758

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Portunidae**

Carapace is dark bluish in male and dark purplish/dull green in female, irregular white/pale bluish spots in both sexes. Carapace broad, little convex its length a little more than half its breadth without the great lateral spines, at all ages closely covered with large military granules. Front cut into four teeth-not counting the inner angles of the orbit-of which the middle two are small and little prominent. Supra-orbital borders cut by two fissures into three lobes, the outer angle of the middle lobe being usually dentiform. Antero-lateral and posterior borders and external maxillipeds almost as in the proceeding species.

Remarks Commonly found in the Sundarbans. Highly valuable for human consumption.

DNA Barcode GenBank Accession No. MF594621



Portunus sanguinolentus Herbst, 1783

Subphylum **Crustacea**
Class **Malacostraca**
Order **Decapoda**
Family **Portunidae**

Color olive to dark green, with 3 prominent maroons to red spots on posterior 1\3 of carapace. Carapace very broad, little convex, its length in the middle line half its breadth excluding the great lateral spines, finely granular everywhere in the young. Front cut into four sharp and very distinct teeth-not counting the inner-supra-orbital angles-of which the middle two are the less prominent and have projecting between and far beyond them the spine-like process of the epistome. Supra-orbital borders cut by 2 fissures into 3 lobes, the angles of the middle lobe not conspicuous. The antero-lateral borders very long and oblique, cut into 9 teeth (including the outer orbital angle) the last of which is about four times as long as any of the others. Antero-external angle of merus of external maxillipeds not produced.

Remarks Commonly found in the Sundarbans and consumed by the local people. Dried to use in fishmeal for poultry feed.

DNA Barcode GenBank Accession No. MF577018-MF577019, MF577021



Scylla olivacea Herbst, 1796

Subphylum **Crustacea**
Class **Malacostraca**
Order **Decapoda**
Family **Portunidae**

Color varies from red through brown to browny black depending on habitat. Carapace is transversely ovate to transversely hexagonal with dorsal surface smooth and relatively flat to gently convex, usually ridged or granulose. Gastric groove is shallow and H-shaped, front broad, margin usually multidental. Frontal lobe spines of the carapace are low, rounded with shallow interspaces. The anterolateral spines of carapace are broad with outer side convex. Carpus of cheliped is without two obvious spines on distal half of outer margin. Palm of cheliped is usually with a pair of blunt prominences on dorsal margin behind insertion of the dactyl, inner present and outer reduced, may be spinous in juvenile and young adults, orange to yellow in color. Chelipeds, legs, and abdomen all are without obvious polygonal or marble like patterning for both sexs).

Remarks An extremely common crab, found in all the estuaries and backwaters in the Sundarbans. Always confusing with another species of *Scylla*. The species is mostly collected from the different rivers and cracks of the Sundarbans. Most commercially important crab. The forest department impose ban on crab harvesting from the Sundarbans from January to February in every year in the Sundarbans Bangladesh.

DNA Barcode GenBank Accession No. MF565484-MF565488, MF577020, MF611598-MF611603



Scylla serrata Forskål, 1775

Subphylum **Crustacea**
Class **Malacostraca**
Order **Decapoda**
Family **Portunidae**



Carapace mud or olive colored but when the carapace is cleansed it becomes brownish to olive green in color. Carapace about two third, or a little less, as long as broad, practically smooth, except for a faint granular ridge running obliquely inwards across either branchial region from the last spine of the antero-lateral border. Front cut into four lobes or bluntish teeth of about equal size and prominence. Antero-lateral borders cut into 9 sharply acuminate teeth of about equal size. Merus of external maxillipeds oblique but not having the antero-external angle distinctly produced in a lateral direction. Chelipeds is not quite twice the length of the carapace in the adult male, but shorter than this in the female and young male. Arm is with 3 spines on the anterior border, and 2 on the posterior border-one terminal, the other submedian. Hand with 3 spines or tubercles, one being in front of the apex of the wrist joint, the other two being side by side behind the finger-joint. Legs unarmed. Abdomen of male is broadly triangular.

Remarks An extremely common crab, found in all the estuaries and backwaters in the Sundarbans. This species is mostly collected from the different rivers and cracks of the Sundarbans. Most commercially important crab. The forest department impose ban on crab harvesting from the Sundarbans from January to February in every year in the Sundarbans Bangladesh.

DNA Barcode GenBank Accession No. MF577017





Matuta planipes Fabricius, 1798

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Matutidae**

Color of carapace is with mosaic to reticulate network of red lines on a white background, appendages usually creamy. Carapace rounded, with 2 long, well-developed lateral spines; anterolateral margins unevenly serrated. Outer surface of palm is with strong oblique ridge.

Remarks Common during pre-monsoon and monsoon season in the Sundarbans especially coastal areas. Not much important for human consumption. Dried to use in fishmeal for poultry feed.

DNA Barcode GenBank Accession No. MF577014-MF577016, MF594623



Calappa lophos Herbst, 1782

Subphylum **Crustacea**
Class **Malacostraca**
Order **Decapoda**
Family **Calappidae**

Color distinct red or purple spots on posterior 1\3 of carapace; red stripes on posterolateral part; red streaks and spots are present on outer surface of cheliped. Carapace smooth, except for a few lumps anteriorly and a few scattered granules posteriorly. Its antero-lateral borders beaded and finely festooned. Its posterior border beaded and bounded on either side by a tooth. Clypeiform expansions nearly as broad as long. Outer part of the pterygostomian regions densely hairy. Front bifid, its least breadth equal to the breadth of the orbit, beyond the level of which it does not project. Upper surface of wrist and outer surface of palm is nearly smooth.

Remarks Not very common in coastal areas of the Sundarbans. Less commercial value for human consumption.



Lobothelphusa woodmasoni Rathbun, 1905

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Potamidae**

Color of dorsal surface of carapace and cheliped brownish to grey with deep brown spot. Pereiopod is light brownish dorsally. Carapace is hexagonal, broader than long, convex with uneven dorsal surface. Frontal region of carapace is robust. Anterior and antero-lateral margin are minutely granular and the anterolateral corner is with 4/5 spines. Cervical groove is distinct. Orbits are broader, crenulate lower edge separated from the external orbital corner on anterolateral sides of carapace. There is H- shaped gastric groove on dorsal surface of carapace. Eyes are moderate size. Chelipeds are equal, slender and shorter than legs. Palm and carpus of cheliped are rough at upper edge. Fingers are slender and longer than palm and do not gape much. Pereiopod is long, thin, and laterally compressed. Dactylus is long.

Remarks Commonly found in coastal areas of the Sundarbans. No commercial value.



Gelasimus vocans Linnaeus, 1758

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Ocypodidae**

Carapace color grayish brown. Major cheliped light yellow and other legs greyish with light colored claws. Carapace is with very narrow front. Lateral sides of carapace are lightly convergent. Major cheliped is three times as long as carapace. Outer surfaces of arm, wrist and palm are smooth to naked eye, with few small granules on inner border of wrist. Fingers are thin, broad and blade like. Dactylus is longer than fixed finger and hook like curved leaves a wide gap between them when closed. Cutting edge of fixed fingers is with two, large and triangular lobes.

Remarks Commonly found along the coast of the Sundarbans. No commercial value.



Ocypode ceratophthalma Pallas, 1772

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Ocypodidae**

Carapace is squarish, convex and cubic. Dorsal surface of carapace is evenly granular. Anterolateral margins are unarmed. Two pairs of legs are profusely hairy on their anterior edges. Color of carapace bricked bluish grey with median parts brown. Chelipeds and legs deep red with distal end white. Length of carapace is 3.5 cm and width is 4 cm.

Remarks Common in coastal areas of the Sundarbans. No food value; dried individuals usually used for poultry industries.



Ocypode macrocera H. Milne-Edwards, 1852

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Ocypodidae**

Carapace color is faint reddish-chestnut. Chelipeds red at the base with red spine and the outer surface of large claw is bright orange. In adult males, the outer edges of the eye orbits tooth-shaped and project forward. The palm of the claws densely covered with tubercles on the upper surface, with distinctively serrated upper and lower margins. The stridulating ridge has 35 to 56 tubercles with striae. The tip of the smaller claw is characteristically blunt. Their eyestalks possess styles.

Remarks Commonly found in sandy beaches, rubble flats, and in estuarine areas of the Sundarbans.



Tubuca dussumieri H. Milne Edwards, 1852

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Ocypodidae**

Carapace's color bluish-grey. Large cheliped and walking legs pale yellow. There are short finely separated anterolateral margins with acute anterolateral angle on carapace. Posterolateral margins of carapace converging. Front of carapace narrow, narrowest between eyestalk bases and is with submarginal ridges well separated. Palm of major cheliped is with inner face either finely granulates or covered with flat tubercles and outer face of immovable finger with longitudinal furrow. Dactylus has two long and distinct longitudinal furrows. Gonopod has large anterior flange and small posterior one.

Remarks Commonly found along the coast of the Sundarbans. No commercial value.



Tubuca rosea Tweedie, 1937

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Ocypodidae**

Body colors and patterns vary; black with white or bluish speckles, or blotches. Major cheliped yellowish or pinkish and other legs grey or black. Anterolateral margins on carapace absent. Front of carapace narrow. Median groove is deep and distinct. Dorso-lateral margins are finely serrate and convergent. Upper orbital edge is tuberculate and lower edge is finely crenulate. Outer side of entire dactylus is traversed by two grooves. Finger tips are forcep like because of large granules on opposable edges. Walking legs are short.

Remarks Commonly found along the coast of the Sundarbans. No commercial value.

DNA Barcode GenBank Accession No. MF594619-MF594620



Episesarma mederi H. Milne Edwards, 1853

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Sesarmidae**

Color of outer surface of palm, light brown with white finger tips. Carapace thick, subquadrate, lateral margins slightly convergent posteriorly, body surface covered with tufts of setae anteriorly, with granules posteriorly. Frontal margin deflected downwards, slightly concave at the middle and laterally. Postfrontal ridge 4-lobed, the median pair with a deeper and smooth groove. Outer orbital angle acutely triangular, directed upwards, posteriorly followed by a sharp tooth.

Remarks Not commonly found in the Sundarbans. No commercial value.



Episesarma versicolor Tweedie, 1940

Subphylum **Crustacea**
Class **Malacostraca**
Order **Decapoda**
Family **Sesarmidae**

Body color brown to brownish grey or black in carapace with violet colored outer surface of palm with proximal parts. Carapace is flat and squarish with one small tooth. Legs flat with pointed tips. Pincers may be colorful. The sides of the body have a structure with a net-like pattern that help recirculate and oxygenate water in the gill chambers.

Remarks Not commonly found in the Sundarbans. Minor commercial value.



Varuna litterata Fabricius, 1798

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Varunidae**

Color of carapace mottled black and brown, body is brown with numerous blackish spots. Carapace is rounded quadrangular; the dorsal surface rather depressed, the usual groove separating gastric and cardiac regions is well demarcated. The lateral borders are feebly convergent backwards; the antero-lateral teeth are three in number including the external orbital one, all being roundish and not much acuminate. The postero-lateral facets are well defined, the surface well cut by a ridge extending from the third lateral tooth toward the base of the last ambulatory leg. The front is pronouncedly expanded and its free margin almost straight and entire. The chelipeds are symmetrical; the wrist has a spiniform tooth at its inner angle, which has one or two accessory spinules.

Remarks Commonly found in the Sundarbans and not commercially fished in our country. Young is used for poultry feed.



Carcinoscorpius rotundicauda Latreille, 1802

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Limulidae**

Color dark green or greenish black. The circular shell is brownish. Identified by shorter spines on the side of the body, the tail is circular in cross-section near where it joins the body, without a groove on the underside and without spines on the upper side. Towards the telson is six pair of book gills.

Remarks *C. rotundicauda* is a survivor unlike other mangrove animal alive today. It is called 'living fossil' an organism which has remained basically unchanged for millions of years. Not commonly found in the Sundarbans. No commercially importance.



Pagurus bernhardus Linnaeus, 1758

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Paguridae**

Color reddish or brownish. Lack of hard carapace, and adopt the empty shells of gastropod molluscs (such as whelks), carrying them around and swapping them for a larger shell as they grow. When seen out of a shell, hermit crabs have a bizarre appearance; the soft abdomen is twisted, which allows it to fit into the coils of the gastropod shell. Has two pincers on the first pair of walking legs. The right pincer is larger than the left, and both have a rough, granular surface

Remarks Commonly found in coastal areas of the Sundarbans. No commercially valuable.



Ganjampenaeopsis uncta Alcock, 1905

Subphylum **Crustacea**
Class **Malacostraca**
Order **Decapoda**
Family **Penaeidae**

Body flesh colored with ash colored wide cross bands on the rostrum and abdominal segments. Rostrum armed with10 dorsal teeth (including the carapace). Epigastric tooth present. Telson unarmed.

Remarks Commonly found in the Sundarbans. Commercially important shrimp species; marketed mostly fresh and frozen; consumed locally.



Metapenaeus affinis H. Milne Edwards, 1837 [in Milne Edwards, 1834-1840]

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Penaeidae**

Body brownish green to brownish blue in color. Sometimes may be pale greenish to pale bluish. Rostrum fine and armed with 8-9 dorsal teeth (including the carapace). Telson armed only with spinules. A strong spine present on the basis of all three pairs of chelipeds.

Remarks Commonly found in the Sundarbans. Commercially important shrimp species; marketed mostly fresh and frozen.

DNA Barcode GenBank Accession No. MF614766



Metapenaeus brevicornis H. Milne Edwards, 1837 [in Milne Edwards, 1834-1840]

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Penaeidae**

Body flesh colored with sparsely distributed brown dots on the dorsal side of the body; more such dots on the tail fin. Body not or very little tomentose. Rostrum armed with 6-7 dorsal teeth (including the carapace). Telson armed only with spinules, one or two distal pairs larger. A strong spine present on the basis of all three pairs of chelipeds.

Remarks Commonly found in the Sundarbans. Commercially important shrimp species; marketed mostly fresh and frozen.



Metapenaeus dobsoni Miers, 1878

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Penaeidae**

Color of body pale yellow to brownish with red, brownish or greenish specks; distal part of rostrum darker; antennae red. Rostrum long and armed with 8-9 dorsal teeth (including the carapace). Telson armed only with spinules.

Remarks Commonly found in the Sundarbans. Commercially important shrimp species; marketed mostly fresh and frozen; consumed locally.



Metapenaeus monoceros Fabricius, 1798

Subphylum **Crustacea**
Class **Malacostraca**
Order **Decapoda**
Family **Penaeidae**

Color of body, pereopods and pleopods pale green to pinkish, sometimes grey-greenish. Rostrum straight, uptilted and armed with 9-10 dorsal teeth (including the carapace). Telson without large movable spines. Distal parts of uropods purple-blue.

Remarks Commonly found in the Sundarbans. Commercially important shrimp species; marketed mostly fresh and frozen; consumed locally.

DNA Barcode GenBank Accession No. MF621335



Metapenaeus tenuipes Kubo, 1949

Subphylum **Crustacea**
Class **Malacostraca**
Order **Decapoda**
Family **Penaeidae**

Color of body flesh or white with multiple light grey dots. Rostrum armed with 6 dorsal teeth (including the carapace). Telson armed only with spinules, 1 or 2 distal pairs larger.

Remarks Commonly found in the Sundarbans. Commercially important shrimp species; marketed mostly fresh and frozen; consumed locally.

DNA Barcode GenBank Accession No. MF581793



Parapenaeopsis coromandelica Alcock, 1906

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Penaeidae**

Body usually grey, sometimes grey- reddish or brownish. Rostrum sigmoidal and armed with 7 dorsal teeth (including the carapace). Epigastric tooth present. Unequal antennular flagella and the outer one is long. A pair of spines are present on telson.

Remarks Commonly found in the Sundarbans. Commercially important shrimp species; marketed mostly fresh and frozen; consumed locally.



Parapenaeopsis hardwickii Miers, 1878

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Penaeidae**

Color of body greyish grey, sometimes pink; multiple dark color dots present on body; legs whitish to pinkish. Rostrum armed with 8 to 10 dorsal teeth (including the carapace). Telson has 3 to 5 pairs of minute movable lateral lines.

Remarks Not commonly found in the Sundarbans. Marketed mostly fresh and frozen; consumed locally.

DNA Barcode GenBank Accession No. MF601487, MF614763, MF614765



Parapenaeopsis sculptilis Heller, 1862

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Penaeidae**

Body pale with wide, dark brown almost black- transverse bands; carapace dark brown dorsally, except for a white band about its middle, laterally much paler, yellow or orangish. Rostrum curved and armed with 8-9 dorsal teeth (including the carapace). Epigastric tooth feeble or absent. Telson has 3-4 pairs of movable lateral spines.

Remarks Commonly found in the Sundarbans. Commercially important shrimp species; marketed mostly fresh and frozen; consumed locally.



Penaeus indicus H. Milne Edwards, 1837

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Penaeidae**

Body semi-translucent, somewhat yellowish- white or greyish-green and covered with numerous minute light brown dots. Antennal flagella generally brownish in color. Legs translucent and somewhat whitish or reddish. Rostrum slightly curved at tip and armed with 7-8 dorsal teeth (including the carapace) and 4-6 ventral teeth. Telson lacking lateral spines.

Remarks Commonly found in the Sundarbans. Commercially important shrimp species; marketed mostly fresh and frozen; consumed locally.

DNA Barcode GenBank Accession No. MF601486, MF614762



Penaeus monodon **Fabricus, 1798**

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Penaeidae**

Body greyish, light brownish to greenish or dark greenish blue; carapace covered with mud-yellow transverse bands, while abdomen bears dark brown and mud yellow cross bands. Rostrum generally armed with 7 dorsal teeth (including the carapace) and 3 ventral teeth. Fifth leg without exopod and telson without lateral spines.

Remarks Commonly found in the Sundarbans. This species is exploited throughout the year in the estuaries during the winter season in beels and rivers of the Sundarbans. Most commercially important shrimp species; marketed mostly fresh and frozen; consumed locally and exported.



Solenocera crassicornis H. Milne Edwards, 1837 [in Milne Edwards, 1834-1840]

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Solenoceridae**

Color of body, pereopods and pleopods reddish-orange to red; posterior margin of each abdominal segment darker; antennae uniform red. Dorsal and ventral antennular flagella lamellate and forming a respirator tube; external ramus of uropod without a distolateral spine. Rostrum short; teeth 8-10; carapace with 3 postrostral teeth and 1 epigastric tooth. Telson without a pair of subapical fixed spines.

Remarks Not commonly found in the Sundarbans. Marketed mostly fresh and frozen; consumed locally.



Solenocera melantho de Man, 1907

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Solenoceridae**

Color of body pink to red; quite semi-transparent; has some irregular red marking on abdomen. Anterior part of the hepatic carina forming a deep; ventral distal margin of rostrum usually straight, sometimes slightly concave; teeth 8-10 (including 3 teeth on carapace). Telson with a pair of lateral spines.

Remarks Not commonly found in the Sundarbans. Marketed mostly fresh and frozen; consumed locally.

DNA Barcode GenBank Accession No. MF614764



Palaemon styliferus H. Milne Edwards, 18 4 0 [in H. Milne Edwards, 1834-1840]

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Palaemonidae**

Color whitish; distal part of rostrum dark reddish brown. Body covered with numerous spots which are most prominent on rostrum. Rostrum long and slender and armed with 6-8 dorsal teeth (including the carapace) and 7-8 ventral teeth. Epigastric tooth absent. Telson devoid of spine and slightly swollen near the tip.

Remarks Commonly found in the Sundarbans. Commercially important and locally consumed as fresh.

DNA Barcode GenBank Accession No. MF621340



Macrobrachium lamarrei H. Milne Edwards, 1837

Subphylum **Crustacea**
Class **Malacostraca**
Order **Decapoda**
Family **Palaemonidae**

Body color flesh with numerous minute brown spots on body and rostrum. Some specimens with greyish band on body and the band also present on the telson and tail fin. Rostrum long and armed with 10-11 dorsal teeth (including the carapace) and 4 ventral teeth. Epigastric tooth present.

Remarks Commonly found in the Sundarbans. Commercially important and consumed as fresh.

DNA Barcode GenBank Accession No. MF621334, MF621339



Macrobrachium rosenbergii de Man, 1879

Subphylum **Crustacea**
Class **Malacostraca**
Order **Decapoda**
Family **Palaemonidae**

Body either light blue or light green in color with longitudinal or irregular streaks of darker and lighter color. Hinges of abdominal segments often orange. Rostrum long and distally curved upwards. Rostrum armed with13 dorsal teeth (including the carapace) and 13-14 ventral teeth. Second legs very large and robust and of same size with carpus longer than merus. Telson regularly tapering to a sharp point and without a posterior margin.

Remarks Commonly found in the Sundarbans. This species is exploited throughout the year in the estuaries during the winter season in beels and rivers of the Sundarbans. Most commercially important shrimp species; marketed mostly fresh and frozen; consumed locally and exported.

DNA Barcode GenBank Accession No. MF621337-MF621338



Alpheus euphroyne de Man , 1897

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Decapoda**
Family	**Alpheidae**

Body color flesh with greenish dots; telson reddish. Large claw, larger than half the shrimp's body. Carapace cylindrical. Has a pistol-like feature made of two parts. A joint allows the "hammer" part to move backward into a right-angled position.

Remarks Not commonly found in the Sundarbans. No commercial value.



Oratosquillina perpensa Kemp, 1911

Subphylum	**Crustacea**
Class	**Malacostraca**
Order	**Stomatopoda**
Family	**Squilloidea**

Body appearing dusky color with concentration of pigment dorsally. Eye T-shaped, cornea bilobed. Carapace, thorax, and abdomen with longitudinal ridges or carinae. Telson with median longitudinal ridge and conspicuous posterior spines. Posterolateral corners of carapace evenly rounded not excavate. Rostral plate broader than long; anterolateral spines of carapace extending to or overreaching base of rostral plate.

Remarks Commonly found in the Sundarbans. Mantis shrimp also known as stomatopod. No commercial value.



Brachythemis contaminata Fabricius, 1793

Class	**Insecta**
Order	**Odonata**
Family	**Libellulidae**

Male has rusty brown eye. Small dragonfly pale brown and bluish grey with reddish abdomen and broad basal orange patch on wings. Female has yellowish eye. Pale yellow with brown abdomen with black broken dorsal stripes and narrow yellow base to wings.



The teneral male

Remarks Commonly found in up streams including buffer zones of the Sundarbans. Important for ecological food chain.



Crocothemis servilia Drury, 1773

Class	**Insecta**
Order	**Odonata**
Family	**Libellulidae**



The female

Eyes of male blood red above, purple on the sides. Blood red to bright orange thorax; reddish legs. Transparent base marked with rich amber of wings. Wings color dark brown; bright red and a black stripe that runs the length of its abdomen. Eyes are brown above and olivaceous below in female. Dark brown thorax and legs. Transparent and basal amber marking paler than in the males. Pale yellow wing spot. Yellowish brown with a mid-dorsal black stripe present in wings.

Remarks Commonly found in up streams including buffer zones of the Sundarbans. Important for ecological food chain.



Diplacodes trivialis Rambur, 1842

Class	**Insecta**
Order	**Odonata**
Family	**Libellulidae**



Color of eyes reddish brown above and pale bluish or yellowish below. Greenish yellow or olivaceous thorax. The dorso-lateral area is violet brown and is speckled with minute dots. Greenish yellow marked with black legs. Color of wings transparent. Dark grey to black wing spot. Segments of abdomen 1-7 greenish yellow with mid-dorsal and sub-dorsal black stripes. Remaining segments black. Female resemble young or sub adult male. 10th segment and anal appendages are completely yellow.

Remarks Commonly found in up streams including buffer zones of the Sundarbans. Important for ecological food chain.



Trithemis pallidinervis Kirby, 1889

Class	**Insecta**
Order	**Odonata**
Family	**Libellulidae**

Wing spot of male black with white ends in males. Reddish brown bluish grey eye. Medium sized dragonfly has very long legs and the habit of perching on the tips of twigs near water, the wings held half open angled upwards. IN female wing spot similar to male eye; has stouter abdomen with slightly different pattern.

Remarks Commonly found in up streams including buffer zones of the Sundarbans. Important for ecological food chain.



Pseudagrion microcephalum

Class	**Insecta**
Order	**Odonata**
Family	**Coenagrionidae**

Eye of male greyish; wings spot. Medium sized damselfly; dark azure blue sky-blue beneath black and light blue with blue-tipped tail. Color of thorax azure blue with a broad black medial stripe. Black goblet shaped mark on second abdominal segment. Female has paler brown eye; olive green above palest blue beneath very different; orange tinted head and thorax bluish green, golden orange above and azure blue on sides; a single thin black line on mid dorsum and bifid black mark.

Remarks Commonly found in up streams including buffer zones of the Sundarbans. Important for ecological food chain.



Life cycle of Odonates



Gomphus vulgatissimus Linnaeus, 1758 (Larva)

Class	**Insecta**
Order	**Odonata**
Family	**Gomphidae**

Young male is black with yellow markings on the body. As the adult ages, yellow markings turn green. The hind wings are also distinctively indented on the inside bottom corner in the male. Female has a black body with yellow markings and no indent in the hind wing. The squat larvae are unique in having bulbous antennae, giving the exuviae a distinctive triangular head shape.

Remarks Not commonly found in up streams including buffer zones of the Sundarbans. Important for ecological food chain.



Gerris sp.

Class	**Insecta**
Order	**Hemiptera**
Family	**Gerridae**

Color of body grayish-brown; pronotum with pale middorsal line and conspicuous whitish stripe along lateral margins; second antennal segment slightly longer than third, and segments 2 and 3 slightly longer than segment 1. Adults usually long-winged, occasionally short-winged or wingless; in winged individuals, posterior portion of forewing often shaded with blue. The front legs have become shortened and adapted to catching and holding prey. The middle set of legs are used like oars to propel the bug through the water, and the hind legs are used for steering.

Remarks Commonly found in the Sundarbans. Important for ecological food chain.

Table 4. **List of arthropods previously reported in the Sundarbans of Bangladesh other than the present study.**

Order	Family	Species	English Name	Local Name	Reference
Decapoda	Ocypodidae	*Uca forcipata*	Forceps Fiddler Crab	Kankra	IPAC, 2010a
		Uca annulipes/ Gelasimus annulipes	Ghost Crab, Field Crab, Mangrove Crab		
	Varunidae	*Metaplax elegans*	Orange Signaller Crab	Unknown	
		Metaplax crenulata	Unknown		
	Macrophthalmidae	*Macrophthalmus brevis*	Unknown	Kokrol	

Table 5. **List of shrimps, prawns and lobsters previously reported in the Sundarbans of Bangladesh other than the present study.**

Order	Family	Scientific Name	English Name	Local Name	References
Decapoda	Penaeidae	*Penaeus japonicus*	Kuruma Prawn	Bagda	IPAC, 2010a
		Penaeus merguinensis	Banana Prawn	Chama Chingri	
		Penaeus semlsulcatus	Green Tiger Prawn	Bagatara Chingri	
		Metapenaeus lysianassa	Bird Shrimp	Gusha Chingri	
		Metapenaeus spinulatus	Stork Shrimp	Laila Chingri	
		Parapenaeopsis stylifera	Kiddi Shrimp	Ruda Chingri	
	Solenoceridae	*Solenocera subnuda*	Coastal Mud Shrimp	Chama Chingri	
	Sergestidae	*Acetes indicus*	Jawla Paste Shrimp	Gura Icha	
	Palaemonidae	*Macrobrachium mirabile*	Short Leg River Prawn	Lotia Icha	
		Macrobrachiurn rude	Hairy River Prawn	Ghoda Chingri	
		Macrobrachiurn villosimanus	Dimua River Prawn	Dimua Icha	
		Nematopalaernon tenuipes	Spider Prawn	Sada Chingri	
		Palaemon styliferus	Roshma Prawn	Gara Icha	
Stomatopoda	Scyllaridae	*Thenus orientalis*	Locust lobster.	Bol sanasa	
		Panulirus ornatus	Ornate Spiny Lobster	Chhua Icha	

1-4

Cnidarians



***Acromitus* sp.**



***Catostylus* sp.**

1-5

Amphibians & Reptiles



Euphlyctis hexadactylus Lesson, 1834

Class	**Amphibia**
Order	**Anura**
Family	**Dicroglossidae**

E. hexadactylus is a large sized frog. Color of dorsal is green with a whitish pale mid dorsal line. Ventral color yellow. Limbs also green color above and yellow color underparts; skin not folded longitudinally. Narrow broad; snout flattish. Toes are fully webbed but fingers are free.

Remarks Not commonly found in the Sundarbans. *H. tigerinus* can tolerate high salinity water. Distributed in everywhere of the Sundarbans. Feeds on mollusks, small invertebrates and crustaceans.

EN
Asian brackish frog, Crab-eating frog

LN
Kakra vuk bang

LC



Fejervarya cancrivora Gravenhorst, 1829

Class	**Amphibia**
Order	**Anura**
Family	**Dicroglossidae**

F. cancrivora is a medium sized frog. Color of dorsal is brown to greenish brown with irregular black margins/bars on back, lips and both limbs. The dorsal sides of the limbs have warts and folds, while the ventral surfaces are smooth. Narrow head; snout is oval. The nostrils, which are closer to the tip of the snout than the eye, are oval and have a small flap. The tympanum is distinct. The pupil is rounded.

Remarks Not commonly found in the Sundarbans. *F. cancrivora* can tolerate brackish water. Feeds on invertebrates specially small crabs and other crustaceans.

EN
Indian bullfrog,
Bull frog, Golden frog

LN
Sona bang

LC



Hoplobatrachus tigerinus Daudin, 1802

Class	**Amphibia**
Order	**Anura**
Family	**Dicroglossidae**

H. tigerinus is a large sized frog. Color of dorsal is greenish brown, sometimes light brown with bars on whole body excepting ventral side. Color of ventral pale; yellow during breeding season. Limbs have multiple cross bars; skin folded in several places. Narrow head; snout is pointed. Toes are fully webbed but fingers are not jointed.

Remarks Not commonly found in the Sundarbans. *H. tigerinus* cann`t tolerate high salinity water but it is distributed in buffer zone of the Sundarbans. Feeds on invertebrates, crustaceans, earth worms, small fishes even small snakes.

EN
Asian common toad, Asian toad

LN
Kuno bang

LC



Duttaphrynus melanostictus Schneider, 1799

Class	**Amphibia**
Order	**Anura**
Family	**Bufonidae**

D. melanostictus is a large sized toad. Color of dorsal highly variable. Brownish or yellowish upperparts. Skin rough with numerous black spots. Ventral color paler. Head is wider and large with large tympanum. Half web toes. Male smaller than female. Toes are fully webbed but fingers are not free.

Remarks Not commonly found in the Sundarbans. *D. melanostictus* can't tolerate high salinity water. Distributed in upside of Sundarbans including buffer zones. Feeds on insects and small invertebrates.



Batagur baska Gray, 1830

Class	**Reptilia**
Order	**Testudines**
Family	**Geoemydidae**

The batagur is one of Asia's largest freshwater turtles. Color of the shell is brown and body color varies both between the sexes and in different seasons; mature males develop an intense black color and dramatically white eyes during the breeding season. Plastron is large. Forehead has small scales; limbs are covered with narrow transversely enlarged scales. Tail short.

Remarks Rarely found in the Sundarbans. Occurs in rivers around the Sundarbans.

EN
Olive ridley, Pacific ridley

LN
Kocchop

VU



Lepidochelys olivacea Eschscholtz, 1829

Class	**Reptilia**
Order	**Testudines**
Family	**Cheloniidae**

The Olive Ridley is smallest marine turtle found in Bay of Bengal. They are named for their pale green carapace, or shell and are the most abundant of sea turtle species. Color of the plastron creamy yellow. 5-9 pairs of costal scutes with 1-2 claws on their flippers. Heart shaped carapace. Tail short comparatively. Hatchlings emerge mostly black with a greenish hue on their sides.

Remarks Commonly found in costal sides of the Sundarbans. One female individuals can lays 84-143 number of eggs in nest hole in sandy beach of Bay of Bengal. Coast of Sundarbans viz., Dublar Char and Alorkon is one of the major nesting site for this species



Crocodylus porosus Schneider, 1801

Class	**Reptilia**
Order	**Crocodilia**
Family	**Crocodylidae**

Strongest reptiles of Bangladesh with strongly built body, limbs and literally flattened tail. Color of body dark grey to brownish grey with series of longitudinal lines of large black spots are present on upperparts of body, limbs and tail. Powerful jaws have 17 to 19 teeth on each side.

Remarks Rarely found in the Sundarbans. The Sundarbans is the last remaining natural habitat for this species but it often travels to the nearby coastal river. Feed on fish, crabs, small and big mammals, rarely humans. The population, estimated to be 150-200 individuals in 1985, is believed to have been reduced to less than 100 due to a variety of reasons, including an increasing human population and its habitat destruction.



Cerberus rynchops Schneider, 1799

Class	**Reptilia**
Order	**Squamata**
Family	**Homalopsidae**

Color of upperparts pale gray with indistinct and blackish gray cross bands and creamy underparts. Head and neck almost equally broad. Tail flat like other sea snakes. Scale keeled; strong. Upper jaw projected dog face like appearance. Rounded pupil; small eyes.

Remarks Commonly found in Sundarbans. Inhabits mudflats, coastal areas and estuaries of Sundarbans. Feeds on fish, mudskippers, crabs and frogs.

Table 6. List of amphibians previously reported in the Sundarbans of Bangladesh other than the present study.

Order	Family	Scientific Name	English Name	Local Name	Reference
Anura	Bufonidae	*Bufo stomaticus*	Marbled Toad	Marble Kuno Bang	IUCN Bangladesh, 2015
	Dicroglossidae	*Euphlyctis cyanophlyctis*	Skipper Frog	Mali Bang	
	Ranidae	*Sylvirana taipehensis*	Two-striped Grass Frog	Shobuj Dagi bang	

Table 7. List of reptiles previously reported in the Sundarbans of Bangladesh other than the present study.

Order	Family	Scientific Name	English Name	Local Name	Reference
Testudinea	Bataguridae	*Batagur kachuga*	Bengal Roof Turtle	Kori Kasim/Kaitta	IUCN Bangladesh, 2015
		Morenia petersi	Yellow Turtle	Haldey Kaitta	
		Pangshura tecta	Indian Roofed Turtle	Kori Kaitta	
		Pangshura tentoria	Indian Tent Turtle	Majhari Kaitta	
	Trionychidae	*Aspideretes gangeticus*	Ganges Softshell Turtle	Kuchrong/Khalua Kasim	
		Aspideretes hurum	Peacock-marked Softshell	Dhum Kasim	
		Chitra indica	Narrow-headed Softshell Turtle	Sim Kasim	
		Lissemys punctata	Spotted Flapshell Turtle	Shundi Kasim	
		Pelochelys cantorii	Asian Giant Softshell Turtle	Hedoilla/Jata Kasim	
Serpentes	Colubridae	*Atretium schistosum*	Olive Keelback	Maita Shap	
		Enhydris enhydris	Common Smooth Water Snake	Paina/Huria Shap	
		Fordonia leucobalia	White-bellied Mangrove Snake	Shundori Shap, Kakra-bhuk Shap	
		Xenochrophis piscator	Checkered Keelback	Dhora Shap	
	Hydrophiidae	*Enhydrina schistosa*	Hook-nosed Sea Snake	Samudrik Shap	
		Hydrophis cyanocinctus	Annulated Sea Snake	Kalo-holud Boloye Lathi Shap	
		Hydrophis fasciatus	Banded Sea Snake	Lati Samudrik Shap	
		Hydrophis gracilis	Common Narrow-headed Sea Snake	Lati Shap	
		Hydrophis obscurus	Estuarine Sea Snake	Lati Shap, Mohonar Lati Shap	
		Lapemis curtus	Malabar Sea Snake	Boitha Tebi Shap	
		Pelamis platurus	Black and Yellow Sea Snake	Rangila Samudrik Shap	

1-6

Aquatic Mammals & Aquatic and Semi-aquatic Birds



Platanista gangetica Roxburgh, 1801

Class	**Mammalia**
Order	**Cetacea**
Family	**Platanistidae**

Dark slaty or earthy brown dolphin with stocky body, rounded belly and low humped back. Long beak, bearing sharp and interlocking teeth. Upward curving mouth, paddle shaped flipper and much reduced dorsal fin.

Remarks *P. gangetica* is facing a high risk of human impact, destruction of natural aquatic habitats and damming of upper reaches of all trans-boundary of rivers. In Bangladesh, *P. gangetica* is in vulnerable condition. Into the Sundarbans estuarine waterways, availability of this dolphin is very high. About 225 numbers of individuals have been counted from the Sundarbans.



Halcyon coromanda Latham,1790

Class	**Aves**
Order	**Coraciiformes**
Family	**Alcedinidae**

Body color ruddy plumage with violet wash on upperparts and slightly paler underparts. Rump paler bluish. Bright red bill and legs.

Remarks Not commonly found in the Sundarbans. Feeds mainly fish.



Todiramphus chloris Boddaert, 1783

Class	**Aves**
Order	**Coraciiformes**
Family	**Alcedinidae**

Greenish blue upperparts and white underparts. Distinct white color. Blackish bill and legs.

Remarks Commonly found in the Sundarbans. Distribute in throughout the costal range. Feeds on small crabs, mudskippers and fish.



Actitis hypoleucos Linnaeus,1758

Class	**Aves**
Order	**Charadriiformes**
Family	**Scolopacidae**

Color brownish-gray on heads, napes and breast, faintly streaked with dark brown; bellies and undertail coverts are unmarked white. Backs, wings and tails are overall darker brown, mottled with shades of tan and very dark brown. Often have a white ring around the eyes. Winter plumage is a more drab version of the breeding plumage. Tail feathers longer and darker legs.

Remarks Commonly found in the Sundarbans during winter season. Feeds on aquatic invertebrates in water margins or muddy platforms.



Numenius arquata Linnaeus, 1758

Class	**Aves**
Order	**Charadriiformes**
Family	**Scolopacidae**

Body color buff-brown plumage with dark streaks and spots. White underwing coverts and rump. Ground color of belly and vent also white. Greyish-blue legs and a very long curved bill.

Remarks Commonly found in the Sundarbans during winter season throughout costal range. Feeds on small crustacean, worms and fish.



Tringa glareola Linneaus, 1758

Class	**Aves**
Order	**Charadriiformes**
Family	**Scolopacidae**

Color of upper body speckled dark brown upperparts and white underparts, while their breasts and necks are white with brown stripes. White supercilium extends from behind their eyes to the back of its ear-coverts. Beak is short and straight, with a deep olive-green base. Legs are long and vary in color from yellow to nearly green; legs connect to slender toes, with almost no webbing.

Remarks Commonly found in the Sundarbans during winter season. Feeds on aquatic invertebrates, small crustacean, worms and fish in swallow water or mudflat.



Chroicocephalus brunnicephalus Jerdon, 1840

Class	**Aves**
Order	**Charadriiformes**
Family	**Laridae**

The brown-headed gull is slightly larger than black-headed gull. Its have different seasonal morph. Pale gray upperparts and white underparts. White spot on black wing tip; black tips to the primary wing feathers have conspicuous white. The underwing is grey with black flight feathers. The brown hood is lost in winter, leaving just dark vertical streaks. Red bill and red legs.

Remarks Commonly found in the Sundarbans during winter season in costal belts. Feeds on small fish.



Leptoptilos javanicus Horsfield, 1821

Class	**Aves**
Order	**Ciconiiformes**
Family	**Ciconiidae**

It is dark grey to black on the wings and back, and white on the underside. The head and neck are naked and neck has a few scattered hair-like feathers, but red in breeding males. The upper shank or tibia is grey rather than pink. The belly and undertail are white. Juveniles are duller and less glossy with more down on the head and neck. This very large stork has long legs, neck and beak, and an upright posture.

Remarks Not commonly found in the Sundarbans. Vulnerable globally. Feeds on large and small fishes, large insects, frogs and crabs. Walks on mudflat and grassland of the Sundarbans.



Egretta garzetta Linnaeus,1766

Class	**Aves**
Order	**Pelecaniformes**
Family	**Ardeidae**

Color of plumage is white, although there are dark forms with largely bluish-grey plumage. During breeding season, the adult has two long plumes on the nape that form a crest. During the winter the plumage is similar but the scapulars are shorter, and more normal in appearance. The bill is long and slender, and black in color. Greenish-grey bare skin at the base of the lower mandible and around the eye which has a yellow iris. Legs black and feet yellow color.

Remarks Commonly found in the Sundarbans. Sits on shallow water and hunts passing fish and frogs. Feeds on large and small fishes, large insects, frogs and crabs. Walks on mudflat and grassland of the Sundarbans.

Table 8. List of aquatic mammals previously reported in the Sundarbans of Bangladesh other than the present study.

Order	Family	Scientific Name	English Name	Local Name	Reference
Cetartiodactyla	Platanistidae	*Orcaella brevirostris*	Irrawaddy Dolphin	Mohonar Shushuk, Shisu	Smith et al. 2006
		Neophocaena phocaenoides	Indo-Pacific Finless Porpoise, Finless Porpoise	Paknahin Choto Shishu	
		Sousa chinensis	Indo-pacific Humpback Dolphin, Chinese White Dolphin	Golapi Dolphin	

Table 9. List of aquatic and semi-aquatic birds previously reported in the Sundarbans of Bangladesh other than the present study.

Order	Family	Scientific Name	English Name	Reference
Anseriformes	Anatidae	*Anas strepera*	Gadwall	Khan, 2005
		Anas poecilorhyncha	Spot-Billed Duck	
		Netta rufina	Red-Crested Pochard	
		Aythya fuligula	Tufted Duck	
Coraciiformes	Alcedinidae	*Alcedo atthis*	Common Kingfisher	
		Alcedo meninting	Blue-Eared Kingfisher	
		Halcyon amauroptera	Brown-Winged Kingfisher	
		Halcyon smyrnensis	White-Throated Kingfisher	
		Halcyon pileata	Black-Capped Kingfisher	
		Ceryle rudis	Pied Kingfisher	
Gruiformes	Heliornithidae	*Heliopais personatus*	Masked Finfoot	
	Rallidae	*Gallirallus striatus*	Slaty-Breasted Rail	
		Amaurornis phoenicurus	White-Breasted Waterhen	
		Porzana fusca	Ruddy-Breasted Crake	
Charadriiformes	Scolopacidae	*Gallinago stenura*	Pintail Snipe	
		Gallinago gallinago	Common Snipe	
		Limosa limosa	Black-Tailed Godwit	
		Numenius phaeopus	Whimbrel	
		Tringa totanus	Common Redshank	
		Tringa nebularia	Common Greenshank	
		Tringa stagnatilis	Marsh Sandpiper	
		Xenus cinereus	Terek Sandpiper	
		Arenaria interpres	Ruddy Turnstone	

Table 9. Continued

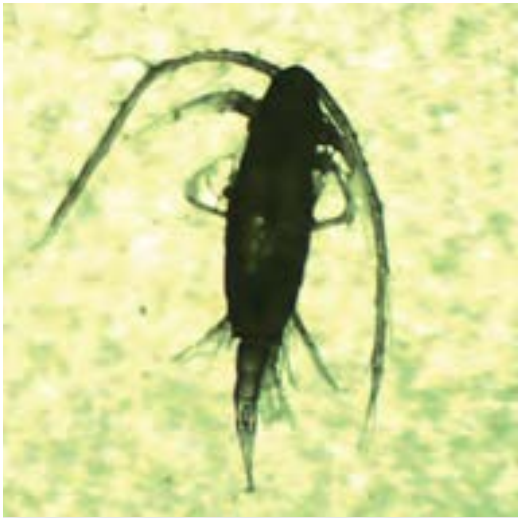
Order	Family	Scientific Name	English Name	Reference
Charadriiformes	Scolopacidae	*Calidris ferruginea*	Curlew Sandpiper	Chowdhury, 2014
		Calidris ruficollis	Red-neked Stint	
		Calidris minuta	Little Stint	
		Calidris alba	Sanderling	Khan, 2005
	Jacanidae	*Hydrophasianus chirurgus*	Pheasant-Tailed Jacana	
	Burhinidae	*Esacus recurvirostris*	Great Thick-Knee	
	Recurvirostridae	*Himantopus himantopus*	Black-Winged Stilt	
		Recurvirostra avosetta	Pied Avocet	
	Charadriidae	*Pluvialis fulva*	Pacific Golden Plover	
		Charadrius alexandrinus	Kentish Plover	
		Charadrius mongolus	Lesser Sand Plover	
		Charadrius leschenaultii	Greater Sand Plover	
		Pluvialis squatarola	Grey Plover	Chowdhury, 2014
		Vanellus cinereus	Grey-Headed Lapwing	Khan, 2005
		Vanellus indicus	Red-Wattled Lapwing	
	Glareolidae	*Glareola lactea*	Small Pratincole	
	Laridae	*Larus ichthyaetus*	Pallas's Gull	
		Larus ridibundus	Black-Headed Gull	
		Gelochelidon nilotica	Gull-Billed Tern	
		Sterna caspia	Caspian Tern	
		Sterna bergii	Great Crested Tern	
		Sterna hirundo	Common Tern	
		Sterna albifrons	Little Tern	
		Chlidonias hybridus	Whiskered Tern	
	Haematopodidae	*Haematopus ostralegus*	Eurasian oystercatcher	Chowdhury, 2014
Suliformes	Phalacrocoracidae	*Phalacrocorax niger*	Little Cormorant	Khan, 2005
Pelecaniformes	Ardeidae	*Ardea cinerea*	Grey Heron	
		Casmerodius albus	Great Egret	
		Mesophoyx intermedia	Intermediate Egret	
		Bubulcus ibis	Cattle Egret	
		Ardeola grayii	Indian Pond Heron	

Table 9. Continued

Order	Family	Scientific Name	English Name	Reference
Pelecaniformes	Ardeidae	*Butorides striatus*	Little Heron	Khan, 2005
		Nycticorax nycticorax	Black-Crowned Night Heron	
		Gorsachius melanolophus	Malayan Night Heron	
		Ixobrychus cinnamomeus	Cinnamon Bittern	
	Threskiorni thidae	*Threskiornis melanocephalus*	Lack-Headed Ibis	
Passeriformes	Motacillidae	*Motacilla alba*	White Wagtail	
		Motacilla maderaspatensis	White-Browed Wagtail	
		Motacilla citreola	Citrine Wagtail	
		Motacilla flava	Yellow Wagtail	
		Motacilla cinerea	Grey Wagtail	

1-7

Zooplanktons



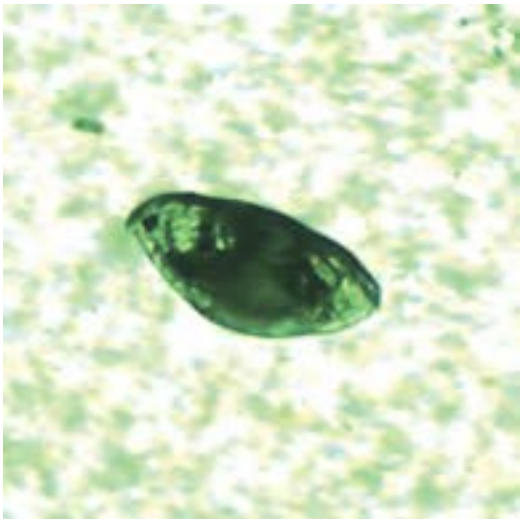
***Acartia* sp.**



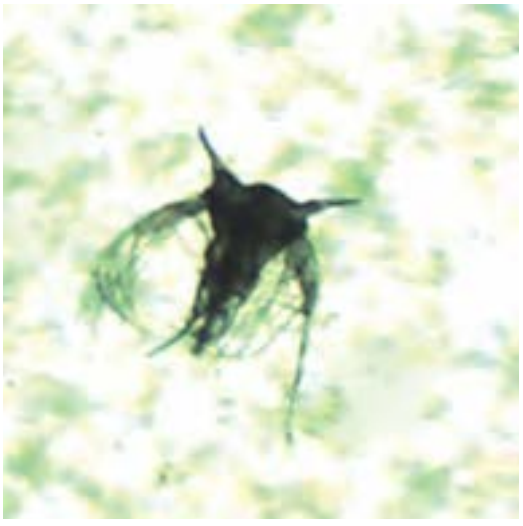
***Amphipod* sp.**



Arrow worm



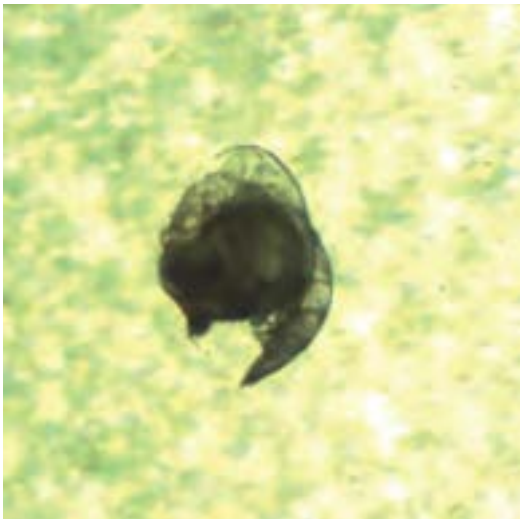
***Cypris* sp.**



***Diaptomus* larva**



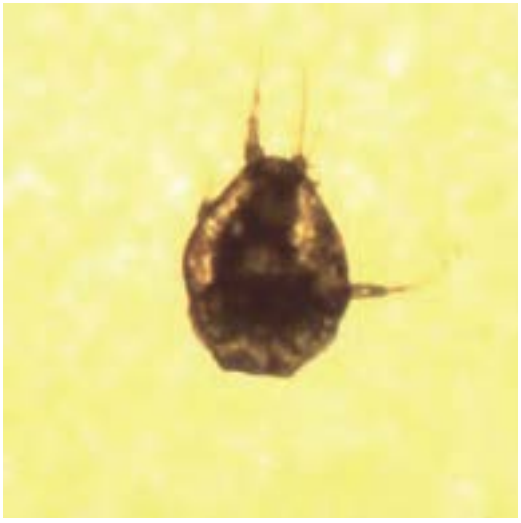
***Diaptomus* sp.**



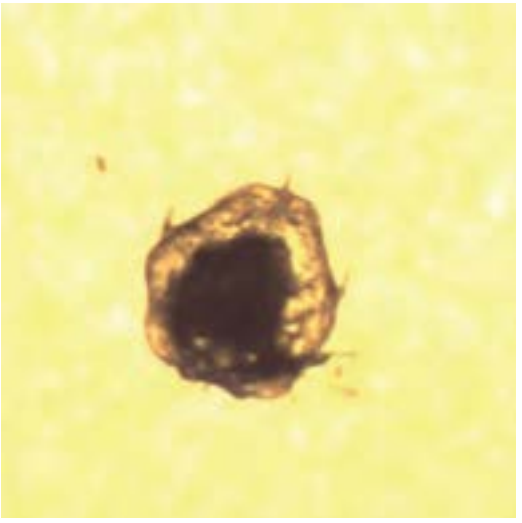
Dragonfly larva



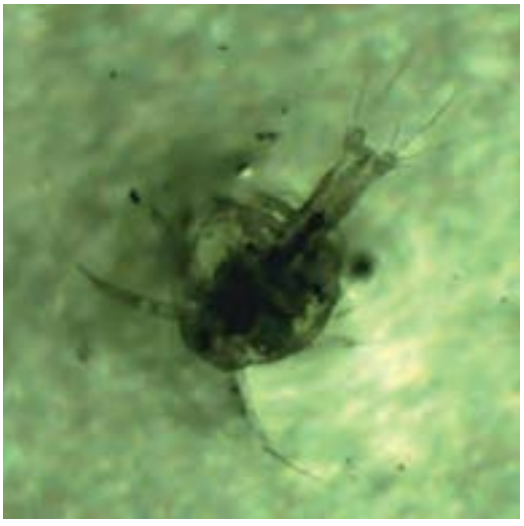
***Harpacticoida* sp.**



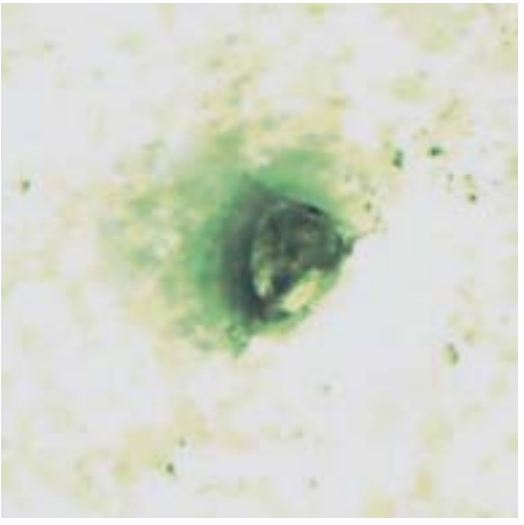
***Heterocypris* sp.**



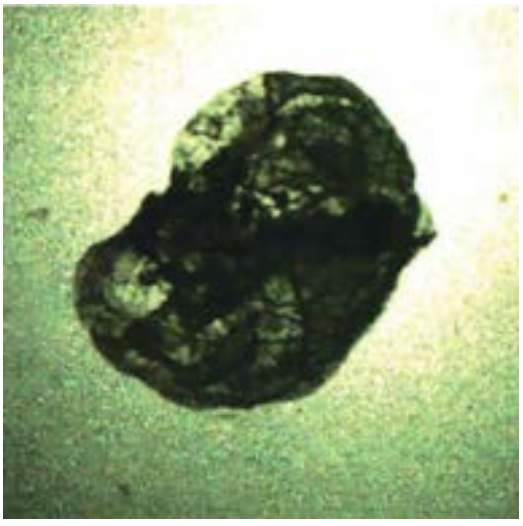
Nauplius larva 1



Nauplius larva 2



Nauplius larva (*Cyclops* copepod)



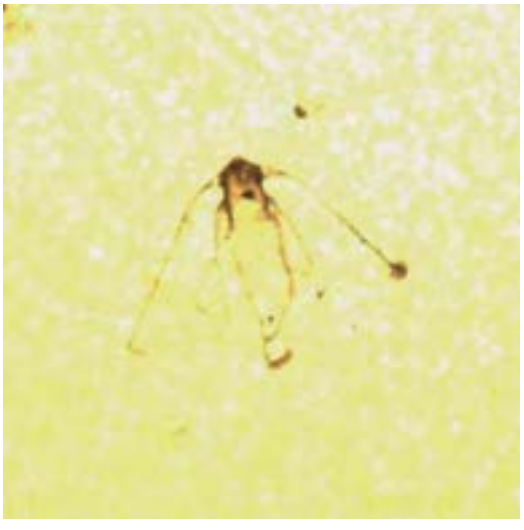
***Noctiluca* sp.**



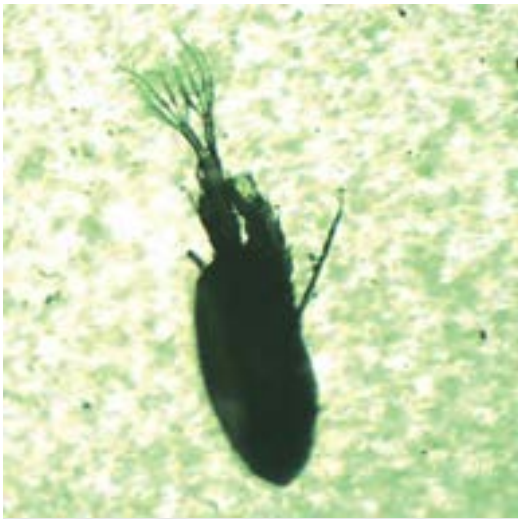
***Oithona* sp.**



***Oligochaeta* sp.**



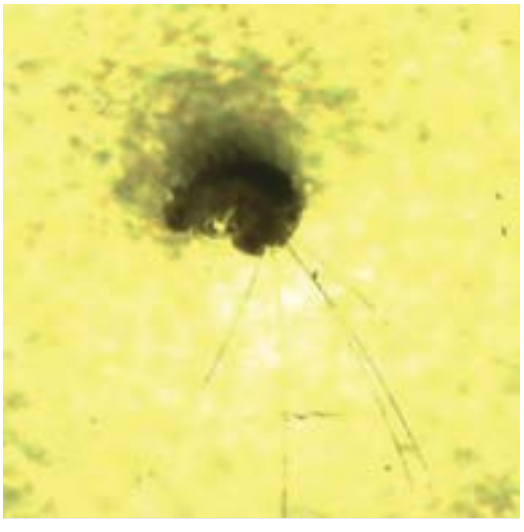
***Ophiopluteus* sp.**



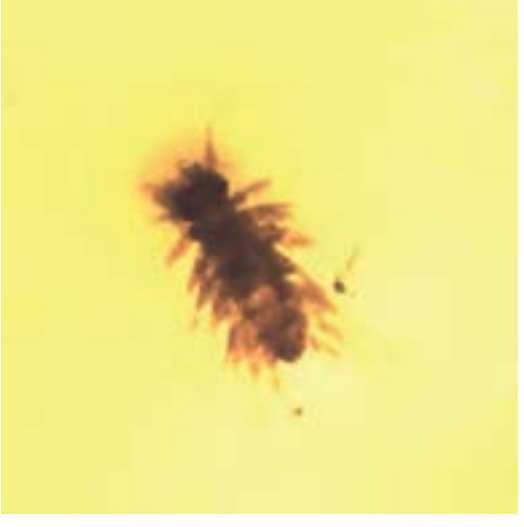
***Phyllodiaptomus* sp.**



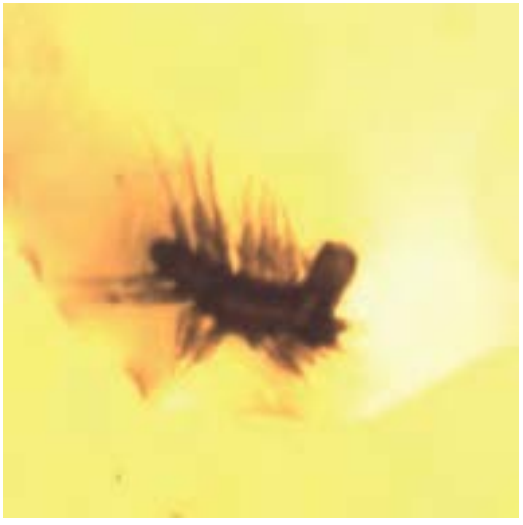
***Phyllodocia* sp.**



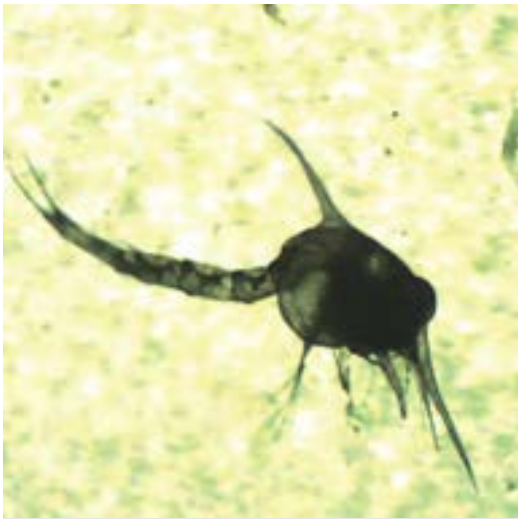
***Polychaeta* larva 1**



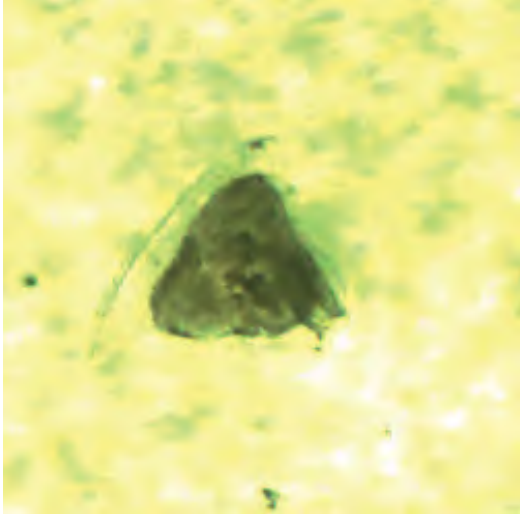
***Polychaeta* larva 2**



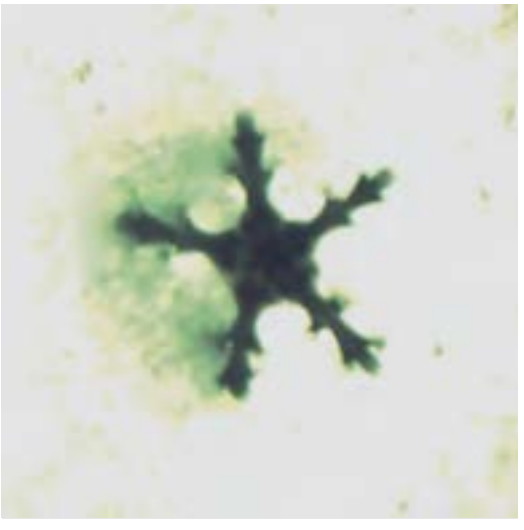
***Polychaeta* larva 3**



***Scylla* sp.**



***Bryozoa* sp.**



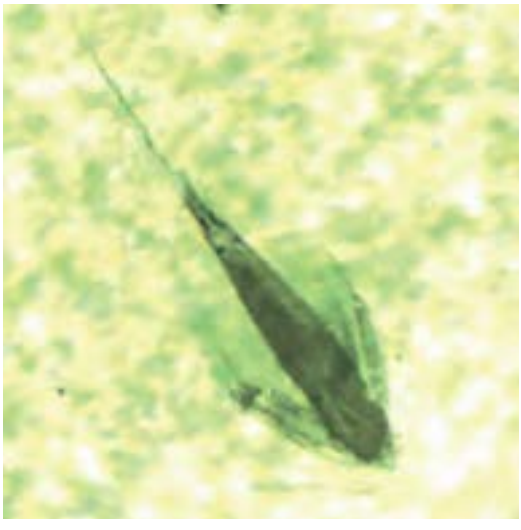
***Echinodermata* sp.**



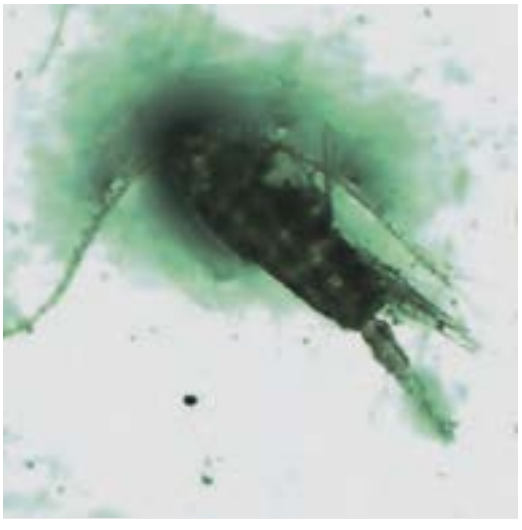
***Echinopluteus* larva**



***Eucyclops* sp.**



Maxillopoda sp.



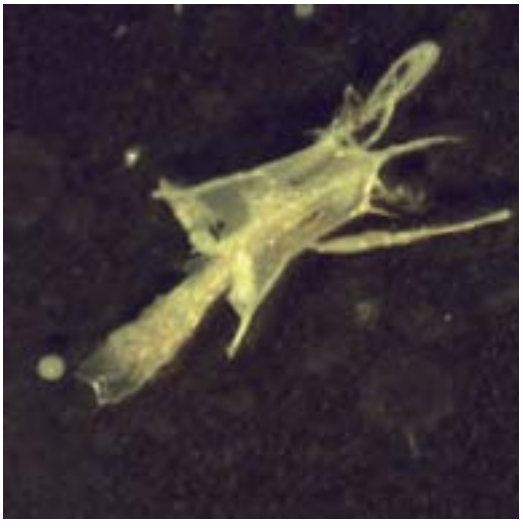
***Paradiaptomus* sp.**



***Rotifera* sp.**



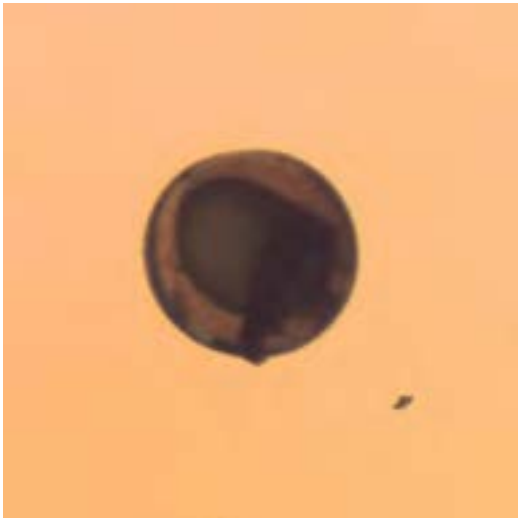
Shrimp larva



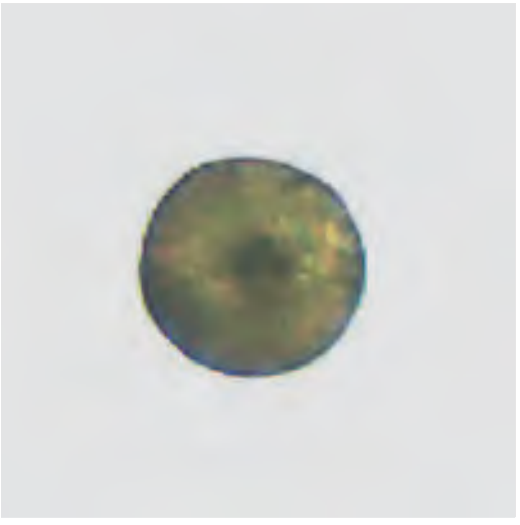
Stomatopod larva



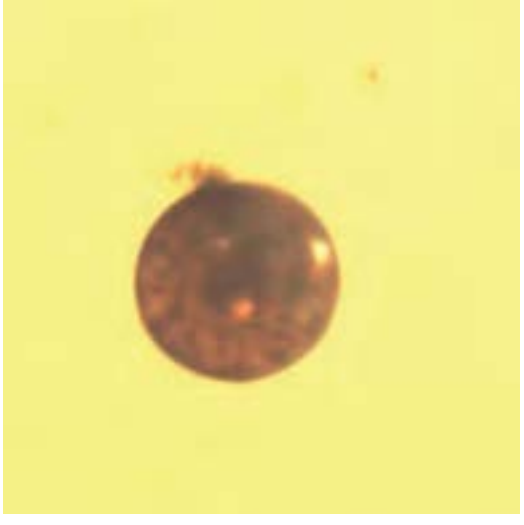
Worm



Copepod egg



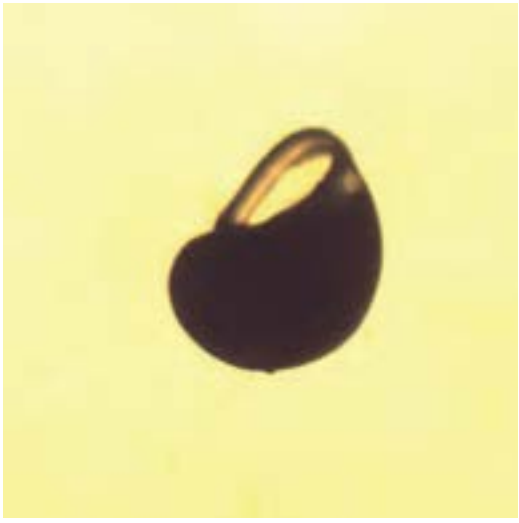
Fish egg



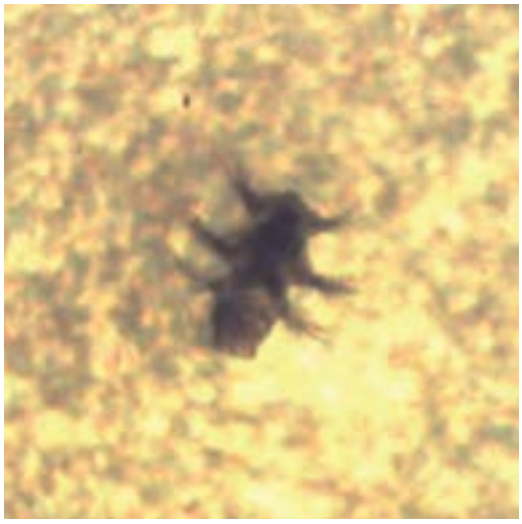
Marine fish egg



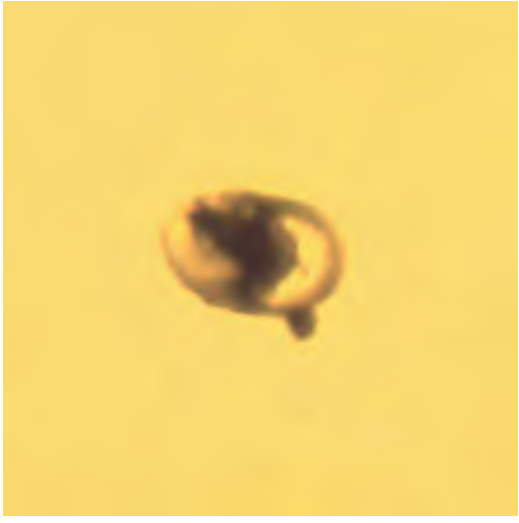
Fish larva



Unidentified zooplankton 1



Unidentified zooplankton 2



Unidentified zooplankton 3

Table 10. **List of zooplanktons previously reported in the Sundarbans of Bangladesh other than the present study.**

Class	Species	Reference
Maxillopoda	*Paracartia* sp.	Bir et al., 2015
Monogononta	*Euclanis* sp.	
	Brachionus sp.	
Eurotatoria	*Synchaeta* sp.	
Cephalopoda	*Loligo vulgaris*	





2
Flora

Mangroves	**336**
Seaweeds	**344**
Phytoplanktons	**350**

2-1

Mangroves



Acanthus ilicifolius



***Bruguiera sexangula* (Fruit)**



Ceriops decandra



Heritiera fomes



Nypa fruticans



Rhizophora mucronata



Sonneratia apetala



Xylocarpus mekongensis

Table 11. List of mangroves previously reported in the Sundarbans of Bangladesh other than the present study.

Family	Scienfic Name	English Name	Local Name	Reference
Plumbaginaceae	*Aegialitis rotundifolia*	Unknown	Dhalchaka	Chaffey et al., 1985
Myrsinaceae	*Aegiceras corniculatum*	River Mangrove	Khalisha Khalshi	
Meliaceae	*Amoora cucullata*	Unknown	Amur	
Avicenniaceae	*Avicennia alba*	Unknown	Sadda bean	
	Avicennia officinalis	Indian Mangrove	Bean	
Tilliaceae	*Brownlowia tersa*	Dungun, Dungun Air	Sundri lata	
Rhizophoraceae	*Bruguiera gymnorrhiza*	Large-Leafed Orange Mangrove	Kankra	
	Bruguiera parviflora	Lenggadai	Kankra	
	Kandelia candel	Narrow-Leaved Kandelia	Gura, Gurae	
	Rhizophora mucronata	Loop-root Mangrove	Garjan	
	Rhizophora apiculata	Tall-stilt Mangrove	Garjan, Jhanna	
Leguminosae	*Cynometra ramiflora*	Katong Laut	Shingra	
	Derris trifoliata	Common Derris	Gila lata	
Euphorbiaceae	*Excoecaria agallocha*	Milky Mangrove	Gewa	
	Excoecaria indica	Unknown	Batla	
Flagellariaceae	*Flagellaria indica*	False Rattan	Abetaa	
Asclepiadaceae	*Hoya* sp.	Waxflower	Agusha	
Combretaceae	*Lumnitzera racemosa*	Black Mangrove	Kirpa	
Palmae	*Phoenix paludosa*	Mangrove Date Palm	Hantal	
Celastraceae	*Salacia chinensis*	Chinese Salacia		
Sonnaratiaceae	*Sonneratia caseolaris*	Mangrove Apple	Choyla	
Tamaricaceae	*Tamarix indica*	Unknown	Jhao, Nonajhao	
Meliaceae	*Xylocarpus granatum*	Mangrove Cannonball	Dhundul	

2-2

Seaweeds



Chaetomorpha aerea



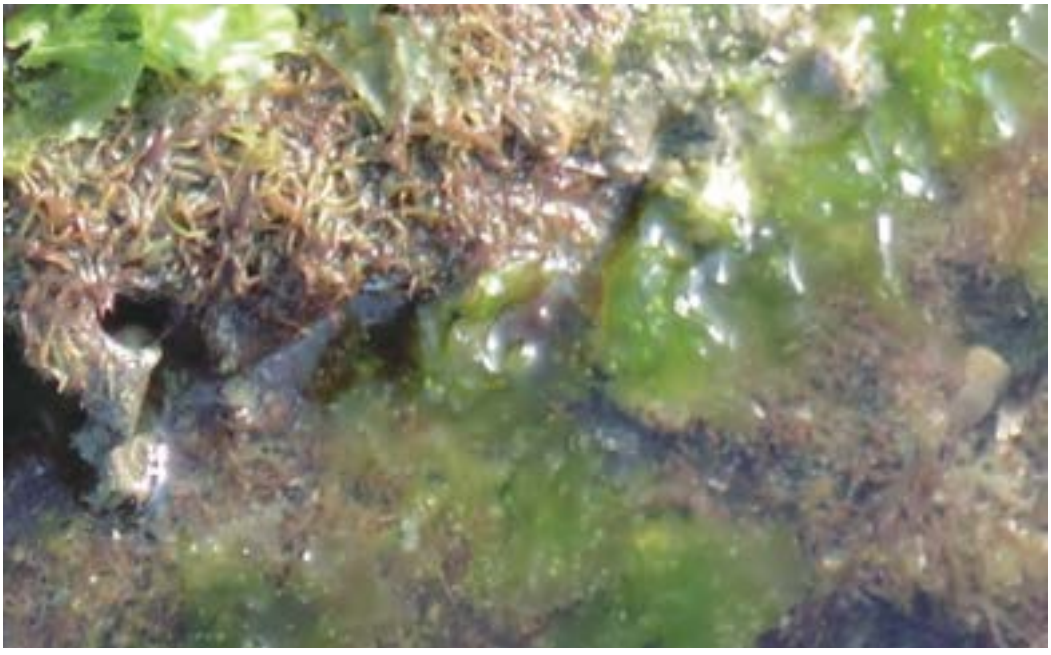
Enteromorpha prolifera



Enteromorpha intestinalis



Colpomenia sinuosa



Ulva lactuca

Table 12. List of benthic algae previously reported in the Sundarbans of Bangladesh other than the present study.

Class	Order	Family	Name of Species	Group name	Reference
Cyanophyceae	Chroococcales	Aphanothecaceae	*Aphanothece castagnei*	Seaweed	Islam, 1973
	Oscillatoriales	Oscillatoriaceae	*Oscillatoria amoena*	Filamentous cyanobacterium	
			Oscillatoria brevis f. major		
			Oscillatoria tenuis		
			Lyngbya confervoides	Seaweed	
			Lyngbya lutea		
		Microcoleaceae	*Hydrocoleum cantharidosum*	Filamentous cyanobacterium	
	Nostocales	Nostocaceae	*Anabaena variabilis*		
		Scytonemataceae	*Scytonema* sp.		
Florideophyceae	Gigartinales	Caulacanthaceae	*Catenella nipae*	Seaweed	
			Catenella repens		
	Ceramiales	Delesseriaceae	*Caloglossa adnata*		
			Caloglossa leprieurii		
		Rhodomelaceae	*Pterosiphonia pennata*		
			Bostrychia radicans		
			Bostrychia tenella		
Ulvophyceae	Ulvales	Ulvaceae	*Enteromorpha intestinalis*		
			Enteromorpha prolifera		
			Ulva lactuca		
	Cladophorales	Cladophoraceae	*Rhizoclonium grande*		
			Rhizoclonium hookeri		
			Rhizoclonium kerneri		
			Rhizoclonium riparium		
			Lola capillaris		
			Lola implexa		
			Lola tortuosa		
			Chaetomorpha aerea		
			Chaetomorpha gracilis		
		Pithophoraceae	*Cladophorella sundarbanensis*	Cladophoroid filamentous algae	
	Bryopsidales	Udoteaceae	*Boodleopsis sundarbanensis*	Seaweed	
Xanthophyceae	Vaucheriales	Vaucheriaceae	*Vaucheria erythrospora*	Filamentous yellow-green algae	
			Vaucheria prescotti		
			Vaucheria pronosperma		
			Vaucheria mayyanadensis		
Phaeophyceae	Ectocarpales	Scytosiphonaceae	*Colpomenia sinuosa*	Seaweed	

2-3

Phytoplanktons



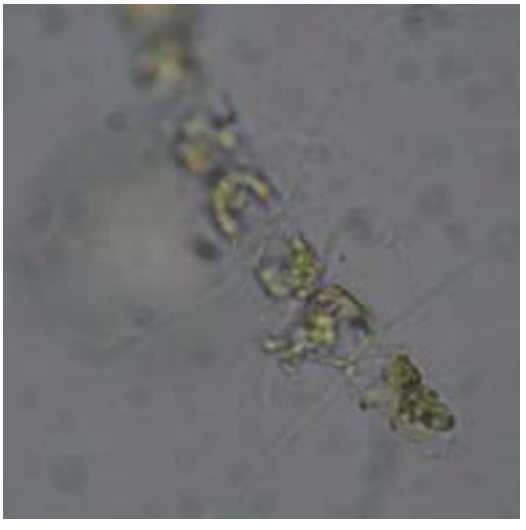
***Amphora* sp.**



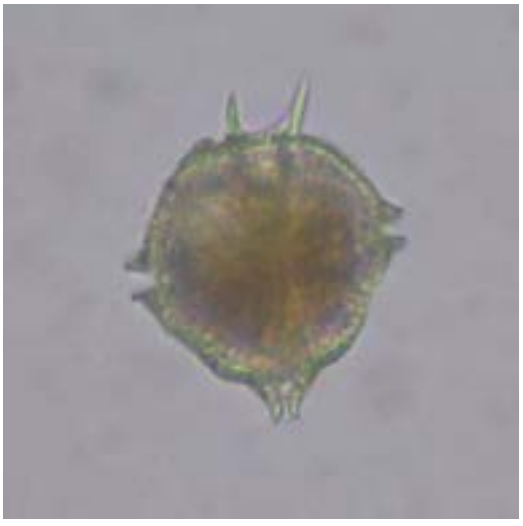
Ceratium furca



***Ceratium* sp.**



***Chaetoceros* sp.**



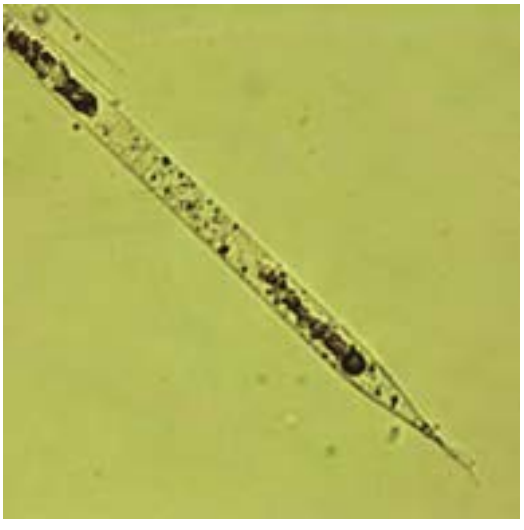
***Gonyaulax* sp.**



***Gyrosigma* sp.**



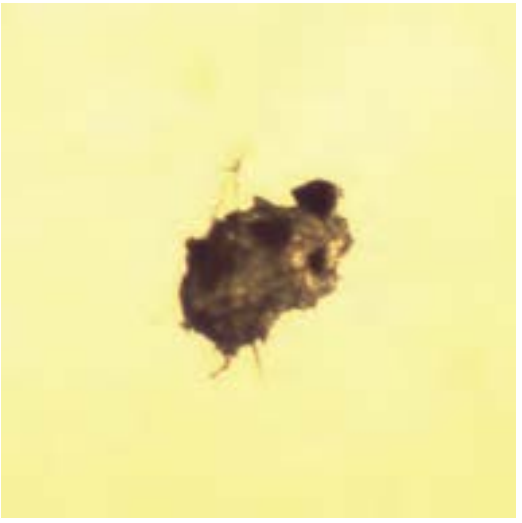
Nitzschia sigma



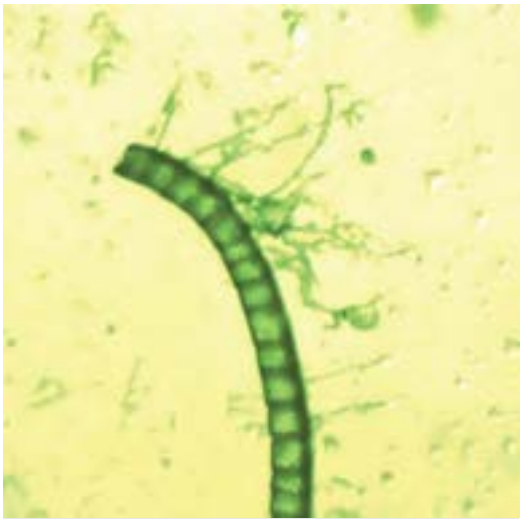
Rhizosolenia hebetata



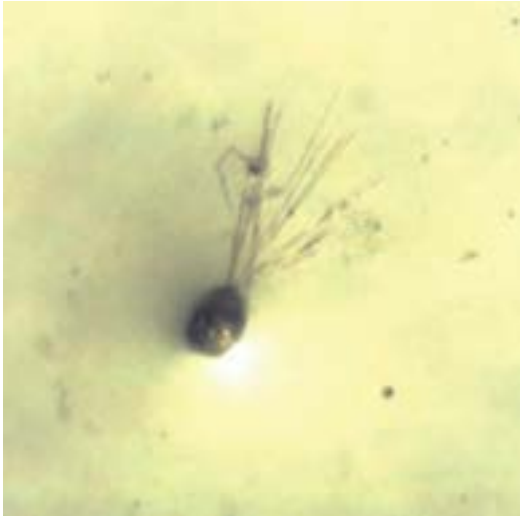
***Amphisolenia* sp.**



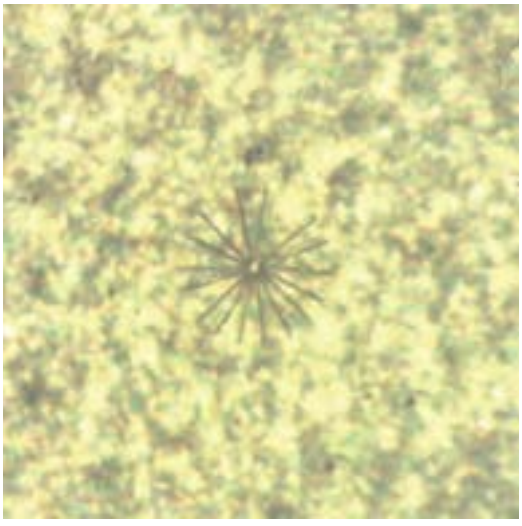
***Dinophysis* sp.**



Unidentified Phytoplankton 1



Unidentified Phytoplankton 2



***Asterionella* sp.**

Table 13. List of phytoplanktons previously reported in the Sundarbans of Bangladesh other than the present study.

Class	Order	Family	Name of Species	Reference
Trebouxiophyceae	Chlorellales	Oocystaceae	*Oocystis pusilla*	Aziz et al., 2012
Conjugatophyceae	Zygnematales	Mesotaeniaceae	*Netrium oblongum*	Rahman et al., 2013
	Desmidiales	Desmidiaceae	*Staurastrum orbiculare*	Aziz et al., 2012
Chlorophyceae	Chaetophorales	Uronemataceae	*Uronema* sp.	
	Chlamydomonadales	Volvocaceae	*Eudorina elegans*	Rahaman et al., 2013
	Sphaeropleales	Hydrodictyaceae	*Pediastrum simplex*	
			Pediastrum duplex	
			Hydrodictyon sp.	
		Selenastraceae	*Ankistrodesmus falcatus*	
Euglenophyceae	Eutreptiales	Astasiaceae	*Astasia cylindrica*	Aziz et al., 2012
	Euglenales	Euglenaceae	*Euglena spathirhyncha*	
Mediophyceae	Chaetocerotales	Chaetocerotaceae	*Bacteriastrum delicatulum*	
	Biddulphiales	Biddulphiaceae	*Biddulphia dubia*	
	Chaetocerotales	Chaetocerotaceae	*Chaetoceros pendulus*	
			Chaetoceros socialis	
			Chaetoceros debile	Rahaman et al., 2013
			Chaetoceros affinis	
			Chaetoceros sp.	Aziz et al., 2012
	Eupodiscales	Eupodiscaceae	*Odontella mobiliensis*	Rahaman et al., 2013
			Odontella sinensis	
Coscinodiscophyceae	Coscinodiscales	Coscinodiscaceae	*Coscinodiscus excentricus*	Aziz et al., 2012
			Coscinodiscus granii	
			Coscinodiscus jonesianus	
			Coscinodiscus lineatus	
			Coscinodiscus marginatus	
			Coscinodiscus spiniferus	Rahaman et al., 2013
			Coscinodiscus marginatus	Rahaman et al., 2013; Aziz et al., 2012
			Coscinodiscus centralis	Rahaman et al., 2013
			Coscinodiscus wailesii	
			Coscinodiscus pavillardi	
			Coscinodiscus radiatus	
			Coscinodiscus angsti	
			Coscinodiscus concinnus	
			Coscinodiscus oculus-iridis var. boreales	

Table 13. Continued

Class	Order	Family	Name of Species	Reference
Coscinodiscophyceae	Coscinodiscales	Hemidiscaceae	*Actinocyclus pruniosus*	
			Actinocyclus anulatus	
			Roperia tesselata	
	Stephanodiscales	Stephanodiscaceae	*Cyclotella striata*	
			Cyclotella stylorum	
			Cyclotella comta	Aziz et al., 2012
Mediophyceae	Rhizosoleniales	Rhizosoleniaceae	*Rhizosolenia setigera*	
	Thalassiosirales	Skeletonemataceae	*Skeletonema costatum*	
		Thalassiosiraceae	*Thalassiosira weissflogii*	
			Thalassiosira eccentrica	Rahaman et al., 2013
			Thalassiosira oestrupii	
			Thalassiosira decipiens	
			Thalassiosira anguste-lineata	
			Thalassiosira punctigera	
			Thalassiosira pseudonona	
			Thalassiosira lundiana	
			Thalassiosira pseudonona	
			Thalassiosira decipens	
			Thalassiosira wongii	
			Thalassiosira rotula	Aziz et al., 2012
	Hemiaulales	Hemiaulaceae	*Cerataulina dentate*	Rahaman et al., 2013
			Cerataulina bicornis	
	Chaetocerotales	Leptocylindraceae	*Leptocylindrus minimus*	
	Lithodesmiales	Lithodesmiaceae	*Ditylum brightwellii*	
Bacillariophyceae	Naviculales	Amphipleuraceae	*Amphiprora alata*	Rahaman et al., 2013; Aziz et al., 2012
	Thalassiophysales	Catenulaceae	*Amphora ovalis*	Aziz et al., 2012
			Amphora veneta	
	Naviculales	Naviculaceae	*Navicula meninscus*	Rahaman et al., 2013
			Navicula brekkaensis	Aziz et al., 2012
	Bacillariales	Bacillariaceae	*Nitzschia acicularis*	
			Nitzschia closterium	
			Nitzschia rotnada	
			Nitzschia inconspicua	
			Nitzschia romana	
			Nitzschia sigma	

Table 13. Continued

Class	Order	Family	Name of Species	Reference
Bacillariophyceae	Bacillariales	Bacillariaceae	*Nitzschia lorenziana*	Rahaman et al., 2013
			Nitzschia behrei	
			Nitzschia sp.	Aziz et al., 2012
			Bacillaria paxillifera	Rahaman et al., 2013
			Cylindrotheca closterium	
	Surirellales	Entomoneidaceae	*Entomoneis sulcata*	
			Entomoneis paludosa	
		Surirellaceae	*Surirella gemma*	
			Surirella fastuosa var. recedens	Aziz et al., 2012
	Thalassionematales	Thalassionemataceae	*Thalassionema nitzschioides*	
			Lioloma delicatula	
	Fragilariales	Fragilariaceae	*Synedra ulna*	Rahaman et al., 2013
	Naviculales	Pleurosigmataceae	*Pleurosigma directum*	Rahaman et al., 2013
			Pleurosigma cf. elongatum	
			Pleurosigma estuarii	
			Pleurosigma angulatum	
	Bacillariales	Bacillariaceae	*Cylindrotheca fusiformis*	
Cyanophyceae	Chroococcales	Microcystaceae	*Anacystis* sp.	
			Microcystis sp.	
	Nostocales	Nostocaceae	*Anabaena cf. flos-aquae*	
Dinophyceae	Gonyaulacales	Ceratiaceae	*Ceratium fusus*	
	Gonyaulacales	Cladopyxidaceae	*Cladopyxis hemibrachiata*	
	Peridiniales	Protoperidiniaceae	*Protoperidinium biconicum*	
			Protoperidinium subinerme	
			Protoperidinium claudicans	
			Protoperidinium leonis	
			Protoperidinium punctulatum	
Xanthophyceae	Mischococcales	Centritractaceae	*Centritractus belanophorus*	
Coscinodiscophyceae	Coscinodiscophyceae	Hemidiscaceae	*Roperia tesselata*	Rahman et al., 2013; Aziz et al., 2012

Life of the Sundarbans



© Jonas Bendiksen

An aerial photo of the different rivers and canals of the Sundarbans mangrove forest, Bangladesh.







Natural beauties of the Sundarbans.







Collecting shrimp fries using Set Bag Net (Behundi jal).









Collecting fish by hands from mud during low tide.





Fishers Life of the Sundarbans.





Fisher's Life of the Sundarbans.







Crab collectors.













Boats carry Golpata also called Nipa Palm from the Sundarbans, Bangladesh.



Drying of ribbon fish.

Fisher's Life of the Sundarbans.





Fish drying in Dublar Char (Dubla Island) near the Sundarbans.

Project Activities



Signing of MOU among SAU, KIOST, Yeosu Foundation and BFD.





Inauguration session of Aquatic Bioresource Research Laboratory. (ABR Lab.) at SAU, Dhaka, Bangladesh.









Lab activities of morphological and genetic analysis at Field station, Khulna and Aquatic Bioresource Research Laboratory at SAU.



Sample and data collection inside the Sundarbans.















Meeting of KIOST team to CCF of Bangladesh Forest Department at Bana Bhaban, Dhaka.



Meeting KIOST team to Vice-Chancellor of SAU.



Project team with undergraduate and post graduate students after a seminar on MPA management.









Knowledge sharing with primary school students and fishermen on aquatic biodiversity of the Sundarbans.

Training on NSG data analysis using advance bioinformatics tools.







Training workshop on DNA barcoding at SAU, Dhaka.

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Appendix I

IUCN Global Red List Code Critically Engendered (CE), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE).

Local Status Code Common (C), Not Common (NC), Rare (R).

Table: List of aquatic fauna reported in the present study.

1. Fishes

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Orectolobi formes	Hemiscylliidae	*Chiloscyllium griseum*	Grey Bamboo Shark	Muichya Hangor	NT	NC
Carcharhini formes	Carcharhinidae	*Scoliodon laticaudus*	Dog Shark	Thutte Hangor	NT	C
	Sphyrnidae	*Sphyrna lewini*	Scalloped Hammerhead Shark	Gol Kaunna, Juliamagar	EN	NC
Torpediniformes	Narkidae	*Narcine brunnea*	Brown Spotted Numbfish	Badami Bidyut Machh	NE	R
	Narcinidae	*Narke dipterygia*	Spottail Sleeper Ray	Chor Chapta, Numbray	DD	R
Rhinobatiformes	Rhinobatidae	*Glaucostegus granulatus*	Sharpnose Guiterfish, Shovelnose	Pitambori, Karanja	VU	NC
Myliobatiformes	Dasyatidae	*Brevitrygon imbricata*	Scaly Whipray	Haushpata	DD	C
		Brevitrygon walga	Dwarf Whipray	Sankush, Haushpata	NT	C
		Himantura uarnak	Leopard Stingray, Reticulate Whipray, Honeycomb Stingray	Haus, Sankush, Chitra Haus	VU	C
		Telatrygon zugei	Sharp Snout Stingray	Shakush	NT	C
	Gymnuridae	*Gymnura poecilura*	Longtail Butterfly Ray, Butterfly Ray	Padmamoni, Kulta, Projapoti	NT	C
Elopiformes	Megalopidae	*Megalops cyprinoides*	Indo-pacific Tarpon	Nanchil Koral Amplify	DD	NC
Anguilliformes	Muraenidae	*Gymnothorax punctatus*	Red Sea White-spotted Moray	Bamosh	NE	C
		Gymnothorax sp.	Moray Eel	Bamosh	NE	C
	Ophichthidae	*Pisodonophis boro*	Boro Snake Eel	Kharu	LC	C
	Anguillidae	*Moringua raitaborua*	Purple Spaghetti Eel	Rata Borua	NE	C
		Anguilla bengalensis	Giant Mottled Eel	Bamosh, Baow Baim	NT	C
Clupeiformes	Clupeidae	*Anodontostoma chacunda*	Chacunda Gizzard Shad, Shortnodse Gizard Shad	Koi Puti, Chakunda	NE	C
		Escualosa thoracata	White Sardine	Hichiri Mach	NE	
		Gudusia chapra	Indian River Shad	Chapila, Khaira	LC	C
		Hilsa kelee	Kelee Shad	Choukka, Gurta Ilish	NE	C

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Clupeiformes	Clupeidae	*Nematalosa nasus*	Bloch's Gizzard Shad, Longfinned Gizzard Shad	Borong, Khoira	LC	NC
		Sardinella fimbriata	Sardine	Khaira	NE	C
		Sardinella longiceps	Indian Oil Sardine	Chandana Illish	NE	NC
		Sardinella melanura	Blacktip Sardinella	Chandana Illish	NE	C
		Tenualosa ilisha	River Shad, Hilsa Shad	Ilish, Ilsha	LC	C
		Tenualosa toli	Toli Shad, Shad	Chandana Ilish	NE	C
	Engraulidae	*Coilia dussumleri*	Goldspotted Grenadier Anchovy	Boiragi	NE	C
		Coilia neglecta	Neglected Grenadier Anchovy	Olua, Boiragi	LC	C
		Coilia ramcarati	Ramcarat Grenadier Anchovy	Boiragi	NE	C
		Setipinna taty	Scaly Hairfin Anchovy	Teli Phasa	NE	C
		Stolephorus indicus	Indian Anchovy	Fasha	NE	C
		Stolephorus tri	Spined Anchovy	Kata Phasa, Kata Phaysha	NE	C
		Thryssa hamiltoni	Hamilton's Thryssa	Fasha	NE	C
		Setipinna tenuifilis	Common Hairfin Anchovy	Fhasa	NE	C
		Thryssa purava	Oblique Jaw Thryssa, Gangetic Anchovy	Fasha	NE	C
	Chirocentridae	*Chirocentrus dorab*	Dorab Wolf-Herring	Karati Chela	NE	C
	Pristigasteridae	*Opisthopterus tardoore*	Long finned Herring	Fhasa	NE	C
Cypriniformes	Cobitidae	*Lepidocephalichthys guntea*	Guntea Loach	Guto Baiym	LC	C
	Cyprinidae	*Puntius chola*	Swamp Barb	Puthi	LC	NC
		Rasbora rasbora	Gangetic Scissortail Rasbora	Darkina	LC	NC
Siluriformes	Plotosidae	*Plotosus canius*	Canine Catfish Eel	Gang Magur, Kain Magur	NE	C
	Ailiidae	*Ailia Coila*	Gangetic Ailia	Kajuli, Bashpata	NT	C
		Clupisoma garua	Gagra	Ghaura, Garua Bacha	LC	NC
		Silonia silondia	Silond Catfish, Silondia Vacha	Shilong	LC	NC
	Bagridae	*Mystus tengara*	Tengara catfish	Tengra	LC	C
	Sisoridae	*Bagarius bagarius*	Gangetic Goonch, Devil Catfish	Baghair, Baghari	LC	NC
	Ariidae	*Arius arius*	Threadfin Sea Catfish	Tangra	LC	C
		Arius maculatus	Spotted Catfish, Sea catfish	Kata Veni	NE	C

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Siluriformes	Ariidae	*Arius venosus*	Yellow Sea Catfish, Marine Catfish	Mochh, Kata Veni	NE	C
		Hemiarius sona	Dusky Catfish, Sona Sea Catfish	Mad, Kata Sona	NE	NC
		Netuma bilineata	Bronze Catfish	Mad	NE	C
Aulopiformes	Synodontidae	*Harpadon nehereus*	Bombay Duck	Loita, Loittaya	NE	C
		Saurida tumbil	Greater Lizard Fish	Achila, Koniari, Tiktiki	LC	NC
Gadiformes	Bregmacero tidae	*Bregmaceros mcclellandi*	Unicorn Cod	Unknown	NE	R
Lophiiformes	Antennariidae	*Antennarius hispidus*	Shaggy Angler, Zebra Frogfish	Achila, Koniari, Tiktiki	NE	R
Beloniformes	Belonidae	*Strongylura leiura*	Banded Needle Fish, Square Tail Alligator Gar	Unknown	NE	C
		Xenentodon cancila	Silver Needle Fish	Kankila, Kakila	LC	C
	Hemiramphidae Zenarchopteri dae	*Rhynchorhamphus georgii*	Georges Halfbeak, Longbilled Halfbeak	Ek Thute, Thutta	NE	C
		Zenarchopterus buffonis	Buffon's Halfbeak, Buffon's Garfish	Ek Thute	NE	C
	Exocoetidae	*Exocoetus volitans*	Tropical Two-winged Flying Fish	Thuris, Uromachh, Urailla	LC	NC
Syngnathi formes	Fistulariidae	*Fistularia petimba*	Red Cornetfish, Flute-mouth	Leza Thute, Bara Thute	LC	NC
	Syngnathidae	*Hippocampus kuda*	Sea horse, Smooth Seahorse	Samudra Ghora	VU	NC
Anguilliformes	Muraenidae	*Strophidon sathete*	Slender Giant Moray	Bamosh	NE	C
Synbranchi formes	Mastacembeli dae	*Macrognathus aculeatus*	Lesser Spiny Eel	Tara Baim	NE	C
		Macrognathus pancalus	Striped Spiny Eel	Guchi Baim	LC	C
Scorpaeni formes	Scorpaenidae	*Pterois russelii*	Plaintail Turkeyfish, Russell`s Firefish	Rongila	NE	NC
	Synanceiidae	*Minous monodactylus*	Grey stingfish	Kata Koral	NE	NC
	Platycephalidae	*Grammoplites scaber*	Rough Flat Head	Mur Baila	NE	C
		Kumococius rodericensis	Spiny Flat Head	Mur Baila	NE	C
		Platycephalus indicus	Bartail Flathead	Mur Bailla	NE	NC
Perciformes	Serranidae	*Epinephelus erythrurus*	Cloudy Grouper, Cloudy Rock Cod	Bol	VU	NC
		Epinephelus coioides	Orange-Spotted Grouper	Bol	VU	NC
	Teraponidae	*Terapon jarbua*	Terapon Perch, Three-striped Tiger Fish	Barguni, Katkoi	LC	C
		Terapon theraps	Banded Grunter	Barguni, Katkoi	LC	C

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Perciformes	Priacanthidae	*Priacanthus hamrur*	Moontail Bullseye	Lal Cokkha	LC	NC
	Apogonidae	*Ostorhinchus fasciatus*	Broadbanded Cardinalfish	Gogla	NE	R
	Sillaginidae	*Sillaginopsis domina*	Gangetic Sillago	Tular Dandi, Sundra, Hundra	NE	NC
		Sillago sihama	Silver Sillago	Sundra, Hundra	LC	NC
	Rachycentridae	*Rachycentron canadum*	Cobia, Black king Fish	Raj Gazari	LC	NC
	Echeneidae	*Remora remora*	Common Remora	Juta Mach, Hangar Chat	LC	NC
	Carangidae	*Alepes kleinii*	Razorbelly Scad	Mouri	LC	C
		Alepes melanoptera	Black-fin Scad	Dora Mouri	LC	C
		Atropus atropus	Black-fin Jack	Bangada	LC	C
		Carangoides armatus	Longfin Trevally	Moori	NE	C
		Caranx sexfasciatus	Bigeye Trevally	Moori	LC	R
		Carangoides hedlandensis	Bumpnose Trevally	Moori	NE	R
		Caranx ignobilis	Giant Trevally, Giant Kingfish	Nilambori, Moori	LC	C
		Decapterus kurroides	Red Tailed Mackerel Scad	Lalamburi	NT	NC
		Megalaspis cordyla	Torpedo Scad	Kauwa, Konkona, Lohamouri	LC	C
		Parastromateus niger	Black Promfet	Kala Chanda, Kala Pankha	NE	NC
		Scomberoides commersonnianus	Double Spotted Queenfish	Chapa Kori, Chapa	LC	C
		Scomberiodes tol	Queen Fish	Bom Maittya	NE	NC
		Seriolina nigrofasciata	Black Banded Trevally	Kala Dora, Moori	LC	NC
		Ulua mentalis	Longrakered Trevally	Unknown	LC	C
	Menidae	*Mene maculate*	Moon Fish	Chan Chanda	NE	NC
	Leiognathidae	*Gaza minuta*	Tooth Pony	Deto Chanda	NE	C
		Photopectoralis bindus	Orangefin ponyfish	Taka Chanda Photopectoralis bindus	NE	C
	Lutjanidae	*Lutjanus johnii*	John`s Snapper, Red Snapper	Ranga Choukka	LC	NC
	Datnioididae	*Datnioides polota*	Four Barred Tigerfish	Sagar Meni, Noyona	NE	C
	Gerreidae	*Gerres filamentosus*	Whiptail Silverbiddy	Tak Chanda	LC	NC
		Gerres sp.	Silver Biddy	Tak Chanda	NE	NC

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Perciformes	Haemulidae	*Pomadasys argenteus*	Silver Grunt	Datina	LC	C
		Pomadasys maculatus	Blotched Grunt	Guti Datina	LC	NC
	Sparidae Nemipteridae Sciaenidae	*Acanthopagrus berda*	River bream	Sada datina	LC	NC
		Nemipterus japonicus	Pink Perch	Rupbam	NE	R
		Chrysochir aureus	Reeve's Croaker	Poa	NE	C
		Johnius borneensis	Sharpnose Hammer Croaker	Mete Ranger Poa	NE	C
		Otolithoides biauritus	Bronze Croaker	Poa	NE	NC
		Johnius coitor	Coitor, Crocker	Poa, Coitor Poa	LC	C
		Johnius plagiostoma	Large-eye Croaker	Poa	NE	NC
		Protonibea diacanthus	Blackspotted Croaker	Poa	NE	C
		Macrospinosa cuja	Cuja Croaker	Kuizza Poa	NE	NC
		Otolithes ruber	Tiger Toothed Croaker	Poa	NE	C
		Otolithoides pama	Pama Croaker	Poa	NE	C
		Pennahia anea	Donkey Croaker	Poa	NE	NC
		Pterotolithus maculatus	Blotched Tiger-toothed Croaker	Lombu, Gutipoa	LC	R
	Polynemidae	*Eleutheronema tetradactylum*	Fourfinger Threadfin	Taila	NE	NC
		Leptomelanosoma indicum	Indian Threadfin	Taila, Lakhua	NE	C
		Polydactylus sextarius	Blackspot Threadfin	Kala Taila	NE	NC
		Polynemus paradiseus	Paradise Threadfin	Taposi, Topse, Topsi	NE	C
	Mullidae	*Parupeneus forsskali*	Red Sea Goatfish	Sonali Bata	NE	R
		Upeneus moluccensis	Goldband Goatfish	Sonali Bata	LC	R
		Upeneus sulphureus	Sulphur Goatfish	Sonali Bata	LC	R
		Upeneus taeniopterus	Finstripe Goatfish	Bata	LC	R
	Toxotidae	*Toxotes chatareus*	Largescale Archerfish	Pankha Pach, Pokkhi	NE	NC
	Drepanidae	*Drepane longimana*	Banded Drepane	Pan Mach	NE	C
	Mugilidae	*Chelon parsia*	Goldspot Mullet	Parse, Parse Bata	NE	C
		Moolgarda cunnesius	Longarm Mullet	Parse, Bata	NE	C
		Mugil cephalas	Striped Mullet	Parse, Parse Bata	LC	C
		Planiliza subviridis	Greenback Mullet	Parse, Bata	NE	C
		Rhinomugil corsula	Corsula Mullet	Parse, Korsula Bata	LC	C
		Sicamugil cascasia	Yellowtail Mullet	Parse, Kachki Bata	LC	C

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Perciformes	Uranoscopidae	*Uranoscopus cognatus*	Two Spined Yellowtail Stargazer	Sagor Baila	NE	R
	Eleotridae	*Butis butis*	Duckbill Sleeper	Baila	LC	C
		Butis humeralis	Black Spot Sleeper Goby	Kalo Baila	NE	NC
		Eleotris fusca	Dusky Sleeper	Bele, Nuna Baila, Pora Baila, Baila	LC	C
	Gobiidae	*Boleophthalmus boddarti*	Mudskipper	Dahuk, Chiring, Meni Mach	LC	C
		Glossogobius giuris	Tank Goby	Goby	LC	C
		Odontamblyopus rubicundus	Rubicundus Eelgoby	Lal Chewa	NE	C
		Pseudapocryptes elongatus	Pointed-tailed Goby	Chiring, Chewa	LC	C
		Scartelaos histophorus	Walking Goby	Chiring, Darak	NE	C
		Stigmatogobius sadanundio	Knight Goby	Potpoti Baila	NE	NC
		Trypauchen vagina	Burrowing Goby	Sada Chewa	NE	C
	Callionymidae	*Callionymus sagitta*	Arrow Dragonet	Baila	NE	R
	Ephippidae	*Ephippus orbis*	Spadefish	Kodal Mach	NE	R
	Ambassidae	*Parambassis ranga*	Glassy Fish	Chanda, Ranga Chanda	LC	R
	Scatophagidae	*Scatophagus argus*	Spotted Scat, Spotted Butterfish	Bishtara	LC	C
	Siganidae	*Siganus canaliculatus*	White-spotted Spinefoot	Unknown	LC	R
	Sphyraenidae	*Sphyraena chrysotaenia*	Yellowstripe Barracud	Dharkuta	NE	NC
		Sphyraena jello	Banded or Indian Barracuda	Dharkuta	NE	NC
	Trichiuridae	*Eupleurogrammus muticus*	Ribbon Fish	Boro Churi	NE	C
		Lepturacanthus savala	Ribbon Fish	Choto Churi	NE	C
	Scombridae	*Euthynnus affinis*	Mackerel Tuna	Kawa, Maitta	LC	C
		Rastrelliger faughni	Island Mackerel	Kawa, Maitta	DD	NC
		Rastrelliger kanagurta	Indian Mackerel	Kawa, Maitta	LC	C
		Scomberomorus commerson	Barred Mackerel	Champa, Maitta	NT	C
		Scomberomorus guttatus	Indo-pacific King Mackerel	Champa, Maitta	DD	C
	Stromateidae	*Pampus argenteus*	Silver Pomfret	Fali Chanda	NE	C
		Pampus chinensis	Chinese Pomfret	Rup Chanda	NE	C
	Latidae	*Lates calcarifer*	Barramundi	Bhetki, Koral	NE	C

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Pleuronecti formes	Soleidae	*Pseudorhombus javanicus*	Javanese Flounder	Chepta Mach	NE	C
		Dagetichthys commersonnii	Commerson`s Sole	Chepta Mach, Serboti	NE	C
		Brachirus orientalis	Oriental Sole	Kola pata	NE	NC
	Cynoglossidae	*Cynoglossus arel*	Largescale Tonguesole	Kukur Jeeb	NE	C
Tetraodonti formes	Triacanthodidae	*Triacanthus biaculeatus*	Short-nosed Tripod Fish	Sukura	NE	R
	Ostraciidae	*Ostracion cubicus*	Yellow Box Fish	Baksha Mach	NE	R
	Tetraodontidae	*Chelonodontops patoca*	Gangetic Pufferfish	Potka	LC	NC
		Diodon hystrix	Spoted Porcupine Fish	Sojaru Potka	LC	R
		Dichotomyctere fluviatilis	Green Pufferfish	Potka	LC	NC
		Lagocephalus guentheri	Diamond-back Puffer	Potka	LC	R
		Lagocephalus lunaris	Green Pufferfish	Potka	LC	C
		Takifugu oblongus	Lattice Blaasop	Dora Potka	LC	R
Batrachoidi formes	Batrachoididae	*Allenbatrachus grunniens*	Grunting Toadfish	Dudhraj, Gongonia	NE	NC

2. Molluscs

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Architaenio glossa	Viviparidae	*Idiopoma dissimilis*	Pond Snail	Guli Shamuk	LC	C
	Ampullariidae	*Pila globossa*	Common Apple Snail	Shamuk, Bara Shamuk	LC	C
		Pila scutata	Apple Snail	Shamuk	LC	NC
Caenogast ropoda	Potamididae	*Cerithidea obtusa*	Obtuse Horn Snail	Motra Leza	NE	C
		Pirenella alata	Gridled Alata Shell	Jhumjhumi Shamuk	NE	C
		Pirenella cingulata	Cerithid Snail	Motra Leza	NE	C
		Telescopium telescopium	Telescope Snail	Jongra Shamuk, Lomba Leza	LC	C
Littorinimorpha	Ficidae	*Ficus gracilis*	Graceful Fig Shell	Chamus Shamuk	NE	C
	Burisidae	*Bufonaria echinata*	Spiny Frog Shell	Bang Kata Shamuk	NE	C
		Bufonaria rana	Frog Shell	Bang Shamuk	NE	C
Neogastropoda	Babyloniidae	*Babylonia japonica*	Japanese Babylon	Ful Kori	NE	C
Cycloner itimorpha	Neritidae	*Mammilla melanostoma*	Black - mouth Moon Snail, Sand Snail	Kala Pat Shamuk	NE	R
		Nerita balteata	Lined or Lineate Nerite	Kalaphat Hock	LC	C
		Neritina smithi	Cherry Snail	Daga Shamuk	LC	DD

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Ptellogastropoda	Lottiidae	*Potamacmaea ouviatilis*	True Limpet	Unknown	NE	DD
Neogastropoda	Melongenidae	*Volegalea cochlidium*	Spiral Melongena	Lal Kata Shamuk	NE	C
	Muricidae	*Semiricinula tissoti*	Tissot`s Rock shell	Choto Shamuk	NE	C
	Clavatulidae	*Turricula javana*	Java Turrid, Java Turris	Kangaroo Shamuk	NE	R
Stylomma tophora	Achatinidae	*Achatina fulica*	Giant African Land Snail	Mati Shamuk	NE	C
[unassigned] infraclass: Pulmonata)	Ellobiidae	*Cassidula* sp.	Judas Ear Cassidula	Deto Shamuk	LC	C
Pulmonata		*Ellobium gangeticum*	Maesh Snail	Lomba Shamuk	NE	C
[unassigned]		*Pythia plicata*	Pythia Ear Snail	Ghaso Shamuk	NE	C
Systellom matophora	Onchidiidae	*Onchidium tenerum*	Mangrove Slug	Chatt	NE	C
Adapedonta	Solenidae	*Solen vagina*	Brief Jackknife Clam	Nokh Chilon, Lomba Chilon	NE	C
Venerida	Verenidae	*Meretrix meretrix*	Asiatic Hard Clam	Jat Jhinuk or Chilon Zhinuk	NE	C
Cardiida	Donacidae	*Donax carinatus*	Donax	Nokh Chilon	NE	C
Arcoida	Arcidae	*Tegillarca granosa*	Granular Ark Shell	Padma Jhinuk or Daitta chilon	NE	C
Cardiida	Tellinidae	*Apolymetis edentula*	Saddle Grooved Macoma	Patla Chilon	NE	C
Myopsida	Loliginidae	*Uroteuthis duvaucelii*	Indian Squid	Nuilla	NE	C
Octopoda	Octophodidae	*Amphioctopus fangsiao*	Webfoot Octopus	Octopus	NE	C
Sepiida	Sepiidae	*Sepia aculeata*	Needle Cuttlefish	Nuna, Firki, Lagra, Douat-kolom	DD	C

3. Crabs

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Decapoda	Portunidae	*Charybdis affinis*	Smooth Shelled Swimming Crab	Shataru Kankra	NE	C
		Charybdis feriata	Crucifix Crab, Coral Crab	Shataru Kankra	NE	NC
		Charybdis hellerii	Pacific Swimming Crab	Shataru Kankra	NE	NC
		Portunus pelagicus	Flower Crab	Shataru Kankra	NE	C
		Portunus sanguinolentus	Three-spot Swimming Crab	Tin Fota Kankra	NE	C
		Scylla olivacea	Mud Crab, Mangrove Crab, Olive Mud Crab	Bara Kankra, Jati Kankra, Shila Kankra, Maita Kankra	NE	C

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Decapoda	Portunidae	*Scylla serrata*	Giant Mud Crab, Mangrove Crab, Serrated Swimming Crab, SriLanka Crab	Hubba Kankra, Bara Kankra, Shila Kankra, and Nona Kankra	NE	C
	Matutidae	*Matuta planipes*	Flower Moon Crab	Lajjavati Kankra	NE	C
	Calappidae	*Calappa lophos*	Common Box Crab	Banksho Kankra	NE	NC
	Potamidae	*Labothelphusa woodmasoni*	Freshwater Crab	Kankra, Kata Kakra	NE	C
	Ocypodidae	*Gelasimus vocans*	Orange Fiddler Crab, Field Crab, Mangrove Crab	Komla Kakra	NE	C
		Ocypode ceratophthalma	Horned Ghost Crab, Hornedeyed Ghost Crab	Lal Kankra	NE	C
		Ocypode macrocera	Ghost Crab	Kankra	NE	C
		Tubuca dussumieri	Field Crab, Mangrove Crab	Kankra	NE	C
		Tubuca rosea	Rosy Fiddler Crab, Mangrove Crab	Lalpa Kakra	NE	C
	Sesarmidae	*Episesarma mederi*	Thai Vinegar Crab	Kokrol, Kakra	NE	NC
		Episesarma versicolor	Violet Vinegar Crab	Kankra	NE	NC
	Varunidae	*Varuna litterata*	Oceanic Paddler Crabs	Gulli Kankra, Chiti Kankra	NE	C
	Limulidae	*Carcinoscorpius rotundicauda*	Mangrove Horseshoe Crabs	Sagor Kakra, Shakul Kakra	DD	NC
	Paguridae	*Pagurus bernhardus*	Bernard's Hermit Crab, Soldier Crab	Shamuk Kakra	NE	C

4. Shrimps and Prawns

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Decapoda	Penaeidae	*Ganjampenaeopsis uncta*	Uncta Shrimp	Tiga Chingri	NE	C
		Metapenaeus affinis	Jinga Shrimp	Honye Chingri, Karaney Chingri	NE	C
		Metapenaeus brevicornis	Yellow shrimp	Nona Chingri, Kucho Chingri	NE	C
		Metapenaeus dobsoni	Kadal Shrimp	Horina Chingri, Ghora Chingri	NE	C
		Metapenaeus monoceros	Speckled Shrimp	Loilla, Kucho Chingri	NE	C
		Metapenaeus tenuipes	Strok Shrimp	Chamma Chingri, Loilla Chingri	NE	C
		Parapenaeopsis coromandelica	Coromandel Shrimp	Godda Chingri	NE	C

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Decapoda	Penaeidae	*Parapenaeopsis hardwickii*	Spear Shrimp	Godda Chingri	NE	NC
		Parapenaeopsis sculptilis	Rainbow shrimp	Tiga Chingri	NE	C
		Penaeus indicus	Indian white shrimp	Chaka Chingri, Chaga Chingri	NE	C
		Penaeus monodon	Black tiger shrimp, Giant tiger prawn, Jumbo tiger prawn	Bagda Chingri	NE	C
	Solenoceridae	*Solenocera crassicornis*	Costal Mud Shrimp	Ghora Chingri	NE	NC
		Solenocera melantho	Razor Mud Shrimp	Ghora Chingri	NE	NC
	Palaemonidae	*Exopalaemon styliferus*	Roshma Prawn	Gara Icha, Gura Chingri	NE	C
		Macrobrachium lamarrei lamarrei	Kuncho River Prawn	Kucho Chingri, Gura Icha	NE	C
		Macrobrachiurn rosenbergii	Giant river prawn, Giant freshwater prawn, Giant malaysian prawn	Golda Chingri	NE	C
	Alpheidae	*Alpheus euphrosyne*	Green Snapping Shrimp	Chingri Pok	NE	C
Stomatopoda	Squilloidea	*Oratosquilla perpensa*	Mantis Shrimp	Chingri Pok	NE	C

5. Insects

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status
Odonata	Libellulidae	*Brachythemis contaminata*	Ditch Jewel	Unknown	LC
		Crocothemis servilia	Scarlet Skimmer		LC
		Diplacodes trivialis	Blue Ground Skimmer		LC
		Trithemis pallidinervis	Long-legged Marsh Glider		LC
	Coenagrionidae	*Pseudagrion microcephalum*	Blue Riverdamsel		LC
	Gomphidae	*Gomphus vulgatissimus*	Clubtail		LC
Hemiptera	Gerridae	*Gerris* sp.	Water Striders		LC

6. Cnidarias

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status	Local Status
Rhizostomeae	Catostylidae	*Acromitus* sp.	Mangrove Jellyfish	Jelly Mach	NE	C
		Catostylus sp.	Jelly Blubber	Jelly Mach	NE	NC

7. Amphibians

Order	Family	Scientific Name	English Name	Local name	Global IUCN Status
Anura	Dicroglossidae	*Fejervarya cancrivora*	Asian Brackish Frog, Crab-eating Frog	Kakra vuk Bang	LC
		Hoplobatrachus tigerinus	Indian Bullfrog, Bull Frog, Golden Frog	Sona Bang	LC
		Euphlyctis hexadactylus	Indian Green Frog	Shobuj Bang	LC
	Bufonidae	*Duttaphrynus melanostictus*	Asian Common Toad, Asian Toad	Kuno Bang	LC

8. Reptiles

Order	Family	Scientific Name	English Name	Local name	Global IUCN Status
Testudines	Geoemydidae	*Batagur baska*	Northern River Terrapin	Batagur	CR
	Cheloniidae	*Lepidochelys olivacea*	Olive Ridley, Pacific Ridley	Kocchop	VU
Crocodylia	Crocodylidae	*Crocodylus porosus*	Salt-water Crocodile, Estuarine Crocodile	Nona Panir Kumir	LC
Squamata	Homalopsidae	*Cerberus rynchops*	Dog-faced Water Snake	Jolbora Shap	LC

9. Mammals

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status
Cetacea	Platanistidae	*Platanista gangetica*	Ganges river dolphin	Shushuk, Shushu, Hush	EN

10. Aquatic and Semi-aquatic Bird

Order	Family	Scientific Name	English Name	Local Name	Global IUCN Status
Coraciiformes	Alcedinidae	*Halcyon coromanda*	Ruddy Kingfisher	Lal Machranga	LC
		Todiramphus chloris	Collared Kingfisher	Unknown	LC
Charadriiformes	Scolopacidae	*Actitis hypoleucos*	Common Sandpiper	Cha Pakhi	LC
		Tringa glareola	Wood Sandpiper	Unknown	NT
		Numenius arquata	Eurasian Curlew	Boro Gulinda	LC
	Laridae	*Chroicocephalus brunnicephalus*	Brown-Headed Gull	Khoira-matha Gangchil	LC
Ciconiiformes	Ciconiidae	*Leptoptilos javanicus*	Lesser Adjutant	Modontak	VU
Pelecaniformes	Ardeidae	*Egretta garzetta*	Little Egret	Sada Bog, Choto Boga	LC

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Chelonodontops bengalensis **Habib, Neogi, Oh, Lee & Kim, 2018**

Class	**Actinopterygii**
Order	**Tetraodontiformes**
Family	**Tetraodontidae**

D_1 12; D_2 absent; P_1 19; A 10; C 10 Color of dorsal fin edge black, color yellowish; fleshy. Pectoral fin transparent with slightly pinkish tinge; anal fin transparent with pinkish edge; dorsal and upper half of lateral sides of the body with spiral shaped whitish spots with greenish tinge; ventral side of the body whitish. Body oblong; dorsal profile moderately convex and snout blunt; interorbital space broad and convex; fleshy lips with papillae; two tooth plates in jaws, teeth fused together into a beak-like structure; nasal organ easily visible without magnification; dorsal surface of posterior eyes more or less smooth. Nasal organ close before superior half of eye, forms a depression with a slightly raised margin; Nasal organ not covered by a small sac with two nostrils; spinules on whole sides of body but not on the caudal peduncle; gill opening not reaching below lower ray of pectoral fin base; lateral line inconspicuous; two lateral lines, the upper joining the lower in the region above or behind the anal fin, expanded before and behind into a pair elongated flaps. Caudal fin truncate slightly rounded.

Remarks A new species to science. Rarely found in the Sundarbans marine areas No food value.

DNA Barcode GenBank Accession No. MH119087, MH102413, MH102414

New species to science

Aquatic Biodiversity of Sundarbans, Bangladesh

Second Edition