



JOMOTSANGKHA WILDLIFE SANCTUARY
DEPARTMENT OF FORESTS AND PARK SERVICES
MINISTRY OF AGRICULTURE AND FORESTS
ROYAL GOVERNMENT OF BHUTAN

A Pictorial Record of FISHES Jomotsangkha Wildlife Sanctuary

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FOREWORD

It gives me immense pleasure to introduce this publication "A Pictorial Record of FISHES of Jomotsangkha Wildlife Sanctuary". A total of 79 species of fishes have been recorded in the Sanctuary from 2018 till date. It is important to assess and document biodiversity of the Sanctuary in order to take suitable management intervention.

This is the first pictorial record of fishes found in the Sanctuary which will serve as a useful document for the staff and other stakeholders. It is my sincere hope that this will encourage the field staff to assess and record more species in future.

I am extremely glad to note that the Sanctuary is launching this book on the important occasion of World Rangers Day 2020. It is an opportunity to commemorate the hard work performed by frontline staff to protect rich biodiversity of our country. I take this opportunity to express my sincere appreciation to author and staff for your effort to come up with this document.

B

Lobzang Dorji DIRECTOR Department of Forests and Park Services



INTRODUCTION

Scientific works on fish in Bhutan dates back to 1838 when Griffith collected the first fish specimen followed by Beavan (1877), Day (1889), Petre (1999), Bhattarai and Thinley (2005), Tenzin (2006), Dorji & Wangchuk (2014), and Gurung & Thoni (2015). Twelve perennial water bodies flow through Jomotsangkha Wildlife Sanctuary to the Indian state of Assam. These rivers and streams are expected to host diverse species of fish as they flow through different altitudinal, ecological and geological formations.

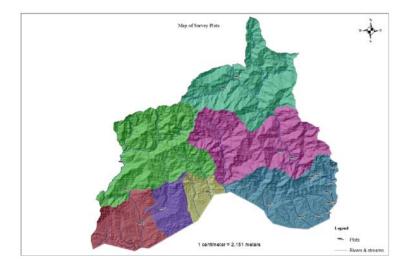
In the recent years, few extensive surveys of fishes were conducted by the College of Natural Resourses, Lobesa and National Research Centre for Riverine & Lake Fisheries, Haa from 2017 till 2020 along the major river systems in the Sanctuary. Office of Jomotsangkha Wildlife Sanctuary (JWS) had also conducted surveys in two major rivers i.e., Nyera amachhu and Jomochhu including other six perennial streams. This book is the product of cumulative efforts of different institutions and individuals who tried to explore the fish diversity over the years.

This pictorial book contains 79 species of fish from JWS out of 109 fish species recorded in the country (Gurung et al., 2015). They belong to 17 families and 42 genera. Cyprinidae is the largest family with 20 genera and 38 species while Anguillidae, Bagridae, Balitoridae, Belonidae, Erethistidae and Olyridae are represented by single species. As we intensify our survey over the years, more species are expected to add to the present list.



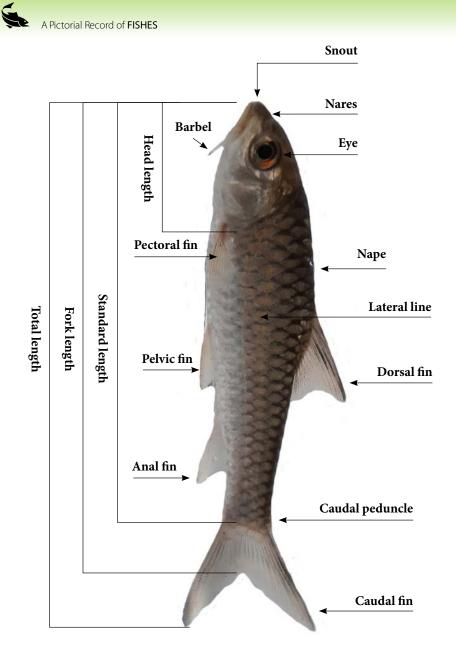
METHODOLOGY

To explore the ichthyofaunal diversity, samplings were conducted from all the rivers and streams in different seasons in the Sanctuary. Random and opportunistic surveys were done to get species counts from all the rivers and streams. Samples were collected from different habitats like pools, riffles, runs and rapids. The entire samplings were done in an altitudinal range of 160 m in Nyera amachhu to 1680 m in Lauri of Taktsang stream. GPS coordinates and altitudes were recorded for all the sampling points (Map of survey plots).



Active gears like cast net of different mesh size and permitted electric shockers were used for sampling. Fish photographs were taken immediately after the capture using photarium to obtain true color. Catch and released methods were adopted during the surveys and only single specimen for each species is now preserved in 70% Ethanol for future reference at JWS office.







Family: Amblycipitidae



Scientific Name: Amblyceps apangi (Nath & Dey, 1989)

Common Name: Catfish, loolee.

Conservation Status: Least Concern (IUCN).

Family: Anguillidae



Scientific Name: *Anguilla bengalensis* (Gray, 1831) Common Name: Freshwater eel, Indian mottled eel. Conservation Status: Near Threatened (IUCN).

Family: Badidae



Scientific Name: *Badis badis* (Hamilton, 1822) Common Name: Badis, lati macha, phakpa nga. Conservation Status: Least Concern (IUCN).



Family: Bagridae

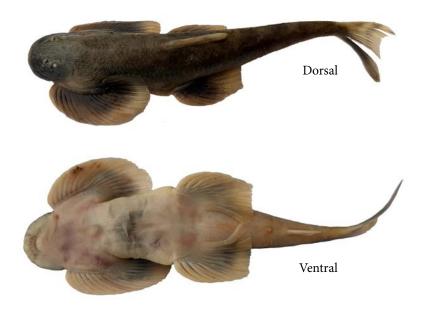


Scientific Name: Batasio fasciolatus (Ng, 2006)

Common Name: Chilne macha.

Conservation Status: Least Concern (IUCN).

Family: Balitoridae



Scientific Name: Balitora brucei (Gray, 1830)

Common Name: Gray's stone loach, tite buduna, bathbala nga.

Conservation Status: Near Threatened (IUCN).



Family: Belonidae



Scientific Name: *Xenentodon cancila* (Hamilton, 1822) Common Name: Freshwater garfish, kakila, kauwa. Conservation Status: Least Concern (IUCN).

Family: Botiidae



Scientific Name: Botia almorhae (Gray, 1831)

Common Name: Almorha loach, tiger loach, khachi nga.

Conservation Status: Least Concern (IUCN).



Scientific Name: *Botia rostrata* (Hamilton, 1822)

Common Name: Bengal loach, rani macha, khachi nga.



Family: Channidae



Scientific Name: Channa gachua (Hamilton, 1822) Common Name: Gachua, hille, Boloktang nga. Conservation Status: Least Concern (IUCN).



Scientific Name: Channa punctatus (Bloch, 1793) Common Name: Spotted snakehead, hille, Boloktang nga.

Conservation Status: Least Concern (IUCN).



Scientific Name: Channa stewartii (Playfair, 1867)

Common Name: Assamese snakehead, hille, Boloktang nga.



Family: Cobitidae



Scientific Name: Lepidocephalichthys guntea (Hamilton, 1822)

Common Name: Guntea loach.

Conservation Status: Least Concern (IUCN).



Scientific Name: *Lepidocephalichthys* sp. Note: Chukarpo a tributary of Dansari River.

Family: Cyprinidae



Scientific Name: *Bangana dero* (Hamilton, 1822) Common Name: Kalabans, gurdi, river rohu, Mong nga.





Scientific Name: *Barilius bendelisis* (Hamilton, 1807) Common Name: Baril, Hamilton's barila, fageta. Conservation Status: Least Concern (IUCN).



Scientific Name: *Barilius vagra* (Hamilton, 1822) Common Name: Vagra baril, lam fageta. Conservation Status: Least Concern (IUCN).



Scientific Name: Cirrhinus cirrhosus (Bloch, 1795)

Common Name: Mrigal carp.

Conservation Status: Vulnerable (IUCN).

Note: Introduced in aquaculture at Jomotsangkha & Samdrupcholing.





Scientific Name: *Crossocheilus latius* (Hamilton, 1822) Common Name: Gangetic latia, mirror carp, lohari. Conservation Status: Least Concern (IUCN).



Scientific Name: Ctenopharyngodon idella (Valenciennes, 1844)

Common Name: Grass carp, ghanse macha. Conservation Status: Not Evaluated (IUCN).

Note: Introduced in aquaculture at Jomotsangkha & Samdrupcholing.



Scientific Name: Cyprinion semiplotum (McClelland, 1839)

Common Name: Assamese kingfish, chepti. Conservation Status: Vulnerable (IUCN).





Scientific Name: Cyprinus carpio (Linnaeus, 1758)

Common Name: Common carp, hangri.

Conservation Status: Critically Endangered (IUCN).

Note: Introduced in aquaculture at Jomotsangkha & Samdrupcholing.



Scientific Name: *Danio dangila* (Hamilton, 1822) Common Name: Dangila danio, butte bhitti, sermin nga.

Conservation Status: Least Concern (IUCN).



Scientific Name: Danio rerio (Hamilton, 1822)

Common Name: Zebra danio, striped danio, Sermin nga.





Scientific Name: Devario aequipinnatus (McClelland, 1839)

Common Name: G iant danio, bhitte, chitaripothi. Conservation Status: Least Concern (IUCN).



Scientific Name: Devario assamensis (Barman, 1984)

Common Name: Assami devaario.

Conservation Status: Vulnerable (IUCN).



Scientific Name: Garra annandalei (Hora, 1921)

Common Name: Stone roller, chuche buduna, tsabrokmu.





Scientific Name: Garra arupi (Nebeshwar, Vishwanath & Das, 2009)

Common Name: Stone sucker, Buduna, bobenang. Conservation Status: Data Deficient (IUCN).



Scientific Name: Garra birostris (Nebeshwar & Vishwanath, 2015)

Common Name: Stone sucker, Buduna, bobenang. Conservation Status: Data Deficient (IUCN).



Scientific Name: Garra gotyla (Gray, 1830)

Common Name: Stone roller, sucker head, buduna, bobenang.





Scientific Name: *Garra lissorhynchus* (McClelland, 1842) Common Name: Buduna, khasi garra, bobenang.

Conservation Status: Least Concern (IUCN).



Scientific Name: Garra quandratritostris (Nebeshwar & Vishwanath, 2013)

Common Name: Stone sucker, buduna, bobenang. Conservation Status: Least Concern (IUCN).



Scientific Name: Gibelion catla (Hamilton, 1822)

Common Name: Catla, chepti.

Conservation Status: Least Concern (IUCN).

Note: Introduced and popular in aquaculture at Jomotsangkha and

Samdrupcholing.





Scientific Name: Hypophthalmichthys molitrix (Valenciennes, 1844)

Common Name: Silver carp.

Conservation Status: Near Threatened (IUCN).

Note: Introduced in aquaculture at Jomotsangkha and Samdrupcholing.



Scientific Name: Labeo dyocheilus (McClelland, 1839)

Common Name: Kali, gardee, thend, bji nga. Conservation Status: Least Concern (IUCN).



Scientific Name: Labeo pangusia (Hamilton, 1822)

Common Name: Gardee, bji nga.

Conservation Status: Near Threatened (IUCN).





Scientific Name: Labeo rohita (Hamilton, 1822)

Common Name: Roho labeo, ruee.

Conservation Status: Least Concern (IUCN).

Note: Introduced in aquaculture at Jomotsangkha & Samdrupcholing.



Scientific Name: Neolissochilus hexagonolepis (McClelland, 1839) Common Name: Copper/chocolate mashseer, Katlae, katli, khey nga.

 $Conservation \, Status: \, Near \, Threatened \, (IUCN).$



Scientific Name: *Opsarius barna* (Hamilton, 1822) Common Name: Barna baril, titer kane faketa. Conservation Status: Least Concern (IUCN).





Scientific Name: *Pethia conchonius* (Hamilton, 1822) Common Name: Rosy barb, red barb, sidre pothi. Conservation Status: Least Concern (IUCN).



Scientific Name: *Schizothorax progastus* (McClelland, 1839) Common Name: Dinnawah snowtrout, chuche asala. Conservation Status: Least Concern (IUCN).



Scientific Name: *Schizothorax richardsonii* (Gray, 1832) Common Name: Snowtrout, yul nya, dhumke asala.

Conservation Status: Vulnerable (IUCN).





Scientific Name: Tor putitora (Hamilton, 1822)

Common Name: Putitor Mahseer, golden mahseer, mahseer, sokhorom.

Conservation Status: ENDANGERED (IUCN).

Family: Erethitidae



Scientific Name: Pseudolaguvia shawi (Hora, 1921)

Common Name: Shawi stone catfish.

Conservation Status: Least Concerned (IUCN).

Family: Mastacembelidae



Scientific Name: *Mastacembelus armatus* (Lacepède, 1800) Common Name: Zig-zag eel, spiny eel, chusi baam, baam nga.



Family: Nemacheilidae



Scientific Name: Aborichthys boutanensis (McClelland & Griffit, 1842)

Common Name: Gadera, gardulay, gongdong nga. Conservation Status: Least Concern (IUCN).



Scientific Name: Aborichthys elongatus (Hora, 1921)

Common Name: Gadera, gongdong nga. Conservation Status: Least Concern (IUCN).



Scientific Name: Aborichthys sp.

Common Name: Gadera, gongdong nga. Note: Thekari a tributary of Jomochhu.



Family: Nemacheilidae



Scientific Name: *Acanthocobitis botia* (Hamilton, 1822) Common Name: Striped loach, mottled loach. Conservation Status: Least Concern (IUCN).



Scientific Name: Schistura cf. beavani (Günther, 1868)

Common Name: Gadera, creek loach.

Conservation Status: Least Concern (IUCN).



Scientific Name: Schistura devdevi (Hora, 1935)

Common Name: Gadera.

Conservation Status: Near Threatened (IUCN).



Family: Nemacheilidae



Scientific Name: Schistura reticulofasciata (Singh & Bănărescu, 1982)

Common Name: Gadera.

Conservation Status: Vulnerable (IUCN).



Scientific Name: *Olyra longicaudata* (McClelland, 1822) Common Name: Himalayan olyra, shingdering nga. Conservation Status: Least Concern (IUCN).

Family: Psilorynchidae



Scientific Name: *Psilorhynchus balitora* (Hamilton, 1822) Common Name: Balitora minnow, tite buduna, yong nga.



Family: Siluridae



Scientific Name: Pterocryptis cf. barakensis (Vishwanath & Nebeshwar

Sharma, 2006)

Common Name: Kallo hallunre, laysi nga. Conservation Status: Endangered (IUCN).



Scientific Name: Pterocryptis gangelica (Peters, 1861)

Common Name: Hallunre, laysi nga.

Conservation Status: Data Deficient (IUCN).

Family: Sisoridae

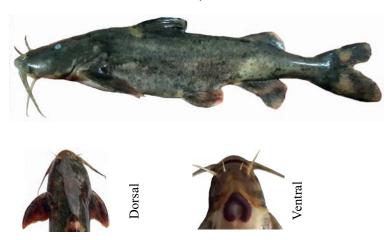


Scientific Name: *Bagarius bagarius* (Hamilton, 1822) Common Name: Fresh water shark, Goonch, dhon nga.

Conservation Status: Near Threatened (IUCN).



Family: Sisoridae



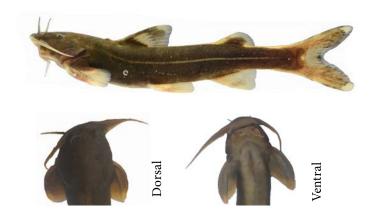
Scientific Name: *Glyptothorax cavia* (Hamilton, 1822) Common Name: Catfish, vendro, yongkatang nga. Conservation Status: Least Concern (IUCN).



Scientific Name: *Glyptothorax striatus* (McClelland, 1842) Common Name: Catfish, Jantaray, ktrechingma nga. Conservation Status: Near Threatened (IUCN).



Family: Sisoridae



Scientific Name: *Glyptothorax trilineatus* (Blyth, 1860) Common Name: Three-lined catfish, kabre, ktrechingma nga. Conservation Status: Least Concern (IUCN).



Scientific Name: *Glyptothorax* sp Common Name: ktrechingma nga



Family: Sisoridae



Scientific Name: Parachiloglanis hodgarti (Hora, 1923)

Common Name: Torrent catfish, batbala nga. Conservation Status: Least Concern (IUCN).





Scientific Name: *Pseudecheneis sulcata* (McClelland, 1842) Common Name: Sucker throat catfish, kabre, ktrechingma nga.



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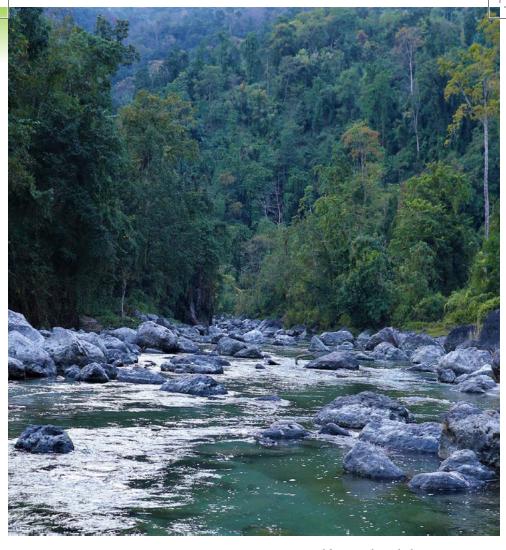
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A Golden Masheer habitat



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