



NATIVE FISH SPECIES OF BEGNAS AND RUPA LAKES

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Authors

Md. Akbal Husen and Lakpa Sherpa

E-mail

akbalhusen@yahoo.com

lakpa.sherpa@libird.org

Photos

Md. Akbal Husen

Design and Layout

Hem G.C., LI-BIRD

OVERVIEW

Nepal is rich in fish biodiversity. It occupies only 0.1 percent of global land area whereas native fish covers 2.6 percent and 23.3 percent of world and Indian sub-continent of freshwater fish respectively. Total of 230 native fish species belonging to 104 genera, 34 family and 11 order are found in Nepal (Rajbanshi 2012). Total nineteen native fish species belonging to five order and five families were collected from Begnas and Rupa lakes, among which 17 and 16 native fish species were recorded from Begnas and Rupa respectively with four exotic fish species (Pokharel, 1999). At present six exotic fish species have been recorded in the catches of Begnas and Rupa lakes. Trophic status of Begnas Lake fluctuates between oligo-mesotrophic, and Rupa lake is in eutrophic condition (FRS, 2016).

Begnas and Rupa lakes are famous for their beautiful scenery, both the lakes provide various services such as fishery, irrigation, drinking water, bathing and re-creation. Fishing is the main occupation of fishery communities living around these lakes. Approximately 40 *Jalari* families are living around Begnas lakes. The major types of fishing gears used by *Jalari*s are gillnets, cast nets and fishing hooks in these lakes. Total catch of fish from Begnas and Rupa lakes are 15 metric ton and 30 metric ton in 2016 respectively. Capture fishery of these lakes comprises of both native and exotic. The native fish contributions in total fish production are only 22 percent and 19 percent from Begnas and Rupa lakes respectively in 2016. Recently, Nile tilapia contributions to total fish catch has increased in Begnas and Rupa lakes (FRS 2016).

This catalogue provides the information of 21 native fish species of Begnas and Rupa Lake.

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A. Family : Cyprinidae



Scientific Name	<i>Tor putitora</i> (Hamilton-Buchanan)
Common Name	Putitor Mahseer, Golden Mahseer
Local Name	Pahale Sahar, Mahseer
Identifying Characteristics	The body is semi round. Head length is greater than height of body and snout is long and pointed. The general body colour in the above portion is silvery green to olive green, belly is silvery white and pinkish on sides. Scales are golden with dark bases. Fins are yellowish. In the breeding seasons, the males are much brighter golden than the females. It has two pairs of barbels. It is noted for its large nine pre-dorsal scales which is not possessed by any other fishes
Breeding Season	September to October and February to March (Captive)
Habits and habitat	Inhabit in streams, riverine pools and lakes. It is found in rapid streams with rocky bottom.
Food and feeding	It is omnivorous, feeding on fish, zooplankton, dipteran larvae and plant matter.
Distribution	Asia: Nepal, Afghanistan, Pakistan, India, Bangladesh, Bhutan and Myanmar.
Conservation Status a. Local b. National	Rare Endangered
Remarks	It is domesticated and its breeding and nursing technology is developed in Nepal. It is one of the largest species of the Cyprinidae family. It attains 80 kg in weight and 1.5m in length. It is a game fish. It is popular in the Pokhara valley for its taste and fetches highest prices in the market.



Scientific Name	<i>Tor tor</i> (Hamilton- Buchanan)
Common Name	Tor Mahseer, Deep Bodied Mahseer
Local Name	Falame Sahar
Identifying Characteristics	Body is deep and dorsal side more convex. Lower part of its body is flattened and fleshy mouth with four barbels. Head is shorter than height of the body. General body colour is dark grey with greenish tinge along upper half of body and sides are slightly golden. Its abdomen is silvery white with golden colour. Generally lower fins are reddish yellow and dorsal fins slightly dark.
Breeding Season	June to September
Habits and habitat	Inhabit in streams, riverine pools and lakes. It is found in rapid streams with rocky bottom.
Food and feeding	It is omnivorous, feeding on fish, zooplankton, dipteran larvae and plant matter.
Distribution	Asia: Nepal, Afghanistan, Pakistan, India, Bangladesh, Bhutan and Myanmar.
Conservation Status	
a. Local	Endangered
b. National	Endangered
Remarks	It is domesticated and breeding success in Nepal. It is an important migratory game fish of Nepal. It can attain up to 78 kg. It is preferred by local consumers.



Scientific Name	<i>Neolissochilus hexagonolepis</i> (McClelland)
Common Name	Copper Mahseer
Local Name	Katlae, Vadalke
Identifying Characteristics	It is deep copper coloured fish. Its head is as long as height of the body. The body is olive green dorsally and with splashes of golden on sides. Half portion of the body is golden whereas the other half is white. There is a yellow band just above the lateral line. Fins are slate grey, faint towards the margin. It is popularly known as tackle burster (<i>Jal Katne Machho</i>).
Breeding Season	April to September
Habits and habitat	Inhibits in fast flowing streams and rivers with rocky bottom, mainly in the middle of streams.
Food and feeding	It is omnivorous, bottom feeder. Adults feed mainly on filamentous green algae, lesser on chironomid larvae, crustaceans and water beetles.
Distribution	Asia: Nepal, India, Bangladesh, Myanmar, Thailand, Malaysia, Indonesia and China. Also found in Bhutan, Pakistan and Viet Nam.
Conservation Status	
a. Local	Endangered
b. National	Vulnerable
Remarks	It is domesticated and breeding success in Nepal. It is a colourful game fish of Nepal. Flesh is considered delicious and market demand is great. It is preferred by local consumers.





Scientific Name	<i>Catla catla</i> (Hamilton-Buchanan)
Common Name	Catla
Local Name	Bhakur
Identifying Characteristics	It is a large, silvery fish with massive head, thick lips and very large scales. Its body is laterally compressed. It has wide upturned mouth with a protruding lower jaw. It has dark grey scales on the back, silvery on sides and abdomen. Scales except those of belly are pink or coppery. Fins are much darker than body. Barbels are absent and lips are non-fringed.
Breeding Season	June to August
Habits and habitat	It is frequently found in deeper parts of rivers as well as lakes, reservoirs and ponds.
Food and feeding	It is surface and zooplankton feeder.
Distribution	Nepal, Pakistan, India, Bangladesh, and Myanmar.
Status	Common
Remarks	It can attain up to 70 kg and measures 150 cm. It is cultured in carp polyculture system in Nepal. It is fast growing species in pond aquaculture, well established in aquaculture.





Scientific Name	<i>Labeo rohita</i> (Hamilton-Buchanan)
Common Name	Rohu
Local Name	Rohu
Identifying Characteristics	It has elongated and cylindrical body. The body colour is bluish or brownish along the back becoming silvery on the sides and abdomen. Occasionally there is red mark on each scale, in some specimens the fins are black. Eyes are reddish. It has thick fringed lips. A small pair of maxillary barbels is present.
Breeding Season	June to August
Habits and habitat	Inhabit deeper parts of river, lakes and ponds.
Food and feeding	It is herbivorous, bottom and column feeder. It feeds on larger planktons, decaying vegetation, planktonic and filamentous algae. periphyton.
Distribution	Nepal, Pakistan, India, Bangladesh and Myanmar.
Status	Common
Remarks	It is a tasty fish among cultivated carps in Nepal. It is cultured in carp polyculture system in pond, well established in aquaculture.





Scientific Name	<i>Labeo dero</i> (McClelland)
Common Name	River Rohu, Kalabans
Local Name	Gardi
Identifying Characteristics	A stout round bodied fish, with a broad head and shoulder. It is dark grey fish with bluish black above, silvery sides and reddish fins. Scales are darker in colour. There is groove across its snout. A pair of short maxillary barbels are present. Its body is fully scaled.
Breeding Season	May to June
Habits and habitat	It lives in rivers of moderate currents of the middle reaches and lakes. Adults inhabit torrential hill streams in shallow waters.
Food and feeding	It is herbivorous, bottom and column feeder. It feeds on larger planktons, decaying vegetation, planktonic and filamentous algae, periphyton.
Distribution	Nepal, Pakistan, India, Sri Lanka and Bangladesh.
Status	Common
Remarks	It is domesticated. Its breeding, nursing technology has been developed. It is tasty fish, absent of Y bones in fish flesh.



Scientific Name	<i>Cirrhina mrigala</i> (Hamilton- Buchanan)
Common Name	Mrigala
Local Name	Naini
Identifying Characteristics	Body is long slender covered with dark grey scales with coppery tinge. In large fishes, body appears very elongated and head quite small. Body scales are large bright golden sometimes black olive brown, side yellowish. Belly is silvery pale yellow and whitish. Anal and ventral fins are deep red. Dorsal profile convex. Its mouth is small, ventral and downward facing. Eye is golden. One pair of short rostral barbels present. The dorsal fin is placed in front of pelvic.
Breeding Season	June to August
Habits and habitat	Inhabits in streams, riverline pools, reservoir lakes and ponds
Food and feeding	It is bottom feeder, omnivorous, feeds on detritus, mud organism, decaying plant and animal matter.
Distribution	Nepal, Afghanistan, Pakistan, India, Bangladesh, Bhutan and Myanmar.
Status	Common
Remarks	It is cultured in carp polyculture system in pond, well established in aquaculture.





Scientific Name	<i>Chagunius chagunio</i> (Hamilton - Buchanan)
Common Name	Chaguni
Local Name	Rewa, Chagunii, Kasree
Identifying Characteristics	Body is moderate deep and slightly compressed laterally. The colour of the fish is silvery with faint pinkish tinge. It has tile like scale on the body. The dorsal fin is rimmed with black colour tints. Fins are generally yellowish, pelvic and anal tinged with red. At base of each scale a black dot is present. Scales are small. Lateral line is complete, nearly straight. Mouth is large with the upper jaw ending just ahead of the midpoint of the eye. Caudal fin is long and deeply forked.
Breeding Season	April and June
Habits and habitat	Inhabits in large rivers with rocky bottoms, clear and fast water and little or no vegetation.
Food and feeding	It is omnivorous, mid-feeder, feeding on large quantity of animal matter.
Distribution	Nepal, Pakistan, India, Bangladesh, Bhutan and Sri Lanka.
Conservation Status	
a. Local	Rare
b. National	Vulnerable
Remarks	Its domestication has started and breeding is success. At present, confined to only research. It is preferred by local consumers.



Scientific Name	<i>Puntius sophore</i> (Hamilton- Buchanan)
Common Name	Spotfin Swamp Barb
Local Name	Pothi, Pate Sidhra
Identifying Characteristics	It is a deep bodied fish having distinct orange golden spot below the eye. Its back is mostly olive green, sides silvery with a reddish flush, silvery on the belly. The opercles are golden red and tip of the fins reddish. There is a faint black band on the lateral line. A distinct black blotch on caudal peduncle and dorsal fin base. Barbels absent. Lateral line system is complete. Head is small and eye is comparatively large.
Breeding Season	May-July
Habits and habitat	Inhabits in slow running or stagnant side pools of rivers, streams and ponds with vegetation.
Food and feeding	It is herbivorous, bottom-column feeder, feeds on algae and plant matter, aquatic insect larvae, planktonic crustaceans.
Distribution	Nepal, Pakistan, India, Bangladesh, Myanmar , China , Bhutan and Afghanistan.
Conservation Status	
a. Local	Common
b. National	Common
Remarks	It is cooked whole, and is rich in vitamins and micronutrients. It is now categorised under small indigenous fish species (SIS). Self-recruited fish species.





Scientific Name	<i>Puntius sarana</i> (Hamilton- Buchanan)
Common Name	Olive Barb
Local Name	Kande, Bhitte, Bada Pothi, Thub Pothi
Identifying Characteristics	It is a small silvery fish having deep moderately compressed body. It has dark black, opercula with golden tints, occasionally a small blotch behind the gill opening. It has two pair of barbels. It has complete lateral line system. In breeding season, the opercula is dashed with golden. The caudal fin is black-rimmed.
Breeding Season	May to June
Habits and habitat	Inhabits in streams, rivers, canals, beels, haors, ponds and inundated fields. Occurs mainly in shallow water.
Food and feeding	It is omnivorous, bottom-column feeder, feeds on worms, crustaceans, insects and plant matter.
Distribution	Nepal, Pakistan, India, Bangladesh, Sri Lanka and Myanmar.
Conservation Status	
a. Local	Extinct
b. National	Uncommon or Lower Risk
Remarks	Not recorded in the catches of Begnas and Rupa Lake in the present survey. According to <i>Jalari</i> community, this fish was abundant in Begnas and Rupa Lakes about 20 years ago. It can be used both as food fish and ornamental fish. It is a hardy fish and can be successfully introduced in carp polyculture system to increase the fish production.



Scientific Name	<i>Puntius ticto</i> (Hamilton- Buchanan)
Common Name	Ticto Barb, Firefin Barb, Two-Spotted Barb
Local Name	Bhitta
Identifying Characteristics	It is a deep bodied uniform silvery fish with black blotches, one on anterior side of body, another on caudal peduncle. It has complete lateral line. The barbels are absent. The pelvic and anal fins are tinged with red. During breeding season, flanks turn red. Dorsal fin is edge with black.
Breeding Season	May to October
Habits and habitat	Shallow and weedy parts of rivers and ponds.
Food and feeding	It is herbivorous, bottom-column feeder, feeds on algae and plant matter, aquatic insect larvae, planktonic crustaceans.
Distribution	Nepal, Pakistan, India, Bangladesh, Myanmar, and Sri Lanka.
Conservation Status	
a. Local	Common
b. National	Uncommon or Lower Risk
Remarks	It is cooked whole and rich in vitamins and micronutrients. It is now categorised under small indigenous fish species (SIS). Self-recruited fish species.



Scientific Name	<i>Danio devario</i> (Hamilton-Buchanan)
Common Name	Devario Danio
Local Name	Chitharipothi, Bhatti
Identifying Characteristics	It is common ornamental fish with silvery greenish body. Pectoral, dorsal, pelvic, anal and caudal fins are yellowish. A dark band runs from the middle of the caudal above the middle of anal fin. Head is small and snout is obtusely pointed. Scales small cycloid. Barbels are absent. Mouth is oblique and directed upwards.
Breeding Season	June to July
Habits and habitat	Inhabits in streams, riverine pools and lakes. It is also found in rapid streams with rocky bottom.
Food and feeding	It is omnivorous, feeding on fish, zooplankton, dipteran larvae and plant matter.
Distribution	Asia: Nepal, Afghanistan, Pakistan, India, Bangladesh, Bhutan and Myanmar.
Conservation Status	
a. Local	Rare
b. National	Common
Remarks	It is cooked whole and rich in vitamins and micronutrients. It is now categorised under small indigenous fish species (SIS). It is a self-recruited fish species.



Scientific Name	<i>Barilius barna</i> (Hamilton- Buchanan)
Common Name	Barna Baril
Local Name	Pati Pattaure, Titerkane Phageta
Identifying Characteristics	Its body is deep and strongly compressed laterally, usually crossed by fine dark vertical bands. Barbels are absent. Open pores are present on both jaws and snout in adults. The body of the fish is silvery with 9-11 bluish vertical bands, originating from the dorsal sides and crossing the lateral lines. Generally dorsal and caudal fins are tinged with black.
Breeding Season	Early spring
Habits and habitat	Inhabits in clear hill streams with gravelly bottom.
Food and feeding	It is omnivorous, mid-feeder with a preference to plant matter, larvicidal.
Distribution	Nepal, India, Bangladesh, Sri Lanka and Myanmar.
Conservation Status	
a. Local	Common
b. National	Common
Remarks	It is a very tasty fish consumed whole. It is rich in essential micro-nutrients including vitamins and minerals. It has high demand among local consumers.



Scientific Name	<i>Barilius bendelisis</i> (Hamilton- Buchanan)
Common Name	Hamilton's Barila
Local Name	Chiple phageta, Khasree Chala
Identifying Characteristics	A medium-sized hill stream fish having fine pores on the snout. The body is crossed with 8-12 lateral bands and dashed with bluish green silvery tinge. It has black spots at the base of each scale. Generally, the paired fins are whitish, tinged with orange almost leafy structure or fan like wing especially in male. Two pairs of barbels present. Its lower jaw is covered with spiny tubercle.
Breeding Season	April to August
Habits and habitat	Inhabits in streams and rivers along the base of hills with pebbly and sandy bottom and moderate water flow.
Food and feeding	It is omnivorous, mid-feeder with a preference to plant matter, and larvicidal.
Distribution	Nepal, Pakistan, India, Bangladesh, Bhutan and Myanmar.
Conservation Status	
a. Local	Common
b. National	Common
Remarks	It is very tasty fish and consumed whole. It is rich in essential micro-nutrients including vitamins and minerals. It has high demand among local consumers.



Scientific Name	<i>Barilius vagra</i> (Hamilton- Buchanan)
Common Name	Vagra Baril
Local Name	Lam phageta
Identifying Characteristics	It is a slim bodied fish with shallow body and relatively small head and mouth. It is a silvery fish with spots and vertical blotches. About 10-14 bluish vertical bands reach the proximity of lateral line scales. Body is greenish-olive on the back, the sides conspicuously silvery, whitish below. The opercle is dashed with a golden orange tinge. Two pairs of barbels present. Dorsal and tail fin greyish; pectoral, pelvic and anal fins yellow to pale orange.
Breeding Season	Early spring
Habits and habitat	Inhabits in hill streams, river and lakes with gravelly and rocky bottom.
Food and feeding	It is carnivorous, eat insects in adults and larval aquatic stage and small arthropods.
Distribution	Nepal, Pakistan, India, Bangladesh, and Myanmar.
Conservation Status	
a. Local	Common
b. National	Uncommon or Lower risk
Remarks	It is tasty fish, consumed whole. It is rich in essential micro-nutrients including vitamins and minerals. It has high demand among local consumers.

B. Family : Mastacembelidae



Scientific Name	<i>Mastacembelus armatus</i> (Lacepede)
Common Name	Tire-Track, Spiny eel
Local Name	Chuche Bam
Identifying Characteristics	It has a long elongated body having anal and dorsal fin confluent with caudal. Its snout is pointed. General body colour is brownish becoming lighter on belly. There is a row of distinct rounded black spots along base of dorsal fin. Occasionally these spots are united with other colour pattern. Its body is covered with small scales.
Breeding Season	June and July
Habits and habitat	It is usually found in streams and rivers, lakes with sand, pebble, or boulder substrate. Prefers to live in crevices, holes in rocks and muddy bank.
Food and feeding	It is carnivorous, bottom-column feeder with marked predaciousness. Forages at night on benthic insect larvae, worms and some submerged plant material.
Distribution	Nepal, Pakistan, India, Bangladesh, Bhutan and Myanmar
Conservation Status	
a. Local	Common
b. National	Common
Remarks	It is highly nutritious and is prescribed to the convalescent and weak patients

C. Family : Belontiidae



Scientific Name	<i>Xenentodon cancila</i> (Hamilton-Buchnan)
Common Name	Freshwater Garfish
Local Name	Dhunge Bam
Identifying Characteristics	It is elongated fish with beak like jaws. Body is greenish above and whitish below. It has series of four or five blotches on sides of the body on between pectoral and anal fin. Sharp opposing teeth are present on both jaws. Dorsal and anal fins with dark edges.
Breeding Season	June and July
Habits and habitat	Tends to inhabit slow moving to still sections of streams and rivers and marshy lowland habitats such as swamps and oxbows.
Food and feeding	It is carnivorous. It is an obligate predator feeding mostly on smaller fishes and insects in nature.
Distribution	Nepal, Sri Lanka and India eastward to the Mekong.
Conservation Status	
a. Local	Common
b. National	Common
Remarks	It is preferred by local consumers.

D. Family : Bagridae



Scientific Name	<i>Mystus bleekeri</i> (Day)
Common Name	Day' Mystus
Local Name	Junge, Tenger
Identifying Characteristics	Its body is laterally compressed posteriorly with four pairs of long exploratory barbels. General body colour is brownish grey. There are three longitudinal bands on the body. An adipose fin is situated at the beginning of the origin of anal fin. It has longitudinal groove on the head.
Breeding Season	June and July
Habits and habitat	It is usually found in streams and rivers, lakes with sand, pebble, or boulder substrate. Prefers to live in crevices, holes in rocks and muddy bank.
Food and feeding	It is carnivorous, bottom feeder with marked predaciousness. Forages at night on benthic insect larvae, worms and some submerged plant material.
Distribution	Nepal, Pakistan, India, Bangladesh, Bhutan and Myanmar.
Conservation Status	
a. Local	Common
b. National	Common
Remarks	It is tasty fish. It is preferred by local consumers.



E. Family : Clariidae



Scientific Name	<i>Clarias batrachus</i> (Linnaeus)
Common Name	Magur, Walking Catfish
Local Name	Mangur
Identifying Characteristics	Its body is elongated and compressed dorsoventrally. A greyish black catfish with splashes of yellow brown colour with vertical head and laterally compressed tail. The dorsal and anal fins are long. The caudal fin is separated from dorsal and anal. Body colour is brownish black. It has four pairs of barbels.
Breeding Season	May to August
Habits and habitat	Inhabits in lowland fresh and brackish waters □ densely planted rivers, lakes, ponds and reservoirs. Usually confined to stagnant, muddy water: marshy and swampy pools.
Food and feeding	It is carnivorous, feed on insect larvae, earthworms, shells, shrimps, small fish, aquatic plants and debris.
Distribution	Nepal, Sri Lanka, Pakistan, India, Cambodia, Thailand, and Viet Nam.
Conservation Status	
a. Local	Common
b. National	Common
Remarks	It can be marketed live. It can live out of water for quite some time and move short distances over land as it has an accessory respiratory organ. It is collected by <i>Jalari</i> community using hook with earthworm bait.

F. Family : Channidae



Scientific Name	<i>Channa orientalis/ Channa gachua</i> (Blotch and Schneider)
Common Name	Asiatic Snakehead
Local Name	Bhoti, Garahi
Identifying Characteristics	It is a brownish fish with elongated body and fairly rounded cross section. Head is comparatively bigger than the body. Eyes are moderate and mouth is large. Pectoral fin transversely barred, extended to anal fin and caudal fin is often rounded. Base of pectoral fin has dark blotch. Scales on top of head are large.
Breeding Season	June to August
Habits and habitat	It usually lives along the substratum, often hiding among the bases of aquatic plants. It is found in edges of lakes, river, ditches, and canals having overhanging vegetation.
Food and feeding	It is carnivorous, bottom feeder, also larvicidal, feeding mostly on smaller fishes and insects in nature but in most cases adapting well to dead alternatives in captivity.
Distribution	Asia: Nepal, Afghanistan, Pakistan, India, Bangladesh, Bhutan and Myanmar
Conservation Status	
a. Local	Rare
b. National	Common
Remarks	It possesses accessory air breathing organ through which it can live outside water for hours. It can be marketed live. It can be collected easily by hook using earthworm bait.





Scientific Name	<i>Channa punctatus</i> (Blotch)
Common Name	Spotted Snakehead
Local Name	Helae, Garai
Identifying Characteristics	It is a small sized olive brown fish. It has fine dark and light stripe above and below the lateral line. Several bands or patches pass down from back to abdomen.
Breeding Season	June to August
Habits and habitat	Lives in ponds, swamps, brackish water, ditches and beels. Adults prefer stagnant waters in muddy streams.
Food and feeding	Omnivorous, Feed on worms, insects and small fish
Distribution	Nepal, Afghanistan, Pakistan, India, Sri Lanka, Bangladesh, Myanmar and Yunnan in China
Conservation Status	
a. Local	Rare
b. National	Common
Remarks	It possesses accessory air breathing organ by the virtue of which it can live outside water for hours. It can be marketed live.

Exotic Fish Species of Begnas and Rupa Lake



Common Carp



Grass Carp



Nile Tilapia



Silver Carp



African Magur



Bighead Carp

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Local Initiatives for Biodiversity, Research and Development (LI-BIRD)

Head Office

PO Box 324, Pokhara, Kaski, Nepal
Tel 00977-61-526834, 535357
Fax 00977-61-539956
E-mail info@libird.org
Web www.libird.org

Programme Coordination Office

Sanepa, Lalitpur, Nepal
Tel 00977-01-5540330

Regional Office

Nepalgunj, Banke, Nepal
Tel 00977-81-523113