



S. G. V. C. Vidya Prasarak Trust's,

**Matoshri Gangamma Veerappa Chiniwar
Arts, Commerce & Science College,**

MUDDABIHAL-586212. Dist. Vijayapur (Karnataka)

(Accredited with CGPA of 2.58 on seven point scale at 'B+' Grade)

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Ref. No. : 642/21

Date : 2021-22

DEPARTMENT OF ZOOLOGY

Project work on 'BEAK MODIFICATION IN BIRDS' for the year 2021-2022

Semester: IVth Semester

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Muddebihal

Department of Zoology

A Project Report on

Beak modification in birds



Project submitted to the Department of Zoology

Submitted By: UmmeBarira - N. Shabhai

Project Guide: Prof. R.G. Vastrad

Staff in charge

2021-22

Head of the Department



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Department of Zoology

CERTIFICATE

This is to certify that the project report entitled **Beak modification in birds** Submitted by **UMMEBARIRA N SHABHAI** as part of IVth semester BSc Zoology curriculum.

~~He~~/She is satisfactorily completed the project work under our supervision during the year 2021-22

Staff in charge

Head of the Department

Darwin's Finches

Beak modification in Birds



1. Seed eating beak:

1. Short, stout, peg like and conical beaks are characteristic of small granivorous or seed-eating birds.
2. The weaker beaks are used for piercing up small seeds, while more powerful beaks are meant for crushing large and hard-shelled seeds and fruit stones.

Example: - Sparrows





2. Cutting Beak:

1. It is long, stout, and sharp.
2. It is used for various purposes like tearing prey, breaking eggs, cutting fruits, etc.
3. The large, strong beak is used for many purposes as a tool.
4. Usually the beak is black in colour.

Example: - crow





3. Fruit-eating beak:-

1. The beak is sharp, massive, deeply hooked and extremely strong.
2. It is well adapted for breaking open hard seeds and nuts.
3. The beak is also used for climbing as well as manipulating and crushing objects.
4. The beak colour is red.

Example: - Parrot





4. Insect catching Beak:

1. The beak is long, slender and slightly curved.
2. The beak is meant for turning the leaves or probing into the soil for insect grubs and pupae.

Example: - Hoopoe





5. Wood- chiseling beak:-

1. Beak is elongated, straight, and stout chisel-like beaks.
2. The beak is used for drilling into the barks or wood for insect larvae.
3. The beak is also used for nest construction.
4. They have thickened, shock absorbent skull bones and strong neck muscles to make such pounding feasible.

Example: Wood pecker





6. Tearing and piercing beak:

1. Beak is short, pointed, sharp-edged and powerful, hooked beaks.
2. The beak is used for tearing flesh and operated by well- developed mandible muscles.

Example: - owl





7. Mud-probing beak:-

1. Their beaks are extremely long and slender.
2. Beaks are used as a probe for thrusting far down into water and mud in search of worms and larvae.
3. Some of these birds are remarkable for the slenderness and extreme length of their beaks.

Example: Stilt





8. Fish- catching beak:

1. Beak is long, powerful, sharp long and narrow beak, the edges of which are armed with for capture of fish.
2. The bill is usually longer and more compressed in species that hunt fish and short and more broad in species that hunt prey off ground.
3. The longer beak is used for stabbing the fish.

Example: Kingfisher





9. Grains eating beak

1. Pigeon beak is short, hard, pointed and curved in front.
2. The beak length is about 2 to 3 inches.
3. It uses its beak to eat, probe for food, preen, and feed its young.
4. Beak is made to crack through shells and pull plants and fruits into smaller pieces.

Example: Pigeon





10. Fish holding beak

1. The beak is long and narrow and ends in a hooked tip.
2. The beak serves to hold the fish and insects firmly.

Example: Cormorant





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Ref. No. : 642/21.

Date : 2021-22

DEPARTMENT OF ZOOLOGY

Project work on 'LOCAL EDIBLE FISHES OF MUDDABIHAL TALUK'

for the year 2021-2022

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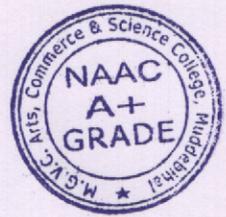
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21	S1928070	Maktumsab Mamadapur
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31	S1928106	Ramesh Dodamani
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44	S1928143	Veena Gubachi
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A Project Report on

Local Edible Fishes of Muddebihal Taluka

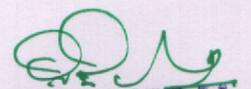


Project submitted to the Department of Zoology

Submitted By: Aishwarya G. Kalyani
R.g.No: 51928005

Project Guide: Vasthna B. S.

2021-22


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Department of Zoology

Certificate

This is to certify that the project report entitled "**Local Edible Fishes of Muddebihal Taluka**" Submitted by Aishwarya G. Kalyani as part of VIth Semester examination in BSc Zoology practicals. Rg. No: 51928005

He/She is satisfactorily completed the project work under our supervision during the year 2021-22

Staff in charge

Head of the Department



OBSERVATION OF CARP FISH BY THE STUDENTS



FISHERMAN SHOWING CATLA FISH TO THE STUDENTS

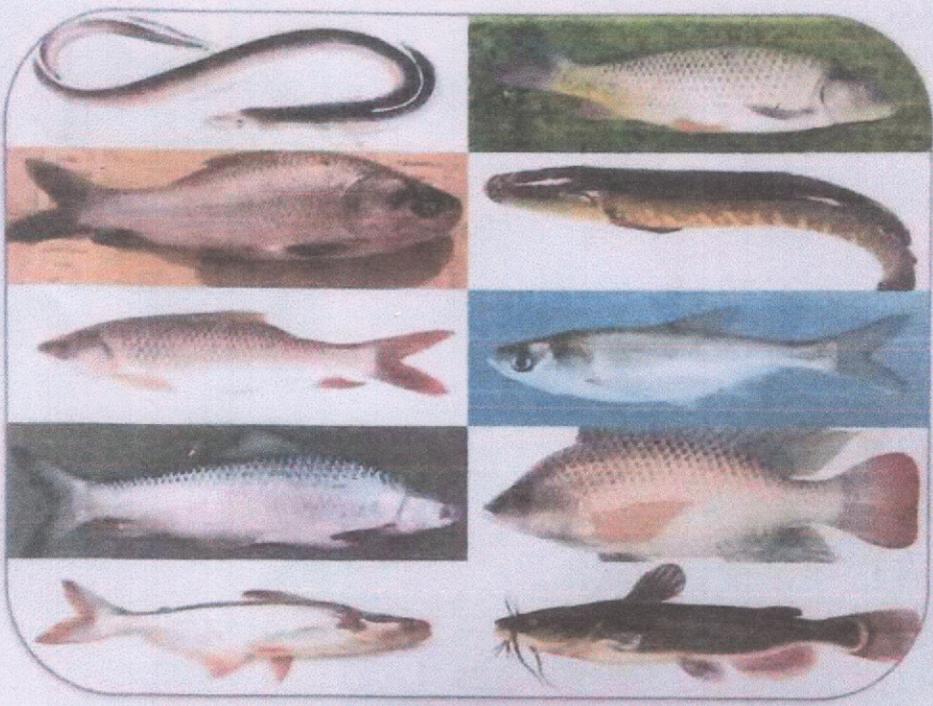


OBSERVATION OF LABEO FISH BY
THE STUDENTS



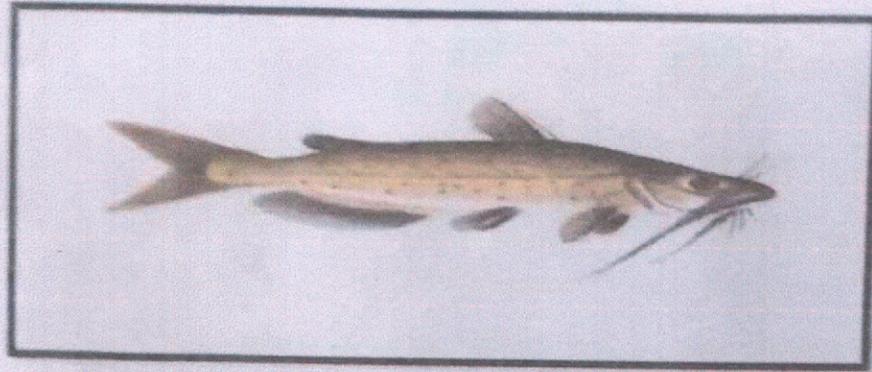
OBSERVATION OF COMMON CARP
FISH BY THE STUDENTS

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9. TILAPIA MOSSAMBICA
10. ANGUILLA

1. WALLAGO ATTU (CAT FISH)



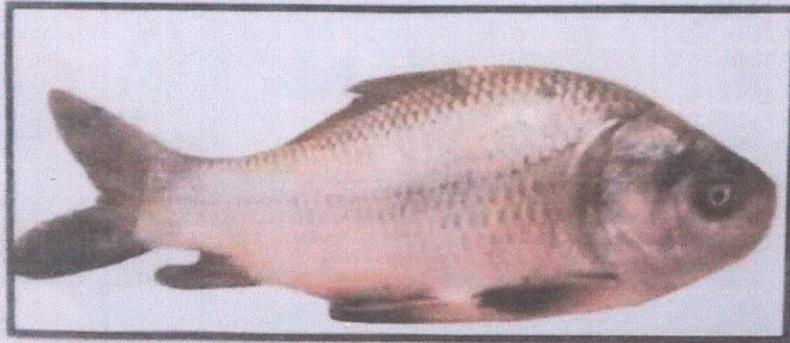
CLASSIFICATION

Phylum	-	Chordata
Class	-	Actionpterygii
Order	-	Siluriformes
Family	-	Siluridae
Genus	-	Wallago
Species	-	attu

MORPHOLOGICAL CHARACTERS :-

- * It is a catfish. Its local name is Mulle.
- * It is commonly called as helicopter catfish
- * It is found in tangadagi river.
- * Its body is elongated, laterally compressed with a straight back.
- * Its body is broader near the head and narrower at the trunk. Its body is about 1 meter in length.
- * Its head bears a wide mouth which extends behinds the eyes and 4 Barbels . a pair of long maxillary barbels and pair of short mandibular barbels.
- * Its dorsal fin is short and spineless. Pectoral fins are close to each other.
- * It is carnivorous. It feeds on eggs of other fishes and dead animals.
- * It is lazy and is usually found at the bottom of pond.
- * Its is one of the best fish food as it lacks intramuscular bones.

3. CATLA (CATLA CATLA)



CLASSIFICATION :-

Phylum	-	Chordata
Class	-	Actionpterygii
Order	-	Cypriniformes
Family	-	Cyprinidae
Genus	-	Catla
Species	-	catla

MORPHOLOGICAL CHARACTERS :-

- * It is one of the fresh water carp.
- * It is found in Rakkasagi lake.
- * Its body is spindle like but more arched dorsally & is covered with scales.
- * It head is scale less. It has large mouth with prominent lips.
- * It has large rounded eyes.
- * It is blackish grey above and silvery on the sides.
- * This fish is over 90cm in length.
- * It feeds on plankton and decayed vegetation.
- * It is a prolific breeder. It lays eggs in July and August.
- * It inhabits all the rivers of India.

4. MRIGALA (CIRRHINUS MRIGALA)



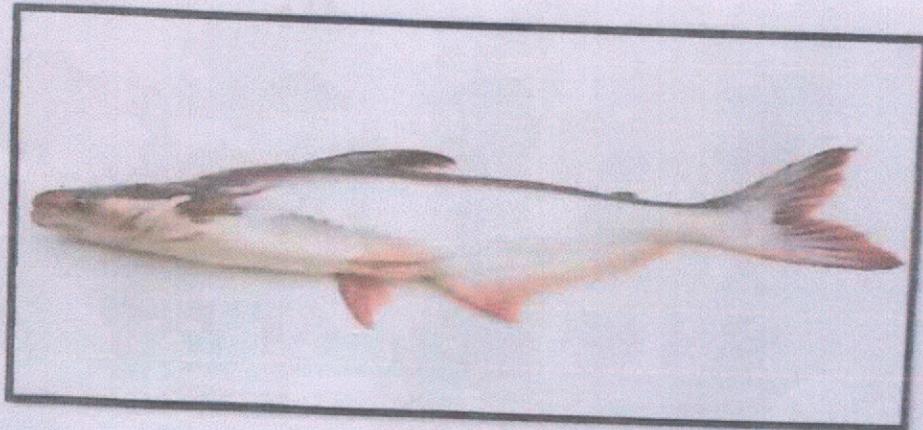
CLASSIFICATION :-

Phylum	-	Chordata
Class	-	Actinopterygii
Order	-	Cypriniformes
Family	-	Cyprinidae
Genus	-	Cirrhinus
Species	-	mrigala

MORPHOLOGICAL CHARACTERS :-

- * It is a fresh water carp.
- * It is found in basarkod tank.
- * Its body is covered by large cycloid scales. Scales are absent on head.
- * It has a wide mouth with thin lips.
- * It may have barbels when present are very small and are folded in the lip.
- * It has a sharply forked caudle fin.
- * Dorsal surface of its body is silvery dark grey in colour.
- * The maximum length acquired is 66cm and its weight is about 1.4 to 2.8 kg
- * It is found in fresh water habitat throughout India.

5. PANGASIUS



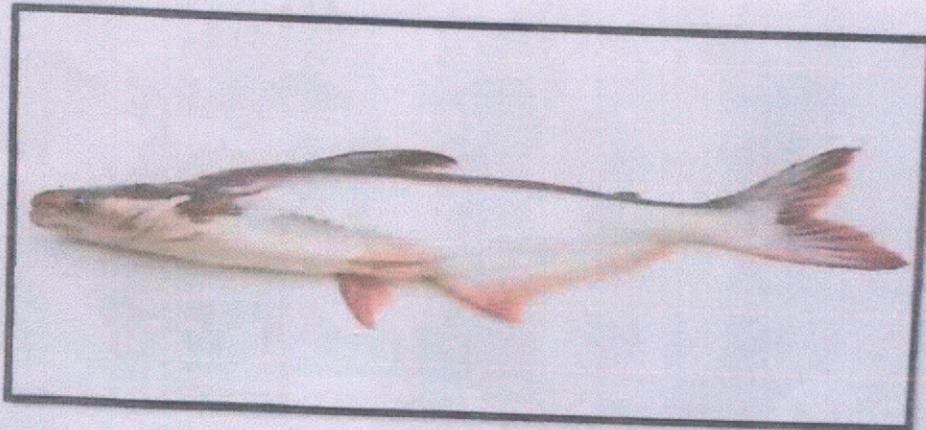
CLASSIFICATION :-

Phylum	-	Chordata
Class	-	Actinopterygii
Order	-	Siluriformes
Family	-	Pangasiidae
Genus	-	Pangasius
Species	-	bocourti

MORPHOLOGICAL CHARACTERS :-

- * It is also one of the fresh water fishes.
- * It is found in madari tank.
- * The body of Pangasius is stout and heavy.
- * The head is rounded and broader than long with blunt snout.
- * It is a medium to large sized fresh water.
- * This species grows to a maximum length of 120cms.
- * These fish are important food fish with an international market.
- * Pangasius is the commercially important fish.

5. PANGASIUS



CLASSIFICATION :-

Phylum	-	Chordata
Class	-	Actinopterygii
Order	-	Siluriformes
Family	-	Pangasiidae
Genus	-	Pangasius
Species	-	bocourti

MORPHOLOGICAL CHARACTERS :-

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- * Pangasius is the commercially important fish.

6. ROHU (Labeo Rohita)



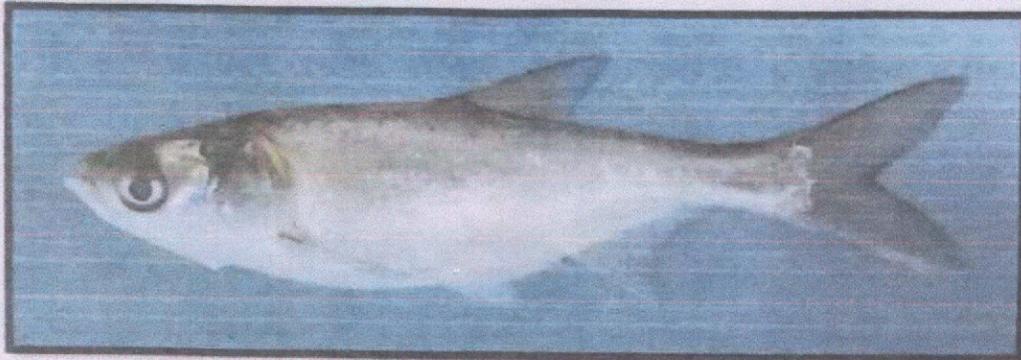
CLASSIFICATION :

Phylum	-	Chordata
Class	-	Actinopterygii
Order	-	Cypriniformes
Family	-	Cyprinidae
Genus	-	Labeo
Species	-	rohita

MORPHOLOGICAL CHARACTERS :-

- * It is a large carp fish.
- * It is found in Hokrani tank.
- * Its body is elongated with a fairly rounded abdomen. The head is prominent with blunt snout.
- * Its body is about 1 meter in length.
- * Its body is grayish on the black and silvery- white on the sides and belly.
- * Its pelvic fins are ventral and opposite to the dorsal fin.
- * Its caudal fin is sharply forked and symmetrical.
- * This fish is carnivorous when young. Young fishes feed on crustacean and insects larvae, but adult is herbivorous feed on phytoplankton.
- * It breeds in July and August.

7.SILVER CARP



CLASSIFICATION :-

Kingdom	-	Animalia
Phylum	-	Chordata
Class	-	Actionopterygii
Order	-	Anabantiformes
Family	-	Channidae
Genus	-	Hypophthalmichthys
Species	-	molitrix

MORPHOLOGICAL CHARACTERS :-

- * It is a fresh water fish.
- * It is found in mudnal river.
- * It has a wide mouth with thin lips.
- * It may barbells. Barbells when present are very small and are folded in the lip.
- * It has a sharply forked caudle fin.
- * It is a deep bodied fish that is laterally compressed.
- * It is a very silvery in colour when young.
- * When they get older they fade from a greenish colour on the back to silver on the belly.
- * They have very tiny scales of their body.

8. SNAKE FISH



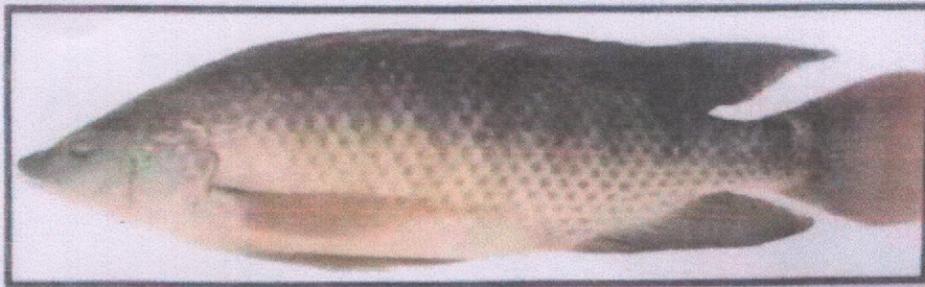
CLASSIFICATION :-

Kingdom	-	Animalia
Phylum	-	Chordata
Class	-	Actinopterygii
Order	-	Anabantiformes
Family	-	Channidae
Genus	-	Channa
Species	-	argus

MORPHOLOGICAL CHARACTERS :-

- * It is a fresh water fish.
- * It is found in Narayanapur dam.
- * Its body is elongated, laterally compressed with a straight back.
- * Its body is shorter near the head narrower the trunk is 25cm (10 inch).
- * It is predatory fish are distinguished by their long dorsal fins large mouths.
- * It has shiny teeth they breath air with gills.
- * Which allows them to migrate short distances over land.
- * It is lazy and is usually found at the bottom of pond.
- * This fish is found in lakes and rivers throughout India.

9. TILAPIA MOSSAMBICA



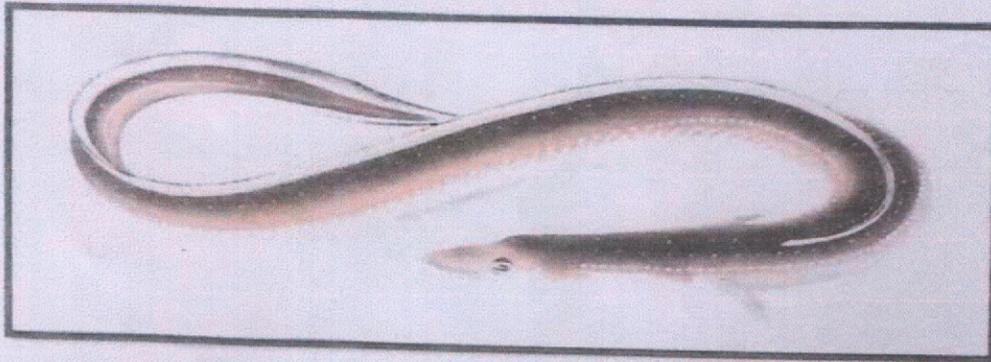
CLASSIFICATION :-

Kingdom	-	Animalia
Phylum	-	Chordata
Class	-	Actinopterygii
Order	-	Perciformes
Family	-	Cyprinidae
Genus	-	Oreochromis
Species	-	aureus

MORPHOLOGICAL CHARACTERS :-

- * It is culture fish which breeds freely and survives in fresh water.
- * Its body is long with rounded snout. Its mouth is large and wide.
- * Its body is covered by cycloid scales.
- * Its dorsal fin is single large and spinous. Its pectoral fin is as long as the head.
- * The colour of the body varies from brownish to blackish.
- * It is herbivorous. It feeds on unicellular filaments algae and aquatic plants.
- * Male fish grows rapidly in early part of life.
- * During breeding season female lays about 70-120 eggs at the time.
- * It breed on large scale in fresh water ponds.
- * Its flesh is not tasty when compared to other fishes.

10. ANGUILLA



CLASSIFICATION :-

Phylum	-	chordata
Subphylum	-	vertebrata
Class	-	Ostichthyes
Superclass	-	pisces
Order	-	anguilliformes
Genus	-	anguilla

MORPHOLOGICAL CHARACTERS :-

- * It is commonly called as "eel"
- * Body is elongated cylindrical and snake like and colour is brown on the back and yellowish below
- * Dorsal, ventral and anal fins are confluent Pectoral is small and pelvic is absent
- * Gill opening is narrow and minute
- * It is fresh water form found in ponds, river, and damp grass
- * Anguilla has a peculiar life history spending most of their in fresh or brackish water but returning to sea to spawn