

B.L.D.E. Association's
S.B. ARTS AND K.C.P. SCIENCE COLLEGE
VIJAYAPUR- 586103
Karnataka State



B. SC 6TH SEMESTER (PAPER-II)
Study Visit Report



DEPARTMENT OF ZOOLOGY

2023-24

CERTIFICATE

This is to certify that MISS.BHAGYASHREE.J.KITTUR Reg no U15KM21S0248 have submitted the study visit report in partial fulfilment of sixth semester B. Sc., during the academic year **2023-24** under the supervision of faculties of **Department of Zoology, BLDEA's S.B. Arts and K.C.P. Science College, Vijayapur** (Affiliated to Rani Channamma University, Belagavi).

Date: 27/08/2024

Place: Vijayapur

B.J.Kittur

Signature of the candidate



Signature of the Faculty

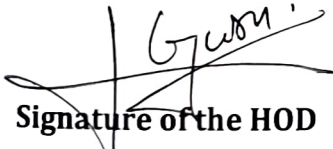
Counter Signed By,

Signature of the Examiners

Signature of the HOD

1. Internal 

2. External 


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STUDY VISIT REPORT

Introduction: Our 1 day zoological study visit to **Fisheries research institute** on 24/07/2024 provided us with an exciting opportunity to explore and learn about various species of fishes and their habitats. This report aims to provide an overview of our observations, experiences, and the knowledge gained during our visit.

Learnt about :

- i. Fishery at Bhutnal
- ii. Types of fishes
- iii. Preservation method for fishes

Overall Experience: The one-day zoological study visit provided us with a comprehensive understanding of the intricate world of fishes, their behaviours, habitats, and conservation. We gained insights into the efforts undertaken by the zoological study visit from Department of Zoology to promote education and awareness. The visit deepened our appreciation for biodiversity and emphasized the vital role of zoologist in preserving the natural world.

Fisheries Research Institute

A study visit to Fisheries Institute can be a rewarding experience, as this provides the knowledge about various kinds of fishes, their behaviour, and their habitat and many more.



Inside the fisheries institute :



INTRODUCTON TO FISHERIES AND AQUACULTURE

Taught us about the Fisheries and Aquaculture

Fisheries : Fishery can mean either the enterprise of raising or harvesting fish and other aquatic life or, more commonly, the site where such enterprise takes place. Commercial fisheries include wild fisheries and fish farms, both in freshwater waterbodies and the oceans.

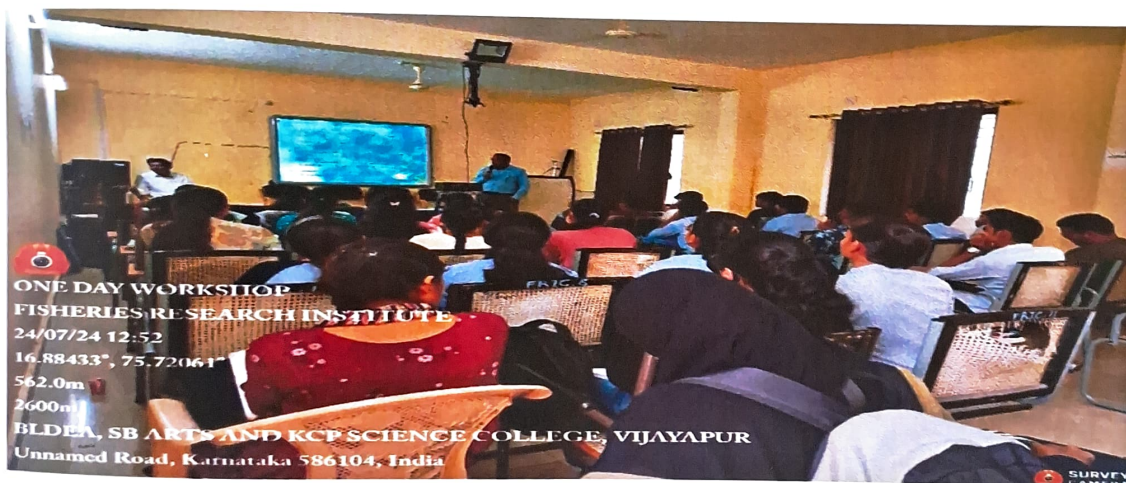
About 500 million people worldwide are economically dependent on fisheries. 171 million tonnes of fish were produced in 2016, but overfishing is an increasing problem, causing declines in some populations

Aquaculture : Aquaculture (less commonly spelled aquiculture^[1]), also known as aquafarming, is the controlled cultivation ("farming") of aquatic organisms such as fish, crustaceans, mollusks, algae and other organisms of value such as aquatic plants (e.g. lotus)

Aquaculture involves cultivating freshwater, brackish water, and saltwater populations under controlled or semi-natural and can be contrasted with commercial fishing, which is the harvesting of wild fish



LIGHTING OF LAMP INSIDE THE FISHERIES INSTITUTE



KNOWLEDGING STUDENTS ABOUT LIST OF OTHER FISHERIES INSTITUTE

Some of the fisheries institute in India are listed below :

- ❖ CENTRAL INSTITUTE OF FISHRIES EDUCATION- MUMBAI, INDIA
- ❖ CENTRAL MARINE FISHERIES RESEARCH INSTITUTE- KARWAR, KARNATAKA
- ❖ CENTRAL INSTITUTE OF FISHERIES TECHNOLOGY- KOCHI, KERALA
- ❖ CENTRAL INSTITUTE OF BRAKISHWATER AQUACULTURE- CHENNAI, TAMILNADU
- ❖ CENTRAL INSTITUTE OF FRESHWATER AQUACULTURE- BHUBNESHWAR, INDIA

Types of fishes and their habitat :

1. Freshwater fishes
2. Marine water fishes
3. Ornamental fishes

Freshwater fishes : Freshwater fish are fish species that spend some or all of their lives in bodies of fresh water such as rivers, lakes and inland wetlands, where the salinity is less than 1.05%. These environments differ from marine habitats in many ways, especially the difference in levels of osmolarity. To survive in fresh water, fish need a range of physiological adaptations.S



SOME OF THE FISHES THAT ARE FOUND IN FRESH WATER

Marine water fishes : Saltwater fish, also called marine fish or sea fish, are fish that live in seawater. Saltwater fish can swim and live alone or in a large group called a school.^[1]

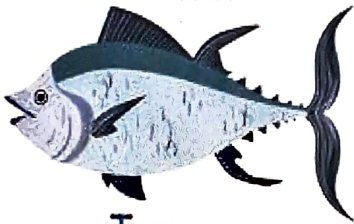
Saltwater fish are very commonly kept in aquariums for entertainment. Many saltwater fish are also caught to be eaten,^{[2][3]} or grown in aquaculture. However, many fish species have been overfished and are otherwise threatened by marine pollution or ecological changes caused by climate change.



Mackerel



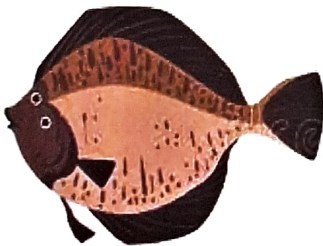
Katran



Tuna



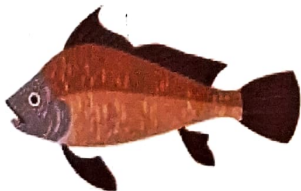
Mullet



Flounder



Cod



Slab



Surmullet



Scad

MARINE FISH

SOME OF THE FISHES THAT ARE FOUND IN MARINE WATER

Ornamental fishes : Inland and marine waters in India possess a rich diversity of ornamental fish, with over 195 indigenous varieties reported from North-East Region and Western Ghats, and nearly 400 species from marine ecosystems. The major fish exported from India are of wild varieties collected from rivers of the North-East and Southern States that contribute about 85% to the total export of all types of ornamental fish from the country. Among the 195 reported fish species from the North-East Region, 155 species are of ornamental value. The region also exhibits exceptional biodiversity and high degree of endemism with respect to freshwater ornamental fishes. Prominent among them are Loaches, Eels, Barbs, Catfish, and Goby. On the other hand, the Western Ghats of India is one of the 34 'Biodiversity Hotspot' Areas of the World.



SOME OF THE ORNAMENTAL FISHES

Fishes that were studied in fisheries research institute, Bhutnal, Vijaypur



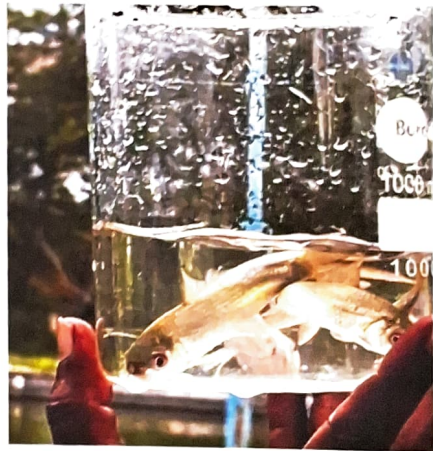
Rohu fish



Green eyed rasbora fish



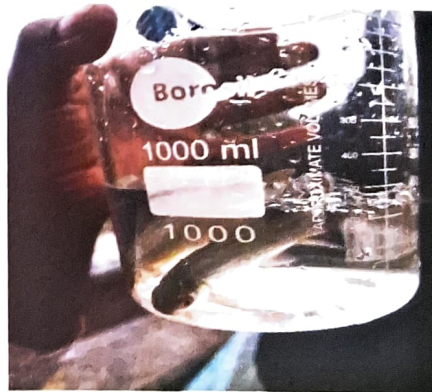
Leucous aul



Henicorhynchus siamensis



Silver minnow fishes



Common carp fish

Preservation methods for fishes :

Firstly, we already know that, fish is highly perishable commodity, which spoiled very rapidly due to the infection of the various types of micro-organism.

So, for this, we have to manage strong and peculiar method fish preservation, so that its frequency of spoiling can be greatly decreases. For the prevention of fish spoilage, there are many types of process in which some are very popular methods of preservation like, drying, canning, icing, etc. All this process are categorized under physical and chemical method of fish preservation and they are as following,

Type of preservation:-

- 1) Physical method**
- 2) Chemical method**

Chemical methods of preservation is nothing but the preservation of fish like commodity by the application of different types of chemical substance, which we are using from earlier day of preservation like, benzoic acid and sodium benzoate etc.

Similarly physical method of preservation is also very common and some of them are very much popular to fisherman and their crew member.

Physical methods of preservation:-

- 1) Drying and dehydration**
- 2) Canning**
- 3) Freezing / icing**
- 4) Salt curing**
- 5) Smoking / smoke curing**
- 6) Marinades**

Conclusion: Our zoological study visit to **Fisheries research institute, Bhutnal, Vijaypur** was an enriching experience that deepened our understanding of the fish kingdom, their habitat, their behaviour and the importance of conservation efforts. Through interactive programs and close encounters with various fishes, we gained insights into the complex relationship between fishes and their environment. We extend our gratitude to the dedicated staff of the Fisheries research institute for their valuable insights and efforts in education and conservation.



ZOOLOGY BATCH 2021-2024