

STUDENT'S STUDY PROJECTS-2020-21

DEPARTMENT OF ZOOLOGY

AVAILABILITY OF EDIBLE FRESH WATER FISHES IN WARANGAL URBAN FISH MARKET”

Submitted by

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HANAMKONDA

TITLE; “AVAILABILITY OF EDIBLE FRESH WATER FISHES IN WARANGAL URBAN FISH MARKET”

Aim & Objective:

The most widely-eaten fish include salmon, tuna, snapper, mackerel, cod, trout, carp, catfish and sardines. Most of these are caught in the sea or in lakes and rivers, but edible fish are also raised in ponds. Fisheries is an economic activity that involves harvesting fish or any aquatic organism from the wild (Capture Fisheries) or raising them in confinement (Culture Fisheries/ Aquaculture). It may be Traditional/ Small Scale Fisheries (SSF) for sustenance, or Large-Scale/ Commercial Fisheries for profit. Major objectives of an integrated fish culture are:

- To reduce operating costs and maximize the farmer's income.
- To develop a more economic ration for fish from wastes to useful fish protein production.
- To solve the waste management problem.
- To control the pollution problem associated with livestock (in the form of fly and odour).

As manure is the major factor controlling fish production in an integrated fish farming system, research efforts should be concentrated on its utilization and management, using fish production and economic benefits as its function.



Introduction:

Based on this review the following priority areas of research are proposed.

1. Standardization of procedure for manure application including frequency, rate and method of application for increased fish production.
 2. Studies on stocking densities and stocking ratios and harvesting of fish in manured ponds.
 3. Application of organic wastes to fish ponds in terms of 'BOD' and 'COD' loading.
 4. Development of supplementary fish diets from wastes of animal and agricultural farms.
 5. Studies on the effect of manuring on fish health, taste and texture of fish meat and sanitation.
 6. Determination of chemical and organic constituents of manures (green and animal).
- To promote Culture Fisheries in the State by utilizing all the available resources to boost fish production in the State.
 - To adopt latest technology of Fish Farming viz; Composite Fish Culture of Indian Major Carps and Exotic Carps.
 - To produce quality Trout Seed for rearing in captivity to table size for sale to the common men.
 - To stock the Natural Cold Water Streams with trout seed to promote sport fisheries in the State.
 - To propagate Fish Culture in Private Sector to provide avenues of earnings to the educated un-employed youth.
 - To develop Endemic Fisheries in the State by adopting the relevant technology.
 - To develop Recreational Fisheries as a means of earnings for the interested persons who may take up Aquarium Fisheries as a trade.
 - To provide better marketing facilities to the fishermen to eliminate the role of middlemen. • To introduce Welfare Schemes for upliftment of Fishermen Community.



Discussion:

Fresh Water Edible Fishes :

- Labeo Rohita (Rohu)
- Catla Catla (Bhakur)
- Cirrhinus mrigala (Nain)

- *Clarias Batrachus* (Mangur)

***Labeo rohita* (Ham):**

Rohu also grows very fast but is relatively little slower than atla. The hatchlings of Rohu when stocked at the rate of 1000000 to 12,50,000/ha grow to a length of 25-30 mm in 15 days, and the survival rate is 50%.

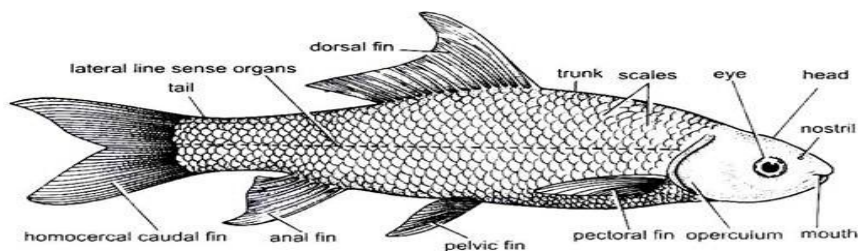


Fig. 15.1. *Labeo rohita*. External features (lateral view).

***Catla catla* (Bhakur):**

The species has the fastest rate of growth among the Indian major carps. In good nursery ponds, hatchlings of catla stocked at the rate of 1000000 to 1250000 per hectare, grow to a length of 20-25 mm in 15 days.

Catla attains maturity when about 2 years old. In 5 kg female, a total number of 4000000 ova were found which gives the fecundity to be 80 eggs/g body weights.

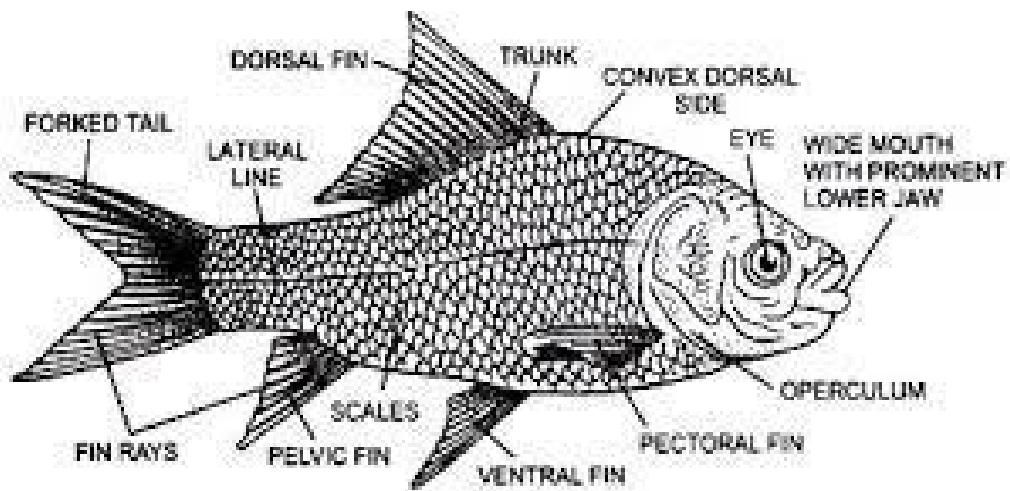


Fig. 9.3. *Catla catla*.

Cirrhina mrigala:

This species is widely cultured in India along with other carps. It grows fast and fry when stocked at 10 lakhs to 12.5 lakhs/ha grow to 25-30 mm in length in 15 days. Both the sexes mature when they are two years old. However induced bred specimen at Central Fisheries Research Institute, Cuttack become sexually mature in one year only.

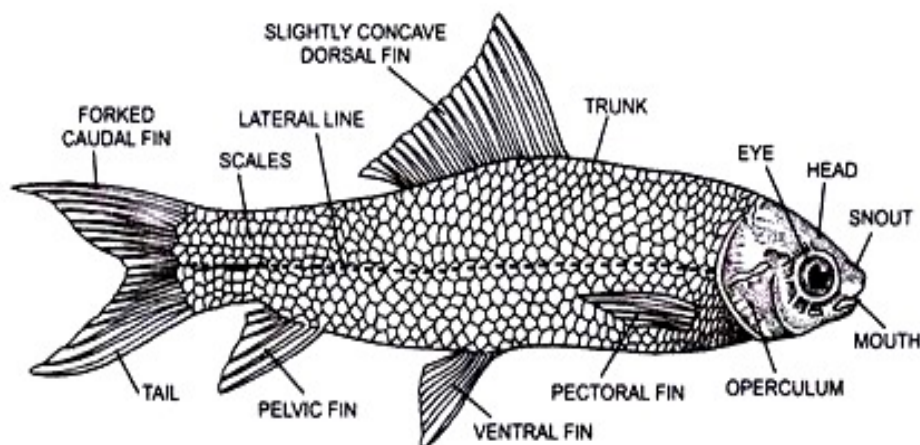
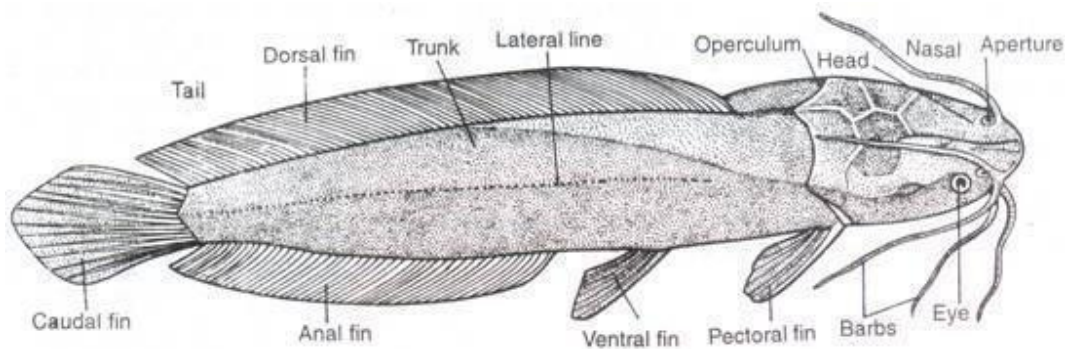


Fig. 9.4. *Cirrhinus mrigala* (Nain)

Clarias batrachus (Linn):

The species reaches a length of 20 cm by the end of first year, and a maximum length of 40 cm by the end of second year. Specimen becomes sexually mature by the end of one year. Generally, 2000-5000 fry are collected from one nest.



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