



***Labeo rohita***

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# Systematic Position of Rohu:

## Phylum Chordata:

Subphylum Vertebrata (= Craniata)

## Series Pisces

Class – Teleostomi

Subclass – Actinopterygii

Order – Cypriniformes

Family – Cyprinidae

**Scientific Name** *Labeo rohita*

**Common Name:** English – Rohu

**Vernacular Names** -Bengali – Rui ,

Oriya – Rohu .

Assam – Rohiti, Rui

Hindi – Rohu

Punjab – Tapra, Rohu

Marathi – Tambadamassa

Gujarati – Rohu



- However the gut analysis , indicates tils bottom feeding habits due to occurrence of decayed organic matter and sand and mud in its gut .
- The characteristic nibbling type of mouth with soft fringed lips, and absence of teeth in the bucco-pharyngeal region helps the fish to feed on soft aquatic vegetation which do not require seizure and crushing.
- It is suggested that the fish feed on minute plankton through sieving water which is facilitated with modified thin and hair-like gill rakers .
- The fry and fingerlings exhibit schooling behaviour usually for feeding but adults do not exhibit this habit.

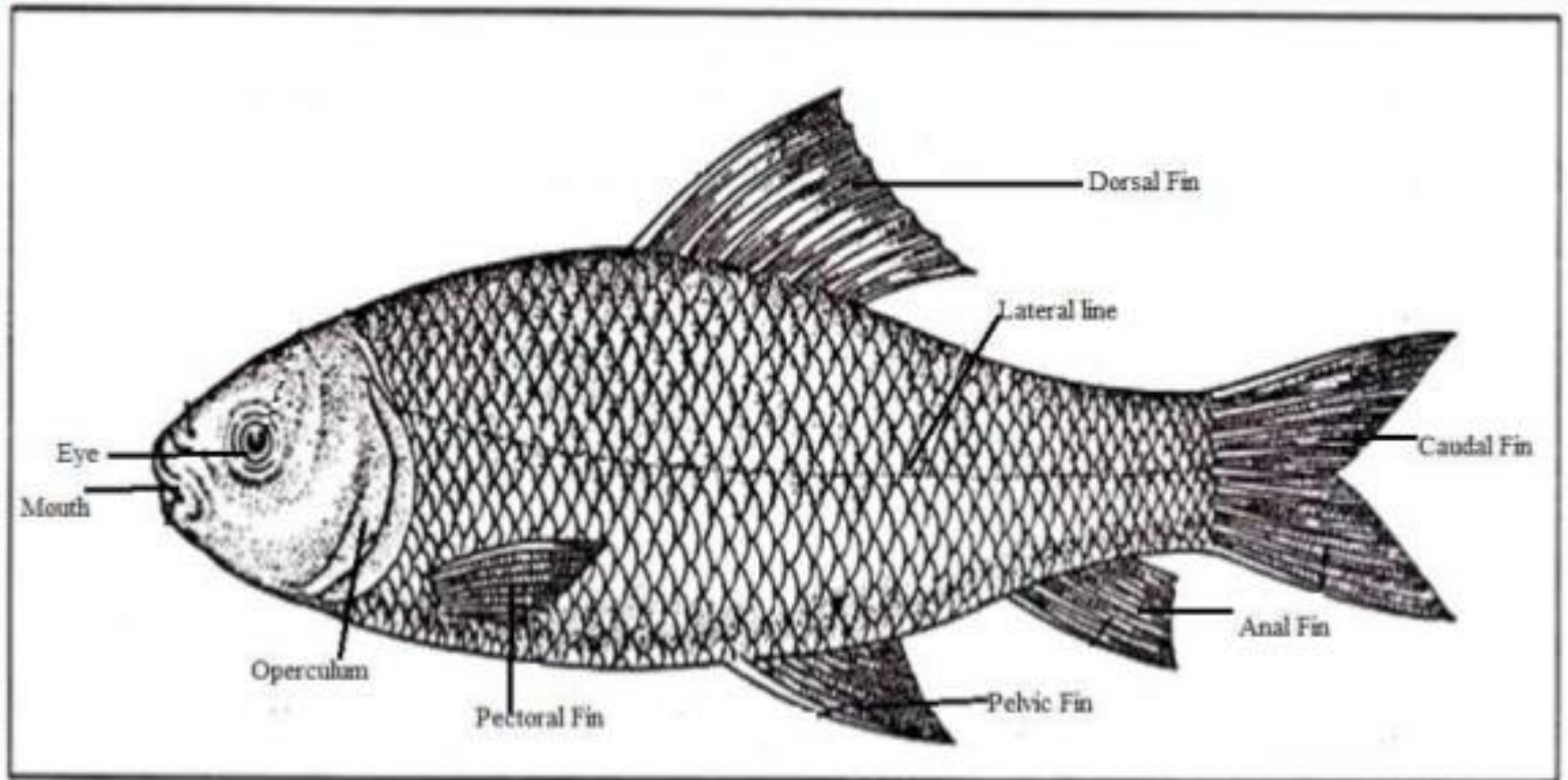
# Habit and Habitat of Rohu:

- In its early stages of life rohu **prefer zooplankton**, mainly **rotifers and cladocerans**, and **phytoplankton** comprise to form its emergency food.
- In the **fingerling stage**, it prefers to feed on all the **zooplanktonic organisms** and few smaller **phytoplankters** like **desmids, phytoflagellates** and **algal spores**.
- On the other hand, **adults** show a strong positive selection for most of the **phytoplankton**.
- In the **juvenile and adult stages** rohu is essentially an **herbivorous column feeder**, and prefers **algae and submerged vegetation**.



## Geographical Distribution of Rohu:

- *Labeo rohita* is found in tropical and temperate regions.
- It is considered as **Indo-Gangetic riverine species which inhabits the riverine system of northern and central India.**
- In India, it has been transplanted into almost all riverine systems including the freshwaters of **Andaman.**
- Apart from India rohu is distributed in **Sri Lanka, the former USSR, Japan, China, the Philippines, Malaysia, Nepal** and some countries of Africa.



*Labeo rohita*

## **External Characteristics:-**

- Body bilaterally.
- Scales are cycloid and head devoid of scale.
- Snout projects beyond mouth and is fairly depressed, eyes dorsolateral in position, mouth small and inferior.
- Lips are lobate ,thick with a distinct inner fold to each lip.
- One pair of small maxillary barbels concealed in lateral groove.
- Jaws devoid of teeth , three rows of pharyngeal teeth .



- Dorsal fin rays are three to four which are simple and unbranched.
- Branched dorsal fin rays are twelve to fourteen.
- Pectoral fin devoid of an osseous spine and caudal fin is deeply forked.
- Non truncate snout, devoid of lateral lobe,
- Body colouration-bluish on back, silvery on flanks and belly.



## **Fins:**

- Both paired and unpaired fins are well-developed. The pectoral and pelvic fins are borne by the respective girdles.
- **Fin Formula -Fin ray counts: dorsal (3/12-13), pectoral (17), pelvic (9), anal (7) and caudal (19). Lateral line with 40-44 scales .Ltr (6 1/2-7 1/2 ):B (1pair)**

## Other important characters:-

- *Rohu* is a **eurythermal** species and does not survive below 14 °C temperature.
- It is a **fast growing** species.
- It attains about **35-45 cm total length and 700-800 g in one year** under normal culture conditions.
- It is observed that , in polyculture, its growth rate is higher than that of mrigal but lower than catla.
- It attains first maturity at the age of two years in both the sexes, whereas complete maturity is attained after four years in males and five years in females.

- The spawning season of rohu generally **coincides with the south-west monsoon**, extending from **April to September**.
- In natural conditions , **spawning occurs** in the shallow and marginal areas of flooded rivers.
- The optimum temperature for spawning is 22-31 °C
- However, breeding does not take place in such lentic pond environments; thus induced breeding becomes necessary.
- The fecundity is **271 egg/gms body weight**.
- Rohu is a polygamous fish and also seems to be promiscuous.





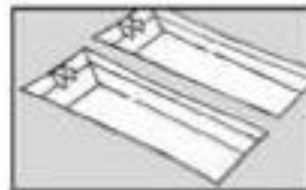
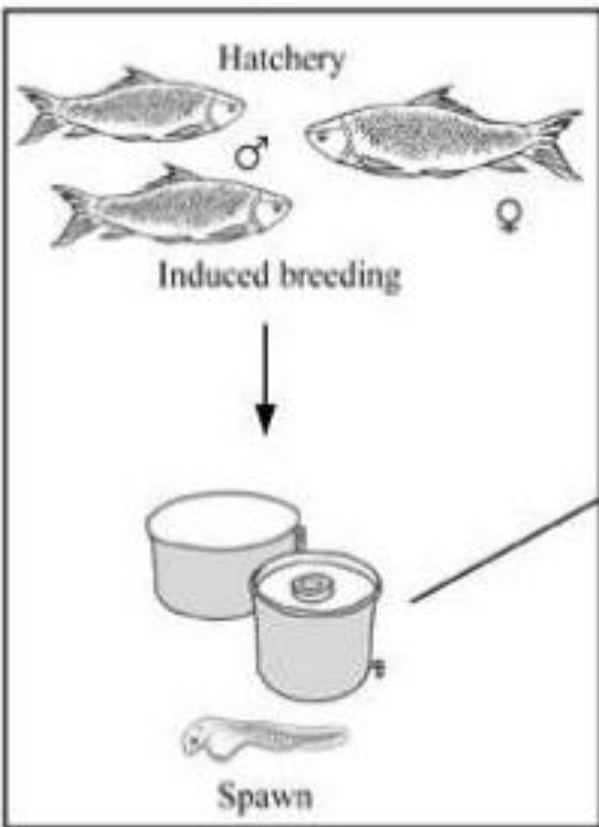
Broodstock (+2 years)



Broodstock pond



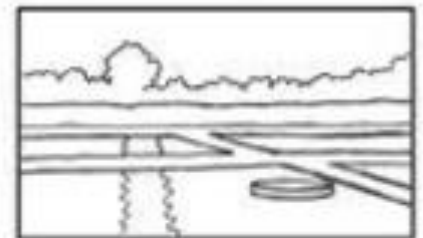
Market



Nursery 15 - 20 days



Fry



Grow-out systems  
(10 - 12 months)

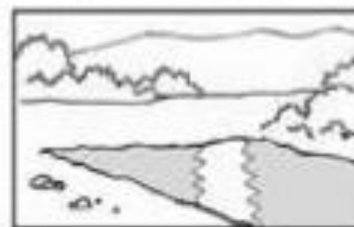


Market



Fingerlings

Fingerling rearing pond  
(60 - 90 days)



## Culture for production

- Rohu is cultured along with the other two Indian major carps they are *Catla catla* and *Cirrhinus mrigala* in the polyculture system.
- Rohu due to its wider feeding niche, is usually stocked at relatively higher rate as compared to the other two.
- Under composite carp culture system in India, the three Indian major carps are cultured along with common carp (*Cyprinus carpio*) and two Chinese carps viz., silver carp (*Hypophthalmichthys molitrix*) and grass carp (*Ctenopharyngodon idellus*).

# Seed supply

- Rohu responds well to induced breeding through hypophysation.
- Hypophysation, is commonly practiced since 1957.
- Several synthetic commercial formulations of purified salmon gonadotropin and dopamine antagonists such as Ovaprim, Ovatide and Wova-FH have also been successfully used in recent years.



# Dear Students

## Welcome for Discussion



***THANK YOU***