

The amount of aspartic acid, cystine, glutamic acid, glycine, histidine, leucine, phenylalanine, threonine and valine decreases from the stage I to the stage III of growth. At all the three stages of growth glutamic acid is present in maximum quantities of all the amino acids. The amount of total nitrogen also increases from the stage I to stage III of growth.

A comparative study of the component amino acids of eye lenses of fish *Labeo rohita*, *Labeo bata* and *Cirrhina raba* (A. K. Goswami. 1975) shows that amino acid cysteine is absent in the eye lenses of all the three fishes at all the three stages of growth. *Labeo rohita* contains 18 amino acid at all the three stages of growth but *Labeo bata* and *Cirrhina reba* contains 19 and 17 amino acids of lens protein at all the three stages of growth.

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A NOTE ON A PRELIMINARY EXPERIMENT ON THE CULTURE OF *SILLAGO SIHAMA* (FORSKAL) AT MANGALORE

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ABSTRACT

A preliminary experiment on the culture of *Sillago sihama* (Forsk.) in a pond adjoining Netravathi estuary at Mangalore revealed a good prospect of farming this fish along the estuarine areas. The fish grows incredibly fast and attains marketable size in 3-4 months.

The prospects of farming *Sillago sihama* on the edge of the South Kanara coast have been highlighted in an earlier account (Ramamurthy and Dhulkhed, MS). As a further step, the culture of this fish was initiated on an experimental basis to assess its growth pattern. The results of this study carried out from January to April 1974 are presented here.

A pond (12.5 x 11.0 m) was selected adjacent to the river *Netravathi* and about 2 km from the bar (Fig. 1). The pond was deepened and its bunds strengthened. A pipe was fixed at a suitable height to ensure free flow of tidal water. Another pipe was laid slightly at a higher level to enable the outflow of excess water. A nylon netting (3-mm stretched-mesh) was tied to both the ends of the pipes to prevent the entry of predators and foreign matter. The depth of water in the pond was usually about a metre at high tide and 0.25 metre at low tide. Two pits of 0.5-m depth were dug at two places in the pond to provide the fish shelter during the hot part of the day, especially at low tides. The bottom was muddy. The predators were weeded out of the pond prior to stocking.

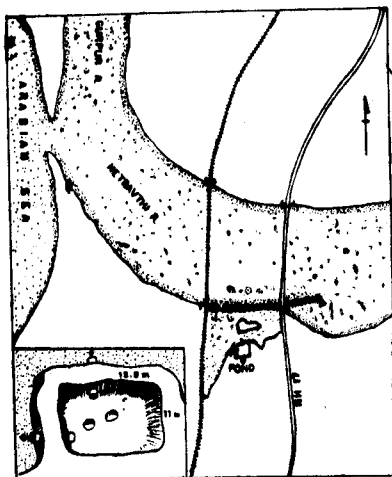


FIG. 1. A diagrammatic sketch of the location of culture pond.

The fingerlings for stocking were collected from the Ganguli estuary on 30th January 1974 and transported in conventional fish cans by road. They were released in the pond after recording their total length which was grouped in 5 mm intervals. Precautions were taken to eradicate periodically the scum and predators (crabs) which accidentally got inside.

Polychaetes and crustacens were found to occur in good numbers in the pond, which form the major food constituents of the fish (Radhakrishnan 1957). Besides, the juvenile prawns which were available in plenty in the adjacent waters were collected and a handful of these dead ones were strewn twice a week as feed.

Temperatures were recorded at 8 a.m. and 2 p.m. daily and salinity was estimated once a week.

The details of the size of fish at the time of release are:

Size range (mm)	Mode	Nos. released	Range in weight (g)	Mean weight (g)
40-94	47 and 62	134	0.4-3.5	1.5

The ranges in temperature and salinity during the different months are:

Month	Temperature (°C)		Salinity %
	8 a.m.	2 p.m.	
February 1974	24.0 - 28.0	30.0 - 34.0	23.96 - 24.33
March	26.3 - 29.0	34.0 - 36.0	28.26 - 33.77
April	26.0 - 30.0	32.0 - 39.2	26.17 - 34.27

On March 1st, the first fishing, by using a single piece of *kairampani* (a small shore-seine), was conducted. Fish could not be caught easily since they buried themselves into the soft mud. Moreover, a few of the caught ones were in a critical condition because of the disturbed bottom. In view of this, fishing was not resorted to frequently.

Towards the end of April, the level of water in the pond at ebb-tides was considerably low. Therefore, fishing was conducted on 26th. The length range and modal size of fish caught are:

Size range in (mm)	Mode	Nos. caught	Range in weight (g)	Mean weight (g)
98-230	127 and 172	20	4.0-86.0	24.0

This reveals that *Sillago* grows very fast in length and weight, a maximum size of 230 mm is reached within a span of 3-4 months, a size, according to Radhakrishnan (1957), attained only during the third year.

However, this study could not be pursued further, since the water level in the pond became too low.

The limited returns were probably due to the insufficient depth of water at low tide and high water temperature during the day, especially at low tides, in addition to probable predation by birds and perhaps poaching to a certain extent. Therefore, it is felt that with proper regulation of water in the ponds, and with improved conditions, better returns can be obtained.

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