

A STUDY ON FOOD AND FEEDING HABITS OF *SILLAGO SIHAMA* (FORSSKAL, 1775) – A CANDIDATE SPECIES FOR MARICULTURE FROM COCHIN WATERS

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ABSTRACT

Analysing the feeding habits in fishes is of great importance. The present analysis of stomach content of *Sillago sihama* shows that the species consume a variety of food items. Crustacean including copepods, lucifers comprised the maximum part of the food of *S. sihama*. Polychaetes formed the second most important food item of *S. sihama*. Digested and semi digested matter was also recorded in the present study. Nematode worms, Foraminifera, and other organisms are also occurred in the stomach of *S. sihama*. The feeding behaviour of *S. sihama* was found to be changed with season as well as maturity stages. High feeding intensity was observed during the months of February-May (Pre-monsoon). *S. sihama* can be classified as euryphagous carnivores, feeding on a wide range of food of planktonic and benthic organisms. Relative Length of Gut (RLG) and Gastro somatic index were calculated. The RLG was less than 1 which indicates its carnivorous habit.

Keywords: Food, Feeding Habits, *Sillago sihama*, Cochin

INTRODUCTION

Feeding ecology is an important aspect to understand the functional role of the fish within their ecosystems (Blaber, 1997; Cruze Escalona et al., 2000; Hajisamae et al., 2003; Abdul Aziz and Gharib, 2007) knowledge of the food requirements, feeding behaviour pattern and predator-prey relationships, helps to understand the predicted changes that might result from any natural or anthropogenic intervention (Hajisamae et al., 2006). The nutritional and energy status of a fish can be studied by analysing the biochemical constituents of fish.

Various scientists including Radhakrishnan (1957), Shrivastava et al., (2001), Rhizkalla et al., (1999), Krishnamurthy (1969), Safi and Khan (2005) Hoda and Khan (1995) and many others have worked on food and feeding habits of teleosts. Scientists including Hynes (1950), Pillay (1952), Das and Moitra (1955, 1956), Ahmed and Akhtar (1967), Windel (1968), Windel and Bowen (1978), Nargis and Hussain (1987) described various methods of analysis of stomach contents in fishes. Food and feeding habits of *Sillago sihama* was explained by Chacko (1949). Study on the diet of fishes helps to understand how animals live and grow, what food may influence their abundance and distribution and the relative quality of feeding conditions. It also helps in the study of length-weight relationship, reproductive biology as well as fecundity. Fecundity of a species is defined as the number of eggs released by an individual fish during a spawning season. Study on nutritional requirements is also helpful to obtain the best growth at least period (Royce, 1984) in aquaculture.

Scanty information is available about the biology of *Sillago sihama*. Available information on its biology in Indian waters is mainly by to the works of Radhakrishnan (1957) in Gulf of Mannar and Palk Bay and Palekar and Bal (1960; 1961) in Karwar waters and also from Taiwan (Lee, 1976) and North Queensland, Australia (Gunn and Milward, 1985). For understanding the overall ecology of Sillaginids and determining their future management, study on the feeding habits of Sillaginids is necessary.

The main objectives of this study were to analyse the stomach contents of *S. sihama* on monthly basis, to determine the feeding intensity and the condition of the stomach.