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FOOD AND FEEDING HABITS OF *PUNTIUS SARANA* (HAMILTON) FROM GODAVARI RIVER, NANDED, MAHARASHTRA STATE

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Abstract: **The food composition of *Puntius sarana* was studied for a period of April 2015 to March 2016. The fish feed on both types of foods plant as well as animal origin. The food and feeding habit of *Puntius sarana* has showed that it is omnivorous. Total food items of *Puntius sarana* divided into four groups phytoplanktons (55.45%) followed by zooplankton (26.1), macroinvertebrates (12.21%) and miscellaneous items (6.56%). Phytoplankton was the first preference of *Puntius sarana* and it is observed for 55.45% of the total items.**

Keywords: **Food and feeding habits, omnivorous, Godavari river.**

1. INTRODUCTION

The study of food and feeding habits of fishes is considered very important in fishery biology. Food is the main source of energy and plays an important role in the life history of fishes. The basic function of life such as growth, development and reproduction take place at the expense of energy, which enters the organisms in the form of food (Nikolsky, 1963). The food habits of some fishes living in different parts of a regime may vary due to differences in physico-chemical and biological characteristics of their feeding niches. A thorough knowledge of food and feeding habit is also necessary for understanding biochemical composition of fish and for successful fish farming or aquaculture. Recent work on food and feeding habits of fish has done by several workers viz., Begum et al. (2008), Ayoade et al. (2008), Arthi et al. (2012), Gupta and Banerjii (2013), Allison and Sikoki (2013), Dutta et al. (2013), Akombo et al. (2014) and Singh et al. (2014). In view of above information, study of food and feeding habits of *Puntius sarana* from Godavari river, Nanded region, Maharashtra has been conducted and is presented in this paper.

2. MATERIALS AND METHODS

Collection of the fish samples:

In order to study food and feeding habit, a total of 600 fish specimens (11.0 cm to 26.6 cm length) were collected on monthly basis from April 2015 to March 2016 from Godavari River at Nanded. The field collections were done with the help of local fishermen. Each fish was dissected, after recording length, weight and sex. Gut content was preserved in 5% formaldehyde. Each gut content was considered as unit, the gut contents were identified and number of each taxon were recorded. The percent composition of each food items was calculated following Hynes (1950) and Moitra S.K. (1973).

The nature of gut contents revealed that *Puntius sarana* is omnivorous in habit. Among the food, phytoplanktons, dominated throughout the year in the form of major food item by fishes. Zooplanktons, Macro-invertebrates and some Miscellaneous items were found in the gut of fishes. The month wise variations in the percentage composition of different food items is given in Table 1.

3. RESULT AND DISCUSSION

Analysis of gut content was made both qualitatively and quantitatively. The content was observed on monthly basis by applying percentage numerical count methods. The minimum quality of food items were observed during summer, especially in April, May and June while the maximum during winter especially in November, December and January.

Phytoplankton were found to be most preferred food items throughout the year. Higher percentage of phytoplankton were observed during September 2015 (62.8) while lower during June 2015 (49.2). Zooplankton and macro-invertebrates were next popular food items. The higher percentage of food items were recorded in the month of November2015, December2015 and January 2016, while lower in April, May and June 2015. Zooplanktons were maximum during December 2015 (32.3%) and minimum during August 2015 (19.8%).

4. CONCLUSION

It may be inferred that on the gut content of *Puntius sarana* was based on percentage numerical count method and suggested that fish feed on plant material and animal material both. Numerically plant material was higher in comparison to animal material.

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Table 1: Month wise variations in the percentage of composition of different food items by *Puntius sarana* (Hamilton)

Month	Phytoplankton	Zooplankton	Macro-invertebrates	Miscellaneous
April 2015	52.3	29.7	10.3	7.7
May 2015	53.7	27.3	11.2	7.8
June 2015	49.2	30.4	14.3	6.1
July 2015	54.8	28.2	13.2	3.8
August 2015	59.6	19.8	11.8	8.8
September2015	62.8	20.2	12.7	4.3
October 2015	60.2	21.9	13.0	4.9
November 2015	57.3	21.2	12.3	9.2
December 2015	55.2	32.3	10.2	2.3
January 2016	53.7	27.9	11.2	7.2
February 2016	52.4	25.4	12.2	10.0
March 2016	50.2	28.9	14.2	6.7

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