

STUDIES ON THE BIOLOGY OF YOUNG GREY MULLET, *MUGIL CEPHALUS* L. II. FOOD AND FEEDING

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ABSTRACT

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This is the second of a series of investigations into the biology of young grey mullet, *Mugil cephalus* L., and the feasibility of its culture in the coastal, estuarine waters of Sri Lanka. The food and feeding habits of mullet, 20-55 mm in length, from the coastal Negombo Lagoon (7° 10' N; 79° 50' E) were studied from November 1974 to October 1975.

The feeding intensity, estimated as the number of food organisms found in stomachs per feeding individual, followed a seasonal pattern with the intensity increasing from April onward and reaching a peak during June-August. Over 80% of the individuals were found to feed throughout the year. The diet consisted of 18 genera of diatoms, eight genera of green algae, some desmids, six genera of blue-green algae and eight other food groups. No sand or detritus was found to occur in fish smaller than 25 mm in length, and the percentage occurrence of detritus and/or sand particles increased with increase in body length. Quantitatively and qualitatively, diatoms were the most predominant food items, accounting for more than 50% of the total diet. Although only one genus of Xanthophyceae was found to occur in the diet, its contribution was significant.

M. cephalus was found to show diurnal periodicity in feeding activity; peaks of activity occurred at dawn and around midday and were unrelated to the state of the tide.

The significance of the nature of the diet and the occurrence of two peaks of feeding activity within a 24-h period is evaluated in the light of present knowledge of the food and feeding behaviour of *M. cephalus* at various stages of growth, and the possibilities of polyculture with other herbivorous species is discussed briefly.

INTRODUCTION

Most studies of the food and feeding habits of fishes, from varying habitats, have shown that those of any one species differ in time and space and at different stages of growth (Hardy, 1924; Savage, 1937; De Silva, 1973; Staples, 1975), thereby emphasizing the need to study in more detail the food habits of a species. The food and feeding habits of at least five members of the family