Bull. Fish. Res. Stn., Sri Lanka Vol. 29, pp. 1-9 1979

Fish Fauna of a Coastal Lagoon in Sri Lanka: Distribution and Seasonal Variation

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Introduction

Sri Lanka is blessed with approximately 22,000 ha. of lagoons and subsistence fin and shell fisheries exist in almost all the larger lagoons. There is however, little known about fish and fisheries of these lagoons. Pillai (1965) reviewed the brackishwater fishery resources of Ceylon. De Silva and Wijeyaratne (1977) studied the food and feeding habits and De Silva and Silva (1979) the biology of young grey mullet, *Mugil cephalus* L., populations of the Negombo Lagoon.

In this paper results of investigations carried out over the period of September 1977 to August 1978 are presented. These data were collected in the course of a detailed investigation into the biology and the ecophysiology of the young grey mullet and the grey mullet fishery of the Negombo Lagoon (also see De Silva and Perera, 1976 ; Perera and De Silva, 1978 *a*, b). In this paper the disribution and seasonal variation of fin fish species within the Negombo Lagoon are presented.

Materials and Methods

Fig. 1 shows the Negombo Lagoon and the inset its relationship to the rest of the Island. Also indicated in the map are the five sampling areas. Some physico-chemical features of the different areas are summarised in Table I.

All samples were obtained from the brushpile, or the locally known masathu, fishery. The fishery, mode of operation of the gear and its efficiency have been dealt with earlier by Ward and Wyman (1975). According to these authors the brushpile fishery accounts for more than 80% of the catch in the Lagoon and also appears to be a means of obtaining a good representative qualitative sample of the fin fish fauna of the lagoon.

A brushpile from each of the five areas was hired and all the fish caught in each pile was collected. The total catch was weighed and sub-samples of each species was brought to the laboratory for detailed analyses. In the laboratory fish were identified to the specific level, the total and standard length of individuals determined to the nearest mm. below their actual length. Fish were then degutted, weight determined to the nearest 0.1 g. and the gonads kept frozen for further investigations.

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