

THE FOOD, FEEDING AND REPRODUCTION OF THE BORNEO MULLET, *LIZA MACROLEPIS* (SMITH), IN A COASTAL ESTUARY IN SRI LANKA

M. J. S. WIJEYARATNE AND H. H. COSTA

Dept. of Zoology, University of Kelaniya, Kelaniya, Sri Lanka.

ABSTRACT

Liza macrolepis in Negombo lagoon was found to have two spawning periods, one during January-February and the other during August-September. The males were more abundant in smaller size groups, but attained 1 : 1 sex ratio with growth. The mean lengths at maturity for males and females were 16 and 21 cm respectively. The absolute fecundity was estimated to be 12300-955000 for fish ranging in total length from 16 cm to 30 cm. The food consisted mainly of polychaetes and detritus. Analysis showed a high similarity between the diets of different size groups.

INTRODUCTION

Liza macrolepis (Smith) forms a significant component of high economic importance in the brackishwater fisheries of Sri Lanka (Wijeyaratne 1984). In Negombo lagoon, about 10% of the total grey mullet catch is composed of this species (Wijeyaratne 1984). This is higher than the contribution from *Mugil cephalus* which accounts only for 6%. Although some aspects of its biology have been studied in India (Gopalakrishnan 1974, Jhingran and Natarajan 1974) and Natal (Blaber 1976, 1977) no studies on the biology of this fish has so far been carried out in Sri Lanka. Because of its preference as a food fish, the present studies were carried out to investigate the food, feeding and reproductive biology of this species mainly as a prelude to the management of its fishery in brackishwater environments in Sri Lanka.

MATERIAL AND METHODS

Monthly samples of live *Liza macrolepis* were obtained from fishermen for a period of 3 years, from January 1980 to December 1982. After recording its total and standard lengths and weight, the maturity stages were recorded. The gonads were preserved in Gilson's fluid for the estimation of fecundity (Lagler 1956). The diameters of the eggs were determined using a micrometer eyepiece. The length of the gut was measured and relative gut length was calculated. The