

REPRODUCTIVE STRATEGY AND FEEDING OF DUSSUMIER'S MULLET *Liza dussumieri* VALENCIENNES FROM SRI LANKA

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Introduction

Liza dussumieri Valenciennes, also known as *L. subviridis* (Valenciennes) is one of the grey mullet species abundant in the coastal waters, lagoons, back-waters and estuaries of the tropics (Fischer and Bianchi, 1984). In Negombo estuary, (7°10'N and 79°50'E) in the west coast of Sri Lanka, it is the most abundant grey mullet species in the commercial catches accounting for about 37% of the total grey mullet catch (Wijeyaratne, 1984). In spite of abundant literature on the biology and fishery of other grey mullet species (Pillay, 1972), reports on *L. dussumieri* appear to be very sparse. It is well known that an understanding of the biology and ecological requirements is essential for efficient management of fisheries and fish farming. This paper describes the reproductive strategy, food and feeding of an estuarine population of *L. dussumieri* from Sri Lanka.

Materials and Methods

From the commercial catch of Negombo estuary, 986 specimens of *L. dussumieri* were obtained for a period of two years between January 1982 and December 1983. The fish preserved in ice were brought to the laboratory at the University of Kelaniya and total length and weight were measured.

The specimens were dissected open and maturity stage of gonads and sex were recorded. Gonads were removed and weighed to determine the gonadosomatic index. Mature ovaries were preserved in Gilson's fluid (Simpson, 1951) for one week and the diameter of oocytes were measured using an ocular micrometer. The fecundity was estimated by subsampling gravimetrically (Lagler, 1956). The gut was removed and length of intestine was measured. Stomach contents were scooped out, weighed and qualitatively analysed under an optical microscope. Quantitative analysis of food was carried out by the method described by Helawell and Abel (1971). Similarity among the diets of different size groups were determined using Schoener's (1970) formula.

Results and Discussion

Reproductive Biology :

Six developmental stages of gonads were identified in both sexes of *L. dussumieri* during the present study. These stages are described in the Table 1. The sex of virgin fish could not be distinguished since both ovaries and testes were similar to each other in external appearance at this stage. These maturity stages have been observed in other grey mullets such as *Mugil curema* and *M. cephalus* in Texas, USA (Moore, 1794).

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