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FOOD AND FEEDING OF TWO SPECIES OF GREY MULLETS *VALAMUGIL BUCHANANI* (BLEEKER) AND *LIZA VAIGIENSIS* QUOY AND GAIMARD INHABITING BRACKISHWATER ENVIRONMENTS IN SRILANKA

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Abstract

Valamugil buchanani and *Liza vaigiensis* were observed to be omnivorous grazers feeding mainly on serpulid polychactes and detritus. Considerable amount of sand were also present in the stomach contents. Seasonal variation in the abundance of different food items in the diet was observed for both species. In *V. buchanani*, the gastrosomatic index was found to be relatively low during their breeding season. The relative gut length of *V. buchanani* increased significantly with the size of fish. However, the amounts of plant matter and animal matter in the diet did not change significantly with size. The values calculated for similarity indices indicate that there is high or moderate overlap among the diets of different size groups of bot h species.

Introduction

The grey mullets (Fam: Mugilidae) have been identified as an important group of fish in the brackishwater fisheries of Sri Lanka (Pillai 1965, Wijeyaratne and Costa 1987a, 1987b). They are widely used for brackishwater aquaculture in many regions of the world (Oren, 1981). Fifteen species of grey mullets have been recorded in lagoons and estuaries of Sri Lanka (Munro, 1955; De Silva and Silva 1979; Wijeyaratne, 1984). Of these, seven species, namely *Liza subviridis* (Valenciennes), *L. macrolepis* (Smith), *L. tade* (Forsskal), *L. vaigiensis* Quoy and Gaimard, *Mugil cephalus* Linnaeus, *Valamugil buchanani* (Bleeker) and *V. cunnesius* (Valenciennes) have been identified as the most important species in the brackishwater fisheries of Sri Lanka (Wijeyaratne and Costa, 1987a). Various aspects of biology such as age and growth, food and feeding and reproduction of some of these species viz, *L. subviridis*, *L. macrolepis*, *L. tade*, *M. cephalus* and *V. cunnesius* have been studied in detail (Wijeyaratne and Costa, 1986, 1987a, 1987c, 1987d, 1988a, 1988b). However, for *L. vaigiensis* and *V. buchanani* only the aspects of age and growth have been documented (Wijeyaratne and Costa, 1987a).

When the rate of growth, asymptotic length and growth coefficients of *V. buchanani* and *L. vaigiensis* are considered, it appears that these two species are suitable for brackishwater aquaculture as *Mugil cephalus* which is widely used in such aquaculture programmes in many regions of the world. Therefore, present study was undertaken to investigate on the food and feeding of these two grey mullet species which may be useful as a prelude for their aquaculture in brackishwater environments. In addition, these results will also be useful as a complement to the existing information on the biology of grey mullets.