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Food Organisms of Juveniles of *Chaenogobius mororanus* Inhabited at Intertidal Zone of the Western Coast of Korea

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ABSTRACT

To investigate the food organisms of the *Chaenogobius mororanus* during the juveniles stage, the stomach contents of fish, captured in the intertidal zone of Chungchong- nam-do Sochon-gun Su-myon Dodun-ri (Fig. 1) between on early June from end of May 2003, were observed. Total length of the juveniles of *C. mororanus* was 5.0 ㎜ ~8.4 ㎜ size, and the participation rate of feeding was 71.4%. Main food organisms were such as copepods, decapods, polychaete larvae, amphipods and these occupied more than dry weight 3.9%. Copepods among them dominated the most quantitys by average 62.0%, and next, food organismsms appeared much by order of decapods, polychaete larvae and amphipods etc.. Therefore, most important food organisms of juvenile stage of *C. mororanus* were copepods, decapods, polychaete larvae, amphipods etc.

INTRODUCTION

Gobiidae being calculated that about 2,000 species are ranging in all over the world (Hoese, 1985), is occupying very important location in nutrition rank of the ecosystem in coastal district and inside bay (Choi et al., 1996) .

The *C. mororanus* of them is the small fish that live in the bottom, distributed much between on the shore tide pool and sunken rock in our country. In this research, distribute widely to western sea district along the coast intertidal zone, the feeding participation rate in the juveniles stage of *C. mororanus* that is occupying ecologically important location was examined, and the kind and composition of food, the change of food accordring to the fish size, were examined from stomach contents.

MATERIALS AND METHODS

Fish fixed in neutral formalin solution 5% as soon as collect, and size of fish measured total length to 0.1 ㎜ by standard. In order to investigate the

appearance aspect of food organisms, the weight change of stomach contents was found going through fullness of stomach. Also, fish size groups particularly, the dry weight ratio of each food organisms for whole stomach content was measured. Participation rate of feeding calculated as the rate of juveniles that feed food about numbers of total individuals. The appearance rate of food organisms was examined from the number of juveniles that each food organisms appears. To recognize the importance degree of each food organisms, multiplying the number composition of individuals of food organisms and the appearance rate, calculated the index of relative importance.

RESULTS AND DISCUSSION

If see the participation rate of feeding that ensue to total length, expressed the lowest participation rate from total length 5.0~5.4㎜ to 52.2%, and the highest participation rate from total length 8.0~8.4㎜ to 88.9% (Table 1). If observe the participation rate of feeding by gathering time, showed level as much as average 69.8% in the morning, and while this decreased until noon time 56.7% becoming low gradually, after begin to increase again in the afternoon and show the maximum value by 84.1% on 3 o'clock P.M., showed low and by 53.4% on 6 o'clock P.M. the lowest value again gradually (Fig. 2). Main food organisms observed in the stomach of *C. mororanus* were such as copepods, decapods, polychaete larvae, amphipods, and these occupied more than dry weight 3.9%. Copepods among them dominated the most quantitys by average 62.0%, and appeared much by decapods, order of polychaete larvae etc. (Table 2). The composition rate of individual among food organisms of copepods was high and because the appearance rate was high, IRI represented the highest value by 5,257.1, and decapods was 794.8, polychaete larvae represented value of 668.3 (Table 3).

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