

## Feeding Habits of *Chaenogobius mororanus* Inhabited at Intertidal Zone of the Western Coast of Korea

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### ABSTRACT

To understand feeding habits of *Chaenogobius mororanus*, this study has been conducted by analyzing stomach contents. *C. mororanus* were monthly collected from the intertidal zone of Dodun-ri, Sochon from May 1997 to April 1998. Fullness of stomach was increased twice a day, in the morning and afternoon. *C. mororanus*(1.0~5.9 cm in standard length) was a carnivores consuming mainly decapods, amphipods and copepods. Its diets also included minor quantities of isopods, cirriped larvae, polychaete larvae and stomatopods. According to fish size examined, some changes in feeding habits were apparent. That is, small individuals prefer to prey in the order of copepods, decapods and amphipods. However, as fish size increased, decapods and amphipods were heavily selected.

### INTRODUCTION

Gobiidae are about 270 Genus all over the world, being calculated that 2,000 species are ranging, numbers of species are one of much taxons among fish. Therefore, these are occupying very important location in nutrition rank of the shore and inside bay ecosystem. *Chaenogobius mororanus* ranges mainly to the western sea shore and the brackish district of our country , researches about the feeding habits of fish supplies basis data to understand dynamic side of ecosystems that fish has belonged. In this research,analyzed the feeding habits of *Chaenogobius mororanus* that collected in the intertidal zone of Dodun-ri, Sochon.

### MATERIALS AND METHODS

*Chaenogobius mororanus* used in this research were collected in water or tide pool at low tide mainly by every month one time from May, 1997 to April, 1998.

About all individuals of *Chaenogobius mororanus* that stomach contents were observed, food organisms' appearance frequency and dry weight ratio were examined. Appearance aspect of fullness of stomach, time different food organisms'

appearance aspect and body length different food organisms of fish were examined. According to season, to recognize is food organisms' change that fish feeds some measure, Horn's overlapping index( $C \lambda$ ) that change Morisita's overlapping index is used (Johnson, 1981) and food organisms' overlapping was examined. To recognize food organisms' diversity degree that fish feeds according as grow, food organisms' diversity degree observed in stomach contents Shannon-Weaver Index  $H'$  (Pielou, 1976) as appear. Food organisms' index of relative importance(IRI) that get fed to recognize relative importance that each kind of food occupies was found by functions of Pinkas et al.(1971).

## RESULTS AND DISCUSSION

*Chaenogobius mororanus* collected in investigation waters were total 168 and body length distribution to 1.0~5.9cm dimension small size individuals most occupy. Fullness of stomach was increased greatly two times in a day generally, the fish represented feeding rhythm of carnivorous. Main food organisms of *Chaenogobius mororanus* were decapods, amphipods, copepods, isopods and cirriped larvae etc.

Appearance frequency of decapods was 63.5%, and decapods dominated 16.2% of total food organisms individuals, 37.2% of dry weight's and 26.85% of IRI. If see the change of food organisms by season, *Chaenogobius mororanus* fed decapods, amphipods, copepods etc. mainly regardless of season. But, ratio that these main food organisms occupies among stomach contents was different gradually according to season. Generally, copepods showed the extent of 13.5~37.2%, and ratio that copepods occupies in food organisms was high in the young individuals, and the ratio of copepods decreased rapidly as body length increases. Body length of fish as increasing, the fish fed more big decapods or amphipods and other foods relatively than small copepods. The overlapping value of main food organisms between season was low comparatively, and the diversity( $H'$ ) of main food organisms was high value in the big individuals, and low value in the small individuals.

## REFERENCES

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