

## The dietary pattern of Caspian bighead goby, *Ponticola gorlap* (Ilgin, ۱۹۴۹) in Anzali wetland

Afshar Zoughi Shalmani <sup>۱\*</sup>

Babak Tizkar <sup>۲</sup>

Ali Nazmi <sup>۳</sup>

<sup>۱, ۲, ۳</sup>. Department of Aquatics and Fisheries Research, Gilan Agricultural and Natural Resources Research and Education Center, AREEO, Rasht, Iran.

\*Corresponding author:

zoughi\_a@yahoo.com

Received date: ۲۰۲۰،۰۵،۳۱

Reception date: ۲۰۲۰،۰۸،۲۳

### Abstract

This study was conducted to investigate the dietary habits of Caspian bighead goby (*Ponticola gorlap*) in Anzali wetland. For this purpose, ۷۰ goby were collected from four stations in different parts of Anzali Wetland by cone nets (fyke net) during December ۲۰۱۴ to April ۲۰۱۵. The contents of the gastrointestinal tract were examined using the occurrence method of Numerical methods. Condition factor, prey abundance, Vacuity Index, Food preference Index and Food preference Index were studied. The results show that The minimum and maximum lengths of the studied fish were ۹،۵۲ cm and ۱۷،۸۰ cm, respectively, and the minimum and maximum recorded weights were ۱۳،۴۳ and ۶۴،۶۱, respectively. The relationship between fish length and weight was  $W = ۰،۰۳۲TL^{۲،۶۸}$ . Condition factor ranged from ۱،۳۵ to ۱،۴۷ in the study months but did not show a significant difference ( $P > ۰،۰۵$ ). In terms of prey frequency, crustaceans (river shrimp, *Macrobrachium nipponense*) accounted for ۵۸،۱۴%, bony fish (Cyprinidae) ۹،۳%, insects (Chironomide) with ۴% and uncertain mass ۳۰% of the total prey. Index of Vacuity Index showed that the Caspian bighead goby is a gluttonous species in cold seasons. Gastro-somatic Index in different months did not show a significant difference ( $P > ۰،۰۵$ ), but its rate was low throughout the period. In terms of Food preference Index of river shrimp with ۷۴،۱۹% as the main food, bony fish (Cyprinidae) with ۱۲،۹% as a secondary food and chironomidae with ۳،۲۳% as accidental feed of goby in the studied months were determined. The results show that the diet of Caspian bighead goby in the study period is limited but the Gastro-somatic Index is high, also according to the type of feeding, can be an inhibitory factor for non-native river shrimp in the wetland.

**Keywords:** *Ponticola gorlap*, dietary pattern, Anzali wetland.