

GUT MICROFLORA OF *CHICOREUS RAMOSUS*: A STATUS REPORT

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In general, guts of aquatic animals may be intermittently or permanently populated by many groups of micro-organisms, that could be beneficial or pathogenic depending on their influence. Bacteria play a very important role in the host's digestive processes, growth and disease susceptibility. According to reports by WHO [No.398, 1968], seafood plays an important role in the transmission of diseases. Therefore, a thorough understanding on the presence and the role of the bacterial flora of molluscs is essential to detect the potential pathogens and to improve the quality of seafood.

In the present study, the total aerobic heterotrophic bacterial count (THB) of the different gut regions of *Chicoreus ramosus* collected from Cuddalore, Mandapam and Tuticorin sectors varied from 13×10^3 (Cuddalore) to 36×10^4 CFU/g of gut sample (Mandapam). The gelatin utilising bacterial population fluctuated from 55×10^2 (Mandapam) to 81×10^3 CFU/g (Tuticorin). Starch hydrolysing bacteria ranged from 4×10^3 (Cuddalore) to 85×10^3 CFU/g (Mandapam). The lipolytic bacterial population

varied between 86×10^2 (Mandapam) and 72×10^3 CFU/g (Mandapam). Among the 3 different gut regions of *C. ramosus*, the highest bacterial numbers were recorded in the hind gut regions followed by fore gut, while the minimum count was recorded from the mid gut. The bacterial forms *Micrococcus*, *Corynebacterium*, *Bacillus*, *Flavobacterium/Cytophaga* sp., *Vibrio*, *Pseudomonas*, *Aeromonas*, *Achromobacter* and *Enterobacteriaceae* were commonly encountered. Among these the gram positive *Micrococcus* was found to be dominant. Proteolytic, amylolytic and lipolytic bacterial strains were observed in the mid gut region of *C. ramosus* in higher numbers than in fore gut and hind gut. *Micrococcus* and *Corynebacterium* were found to be the dominant forms, which could have contributed more to hydrolysis of protein, carbohydrate and fat in all the three regions of the digestive tract. The present study reveals the presence of very low numbers of pathogenic bacterial genera like *Vibrio* and *Pseudomonas*. Further studies will hopefully reveal the seasonality and the pathogenicity of bacterial forms harboured in this snail.

REFERENCE

- WHO Expert Committee and F.A.O.: Microbiological aspects of food hygiene, 1968. WHO Technical Report Series No.398.