Chapter - II

Material and Method

In river Panchaganga at Kolhapur the crab, Paratelphusa jacquemonti is of common occurrence. A large number of crabs were collected, brought to the laboratory and maintained in the freshwater aquaria. An aquarium was set to allow the crabs free movements and natural surroundings. Some pond pebbles and stones were also kept in the aquarium for crabs to hide under the stones. Larval stages of mayor carps like Labeo bata and Cirrhinus reba were introduced in the aquarium. Some aquatic weeds like chara and hydrilla served as food to these larvae.

The animals were killed and preserved in 7 per cent formalin freshwater. Nearly 30 animals were dissected to study in detail the structure of alimentary canal, mouth parts and gastric mill. All mouth parts were removed carefully and separate photographs were taken of each mouth parts. Hand drawings were also drawn to label the different parts.

Mouth parts bearing setae were dissected out and were kept in 4 per cent formalin. Before taking out the setae each mouth part was heated in 20 per cent glycerine (Green and Anderson 1960). The setae were mounted in D.P.X. mountant and the structure of single seta was observed under low power of microscope. Seventyfive slides of the setae were prepared. Drawings were drawn of the setae with the help of camera luicida. Diagrams were also drawn on Eranascope. The part of the carapace lying directly dorsal the gastric mill was

cut using dentist's drill to study the gross anatomy and movement ossicles of the gastric mill Fig.31 . Direct photographs were taken to show the position of gastric mill.

The gastric mill was carefully taken out from the body of the crab and washed in freshwater to remove all attached muscles. Then it was placed in 4 per cent potassium-hydroxide at 55°C for 24 hrs and stained by Alizerin Reds method (Humason 1972). The stained preparations were cleared and mounted in glycerine.

Feeding mechanisms were studied in live crabs by three methods.

(1) Observations of the animal with all appendages intact.

(2) Stimulation of feeding after 5-10 days of starvation.

(3) Foregut of ten animals were fixed in 5 per cent formalin solution immediately after collection. A dorsal longitudinal slit was made in each foregut. The gut contents were brushed into watch glass and were examined under a dissecting microscope.

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