

JOB REPORT

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Project Name: General Ecological Survey of the Matagorda Bay Area.

Period Covered: June 3, 1958 - June 15, 1959. Job No. B-4

Study of the Diet of the Brown Shrimp

Objective: To determine the main items in the diet of the brown shrimp and its seasonal variation.

Procedure: Samples of brown shrimp collected in the trawl were examined under the microscope. Aquarium studies of the feeding habits will be carried on.

Findings: The greater need for information on the vertebrate and invertebrate populations in Area M-4 during the first year of research limited the time of study of shrimp diet.

The time allotted to this project was principally used to develop methods of preserving shrimp foregut contents. The best method developed was an injection of 5% formalin into the hepato-pancreas region of the shrimp body. (The contents of the foregut will thus remain intact for one month.)

Brown shrimp were not available during the winter, so white shrimp were used in this study. The five white shrimp studied were caught on September 26, 1958 in Coon Island Bay. The bottom type in the area trawled was firm blue-gray mud with scattered live oyster clumps on the bottom. The white shrimp were dissected and their foreguts (esophagus and gastric mill) removed. The foregut was opened and the ingested material was washed onto a slide for microscope examination.

The foreguts of the five white shrimp studied had the following major organisms listed in descending order of abundance: (1.) Copepods (2.) Foraminifera (3.) Dinoflagellates. These animals were entangled in a mass of brown branching plant material.

The small samples of white shrimp foreguts studied can only be used as a minor indication of possible materials to be found in their diet.

New laboratory methods developed in this year's study will allow a more precise dietary study this coming year.

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