

QUARTERLY REPORT

THE LIFE HISTORY OF THE SEA TROUT, REDFISH AND FLOUNDER

By

Dewey W. Miles

From: October 1, 1950 to December 31, 1950

Biologist: Dewey W. Miles

Boats: Manatee

Crew: Santos Pulido

INTRODUCTION

The quarterly period of October, November, and December, 1950, was spent tagging trout and redbfish and obtaining adult individuals for sex, maturity, and age determination.

An intensive search for the eggs, larvae, and post larval forms of the redbfish (*Sciaenops ocellatus*) was made from September 15, 1950 to December 1, 1950.

Concentration for most of the quarter period was upon the collection of mature trout and redbfish for sexual examination.

STATUS OF THE PROJECT AT TIME OF LAST REPORT, SEPTEMBER 30, 1950

Up to and including the month of September, 1950, the post larval forms of the sea trout, (*Cynoscion nebulosus*), and the redbfish (*Sciaenops ocellatus*) had been collected monthly for the purpose of age determination, stomach analysis, and a general ecological study of their seasonal habitats.

Age and growth determinations were charted for the entire one year period in maximum, modal, and minimum sizes in millimeters.

A quantitative stomach analysis for both trout and redbfish ranging between 35 and 120 mm. standard length was completed and tabulated.

AREAS WORKED

The areas worked for the quarter period ending December 31, 1950 were as follows:

Aransas Bay:

Allyn's Byte, Mud Island, Frandolig Point, Trout Bayou, Turtle Bayou, Big Bayou, North Pass, Long Reef, and Nine-mile Point.

Copano Bay:

Turtle Pen Flats, the area around the north shore of the Copano Causeway, Port Bay and Port Bay Channel, and Redfish Point.

Mesquite Bay: Cedar Bayou near the gulf entrance and the Mesquite Bay entrance.

Corpus Christi Bay: Shamrock Cove and the waters around Shamrock Island.

Redfish Bay: California Hole and the general area around the entrance to Big Bayou.

St. Charles Bay: Big and Little Devil Bayou and that area around Cavasso Creek.

Port Aransas: The Gulf Beach on either side of the jetty and as far south as five miles from the old fishing pier.

BIOLOGICAL DATA

Small post-larval forms of the redfish (Sciaenops ocellatus), measuring 3 to 9 mm. in length were taken in Cummings Bayou just off the main ship channel at Port Aransas on October 9, 1950.

Two weeks prior to this time, adult bull redfish were sighted in the Gulf of Mexico between Brownsville and Eighth Pass and were presumably engaged in courtship activities.

These small forms were taken on the incoming tide substantiating the fact that the eggs were laid in the open Gulf waters. No small post larval redfish could be found in any of the back bays at this time.

One 25 1/2 inch bull redfish was taken at Allyn's Byte on October 12, 1950, in a spent condition which indicates the possibility of redfish spawning before they are 29 inches standard length.

A school of ten bull redfish were taken at Allyn's Byte on October 12, 1950, and were sexed, tagged, and released. One of these redfish was recaptured by rod and reel on October 25, 1950, at the town of Matagorda or a distance of 65 airline miles. The total route covered by water would have been approximately 100 miles. This is the greatest distance covered by any tagged fish to date.

An examination of small trout 200 to 250 mm. standard length revealed that 99% of the males and 94% of the females

in December were maturing and would spawn in the spring and summer of 1951. 49% of the males and 38% of the females were maturing during the month of November. A sufficient sample of trout between this size range was not obtained during the month of October.

Fish Examined in the Field

October

Species	Number Tagged	Number Examined	Number Returned
Trout	26	122	3
Redfish	0	20	0
Drum	0	2	0

November

Trout	175	1330	
Redfish	139	280	
Drum	10	40	

December

Trout	0	1550	
Redfish	0	82	
Drum	0	27	

OTHER ACTIVITIES

The Marine Seminar of the Marine Laboratory was held in Rockport on October 27-28-29, 1950 at which time lectures were attended by myself and other personnel. Three trawl trips were conducted by myself on the boats DOLPHIN and MANATEE for students of the various universities of the State of Texas.

Photographs of the Aspergilliosis infection in the geese of this area were made by me for J. R. Singleton and Sam. H. Nichols who were conducting the investigation.

Several scales from large bull redfish were studied for age determination by annuli count.

Commercial fishermen were interviewed for opinions concerning this coming spring's tagging program.

Utilization of Time

Project	Biologists Hours	Crew Hours
Collecting, tagging, and examining fish	450	450
Correspondence	30	-
Scale reading	20	-
Compilation of data	90	-
Interviews with commercial fishermen for tagging program	50	50
Photomicrography	15	-
Seminar	30	30
	<hr/> 685	<hr/> 530

SUMMARY

1. The large part of the fourth quarter period was spent collecting, examining, and tagging trout and redfish above the 0 year class.

2. The smallest post-larval redfish forms were found in a small bayou on October 9, 1950, on an incoming tide from the Gulf of Mexico.

3. The early maturity of trout 200 to 250 mm. in length was established by examination of the gonads of several hundred specimens.

4. A large tagging program for the Laguna Madre was arranged for the coming spring season beginning March 15, 1951.

5. A 100 mile migration by a large bull redfish was recorded during the month of October.