

JOB REPORT

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Project No: MO-2-R-1 . Date: June 30, 1959

Name of Project: Survey of the Major Oyster Fishery Reefs and Associated Organisms in Area M-6.

Period Covered: June 1, 1958 - June 30, 1959 . Job No: B-2a

Basic Survey and Inventory of Commercial Oyster Population in Aransas Bay

Objective: Effort has been directed toward the formulation of an accurate survey of the relative abundance of commercial oyster populations in the Aransas Bay area as an aid in determining potential conservation methods and increasing the annual oyster harvest.

Procedure: Population measurements were taken on seven major oyster reefs in Aransas Bay. Six of the reefs are located in areas of commercial importance and have been extensively fished by commercial oystermen for the past few years. The remaining reef, Two By Four, near Fulton, is in an area in which no commercial dredging is allowed.

Each reef station (Figure I) was sampled by means of a commercial type oyster dredge pulled by a power boat in the same manner as a commercial oyster boat.

A count sample of one standard size bushel of oysters taken at random over the reef area was counted and measured. None of the samples were culled. Each oyster was measured to the nearest centimeter and those over nine centimeters (approximately three and a half inches) were classed as commercial size oysters. Those under nine centimeters were classed as seed oysters or under the legal commercial size.

Percentages of each group are based on total count of live oysters in each sample.

Findings: Listed below are the reefs sampled, the percentage of commercial oysters and seed oysters and the number of oysters in each bushel sampled.

<u>Reef Checked</u>	<u>Date</u>	<u>% of Commercial Oysters</u>	<u>% of Seed Oysters</u>	<u>Number per Bushel</u>
Long	8-12-58	3.5	96.5	223
Long	4-20-59	20.3	79.9	133
Half Moon	9-3-58	8.0	92.0	270
Half Moon	4-20-59	25.7	74.3	183

<u>Reef Checked</u>	<u>Date</u>	<u>% of Commercial Oysters</u>	<u>% of Seed Oysters</u>	<u>Number per Bushel</u>
Jay Bird	4-20-59	15.8	84.2	279
Poverty	4-20-59	7.0	93.0	267
Paul's Mott	2-16-59	33.4	65.6	305
Two by Four	7-10-59	8.4	91.6	342
Two by Four	9-30-59	4.0	96.0	293
Cedar Bayou	3-25-59	72.0	28.0	96

An increase in the percentage of commercial oysters was found on Long Reef and on Half Moon Reef. These reefs were first checked in August and September, 1958, respectively. Both were sampled the second time in April, 1959. The increase of approximately 17.0% for each reef is contributed to the spat fall during the summer of 1958 and growth over the seven month lapse between samples giving the increased reading in April, 1959. The samples from any given reef will vary in percentages with seasonal spat fall and growth. Estimates of reef populations are correlated with growth rates in predicting overall commercial populations for the commercial season. Oysters in Aransas Bay are generally commercial size by the second season after they were spawned.

Comments: Aside of the sport fishing value of any oyster reef its economical value is based upon its importance as a commercial oyster bed. Areas in which the oysters are overcrowded will produce small non-commercial oysters. Reefs of this nature are limited in value and usefulness to the oysterman. On an overcrowded reef the amount of time needed to cull the few marketable sized oysters from the small clustered oysters is a major hinderence to the oystermen and wastes valuable time. An example of this type of situation is the Copano Bay area. This bay, located adjacent to Aransas Bay, is shallow; and in only a few places is the water deep enough to allow legal dredging in six feet of water. This law was amended for the 1958 oyster season to permit oystermen to dredge in water up to three feet deep in a major portion of the bay. This proclamation was intended to open the bay to boats which would come in and work the area, break up the clusters and cultivate the reef for future exploitation. Also, this new area would relieve some of the pressure on Aransas Bay. The results were decidedly unsuccessful as the oysters in Copano Bay are fouled with what has been referred to as an oily taste. The oysters were unmarketable and no production was noted from the bay. All dredging operations halted and the condition of the bay remained unchanged.

Aransas Bay has some reefs on which the oysters are small and clustered but not to the serious degree as those in Copano Bay. The commercially prominent reefs are being replenished by a good spat fall and satisfactory conditions exist for desirable growth. The conditions at the present time are good and production is expected to increase during the forthcoming season. However, if and when these conditions change, the oysters may be severely retarded in growth and reproduction. The reefs will have to be

relieved of some or perhaps all commercial pressure. This is an important aspect of management and must be anticipated. Additional measures are being considered in the way of reef expansion and reef construction in Area M-6.

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Date Approved

25 August 1959

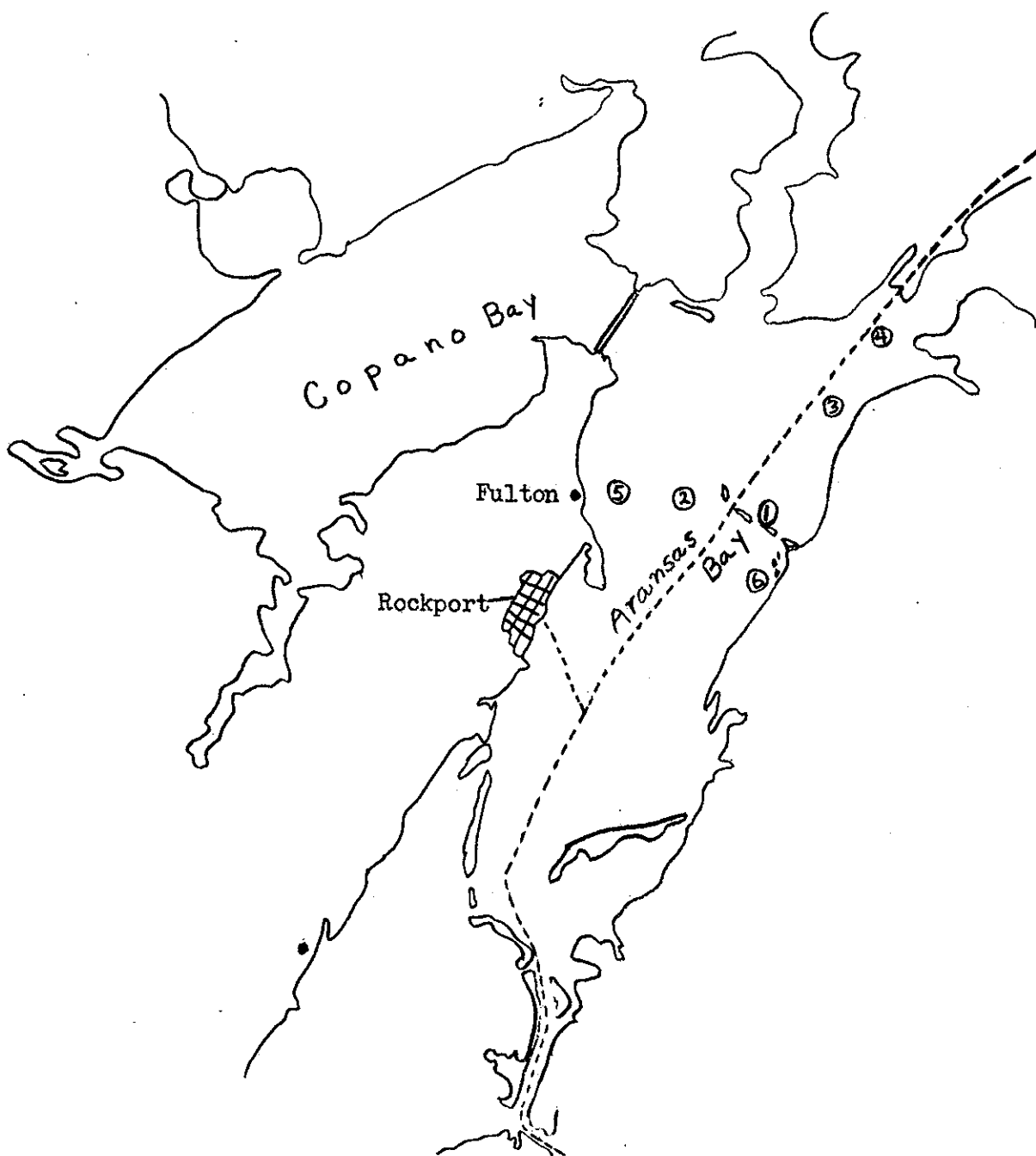


Figure I

○ Indicates reefs sampled.

- 1. Long Reef.
- 2. Half Moon.
- 3. Jay Bird.

7. Cedar Bayou (Not shown)

- 4. Poverty.
- 5. Two by Four.
- 6. Paul's Mott.