

JOB REPORT

Thomas L. Heffernan,
Marine Biologist

Project No. MO-2-R-2 Date 31 July 1960
Project Name: Survey of the Major Oyster Fishing Reefs and Associated Organisms
in Area MO-2.
Period Covered: March 1, 1960 - July 15, 1960. Job No. B-3a

Development of an Artificial Oyster Reef in Aransas Bay

Objective: To develop an artificial oyster reef in the Aransas Bay area to supplement production. Aransas Bay was closed to oystering in December, 1959, due to excessive mortalities on the natural reefs during the late summer months. Cause and effect are described in Job Report B-3b under Project Number MO-2-R-2 and Project Report MO-R-2.

Procedure: A series of bottom samples taken with an Ekman Dredge was used to locate suitable bottom upon which to build the artificial reef. The area selected consists of a firm sandy mud in six and a half feet of water. The base of the reef was made of washed mud shell a foot thick covering an area three hundred feet wide and five hundred feet long, conforming to the strip of desirable bottom running parallel to the shoreline. The location is about seven hundred yards from St. Joseph Island in the vicinity of Allen's Bight (Figure 1). Upon selection of a site to build the reef a permit was requested from the U.S. Corps of Engineers. The permit was approved and five thousand yards of washed mud shell was purchased, by bid, from Heldenfels Brothers Shell Company. The cost of the shell and placement was \$6,250. Construction of the reef was begun on June 17, 1960, and completed on July 2, 1960. The reef was seeded with oysters from a natural reef in Copano Bay (Figure 1). This reef was selected for the number of single seed oysters and the abundance of spat attached to the shell (Table 1). Approximately 150 barrels of seed stock were transplanted to the artificial reef on July 19 and 20, 1960. A twenty sample Dermocystidium marinum check was made on the reef from which the seed oysters were taken. All samples were clear of the fungus.

There are 3.7 standard bushels of oysters per barrel. At 2,366 oysters per bushel there were about 13,131,000 placed on the artificial reef as seed.

Comments: A study will be made of the reef in the way of population checks, hydrographic samples, glycogen analysis, and growth studies. The reef will be protected from oystering of any type until the population is sufficient to support commercial pressure.

Prepared by Thomas L. Heffernan
Marine Biologist.

Accepted by

Howard T. Lee
Howard T. Lee

Date

7 November 1960

FIGURE I

Locations of Artificial Reef and Seed Reef.

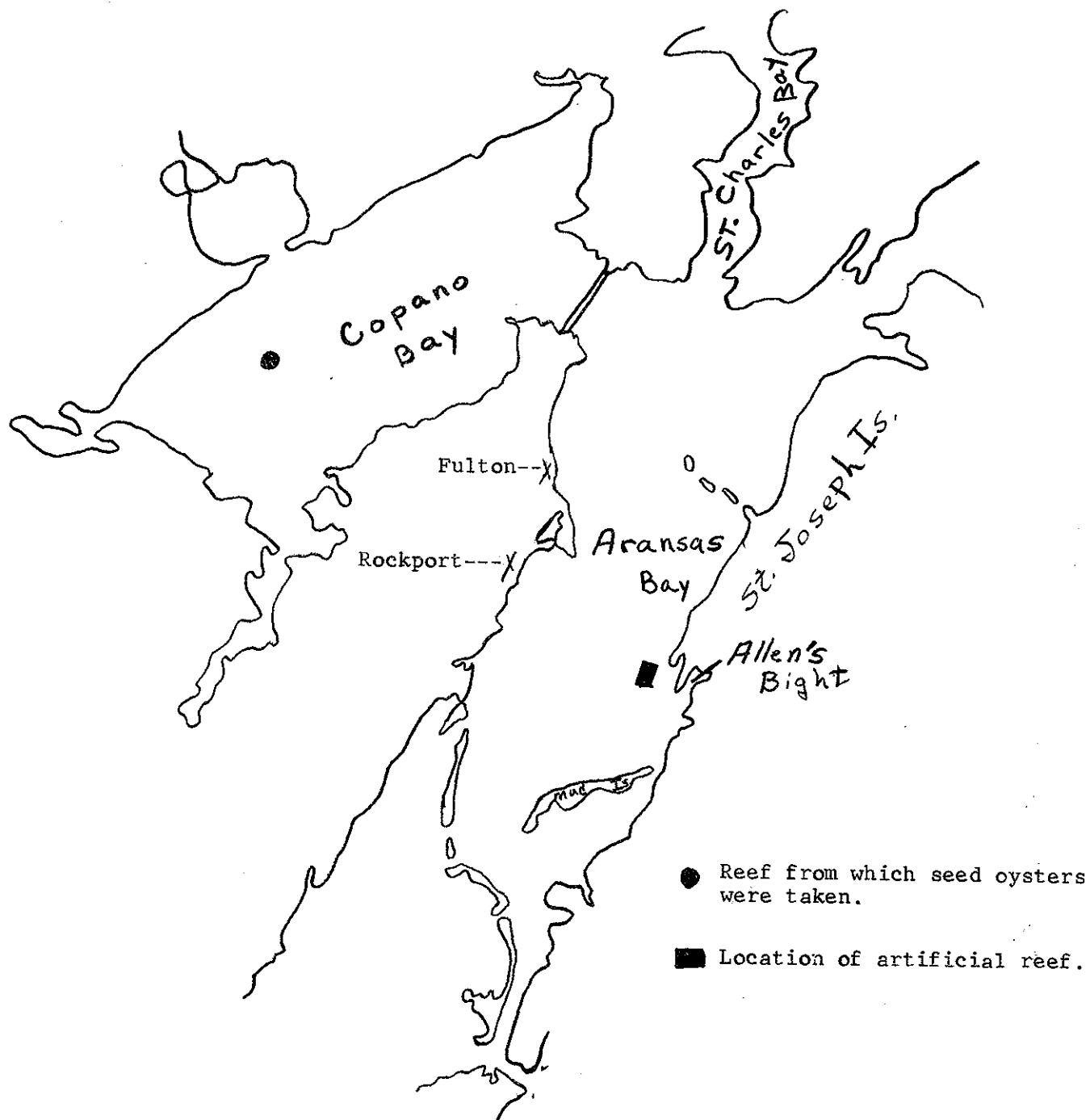


Table 1

Count Sample of One Standard Bushel of Oysters From the Seed Reef

Size of Oysters in Cms.	Number of Oysters in Group
Spat (less than 1 cm.)	1,127
1 cm.	692
2 cm.	96
3 cm.	40
4 cm.	83
5 cm.	71
6 cm.	75
7 cm.	97
8 cm.	50
9 cm.	28
10 cm.	3
11 cm.	3
12 cm.	1
Total -	<u>2,366</u>

