

Job Report

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Project Name: Survey of Oyster Populations and Associated Organisms  
Period Covered: January 1, 1963 to December 31, 1963 Job No. 3

Study of Oyster Population and Experimental Planting  
in Corpus Christi Bay

Abstract: Four oyster reefs in Corpus Christi Bay were seeded with live oysters transplanted from Copano Bay. Two of the seeded areas were on natural reefs which had suffered extensive oyster mortality in 1960 and 1961 and had not reestablished their populations. The other two locations were on artificial reefs constructed in 1962 of washed mud shell and were void of live oysters prior to the transplantation.

Test oysters held in trays at the four transplant locations showed little mortality from June through December 1963 indicating the future practicality of additional transplantations of oysters to the Corpus Christi Bay area to aid in reestablishing oyster populations.

Objectives: To determine if live oysters can be transplanted on existing reefs in Corpus Christi Bay; to determine the growth rates and mortality of the transplanted oysters.

Procedures: One hundred barrels of seed oysters were planted on each of four locations in Corpus Christi Bay (Figure 1). Test trays constructed of polyvinyl coated wire measuring 28 inches by 18 inches by 4 inches deep containing approximately 100 live oysters from the seed group were placed on each of the four reefs at the time the oysters were transplanted. Monthly counts and measurements were made to obtain growth and mortality data.

Findings and Discussion: Reef seeding was started in June 1963. The last load of live oysters was placed on location during the first part of July. All seed oysters were obtained from an unnamed 5 acre reef in Copano Bay near the town of Bayside. The seeding operation was let by contract at \$2.25 per barrel for a total cost of \$900.00.

Prior to the transplant operations, 20 oysters from the seed source location were examined for the presence of D. marinum. No D. marinum was found in any of the oysters.

Seed oysters obtained for transplant to Corpus Christi Bay ranged in length from 30 mm to 100 mm with an average length of 55 mm. Oysters were not individually culled but were separated from clusters and the excess dead shell removed. Total elapsed time from gathering to transplanting was approximately twenty-four hours for each load.

Salinities at the Copano Bay reef area and at the seeding locations in Corpus Christi Bay coincided closely at 38.6 parts per thousand. There were fractional temperature differences between the two areas due to differences in water depth.

Test baskets containing approximately 100 live oysters were placed on each of the four reefs at the time the oysters were transplanted. Mortality counts and growth measurements were made at monthly intervals from July to November. It was not possible to sample the baskets during October and December due to mechanical trouble with the boat.

Length frequency histograms of the oysters in test baskets appear in Figure 2. Oyster mortality was highest in July at which time the oysters in the College Reef test basket showed 17 per cent mortality. Oso Reef showed 21 per cent mortality. Alta Vista Reef had a 20 per cent mortality and Long Reef showed 22 per cent mortality. Mortality rates decreased after the initial shock of transplanting and remained low during the rest of the year (Figure 3).

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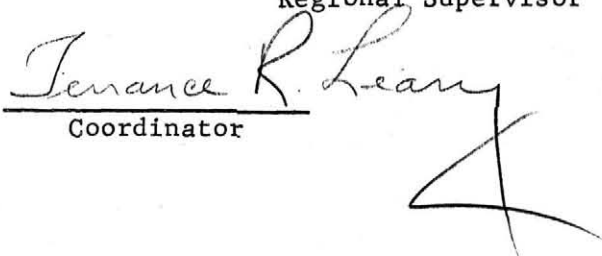


Figure 1  
Oyster Tray Stations

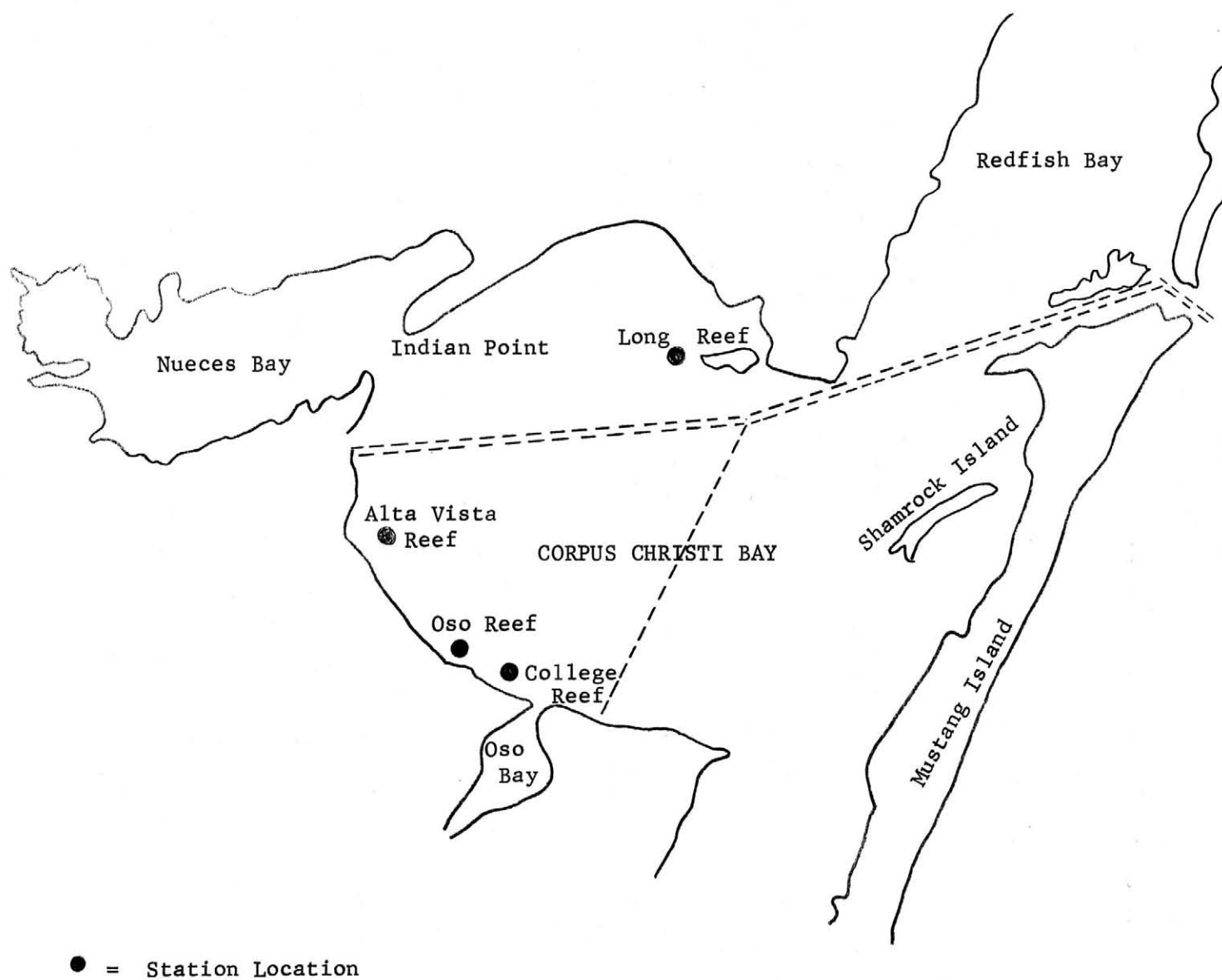


Figure 2

Length Frequency of Test Oysters

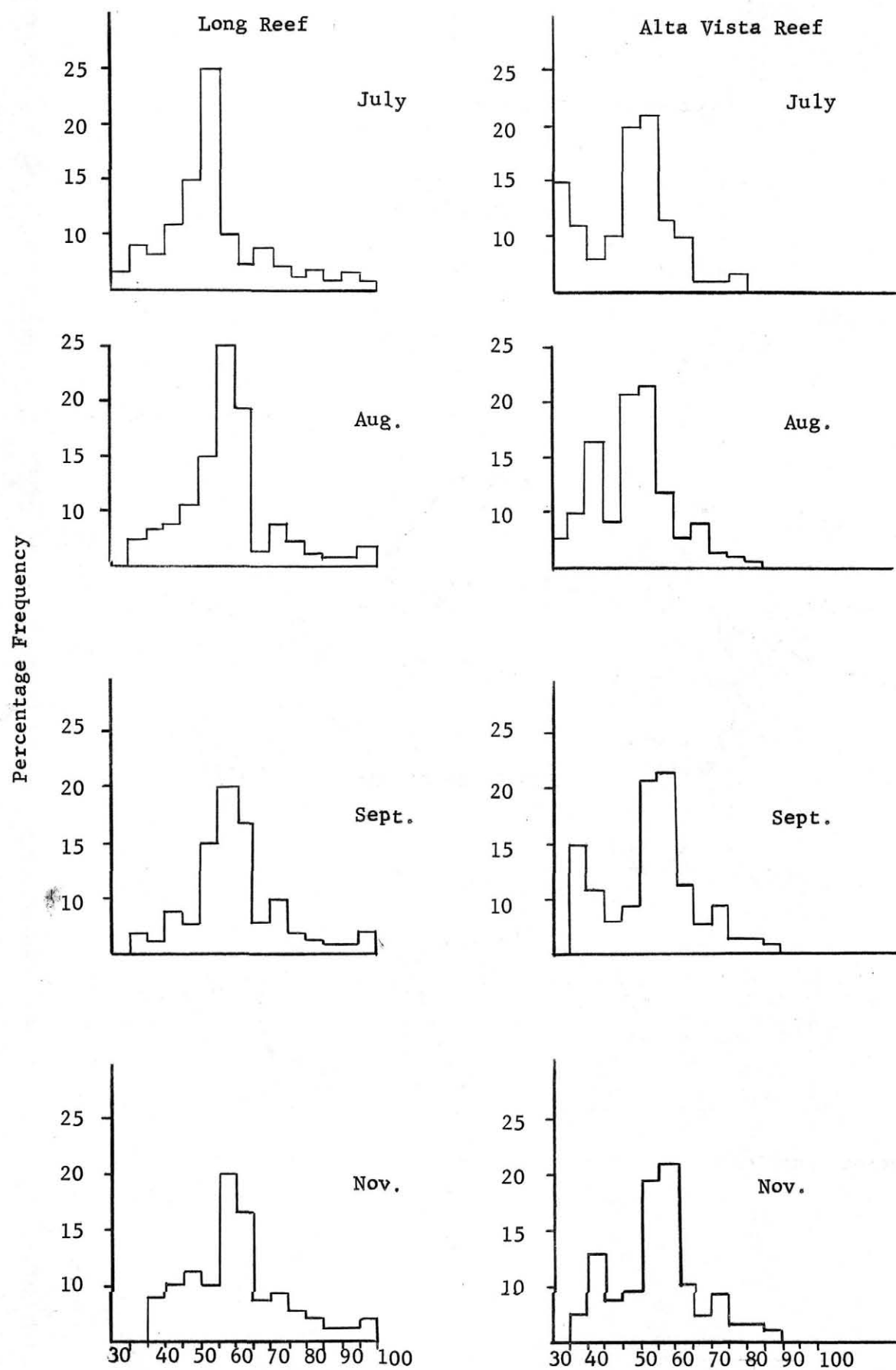


Figure 2 (Continued)

Length Frequency of Test Oysters

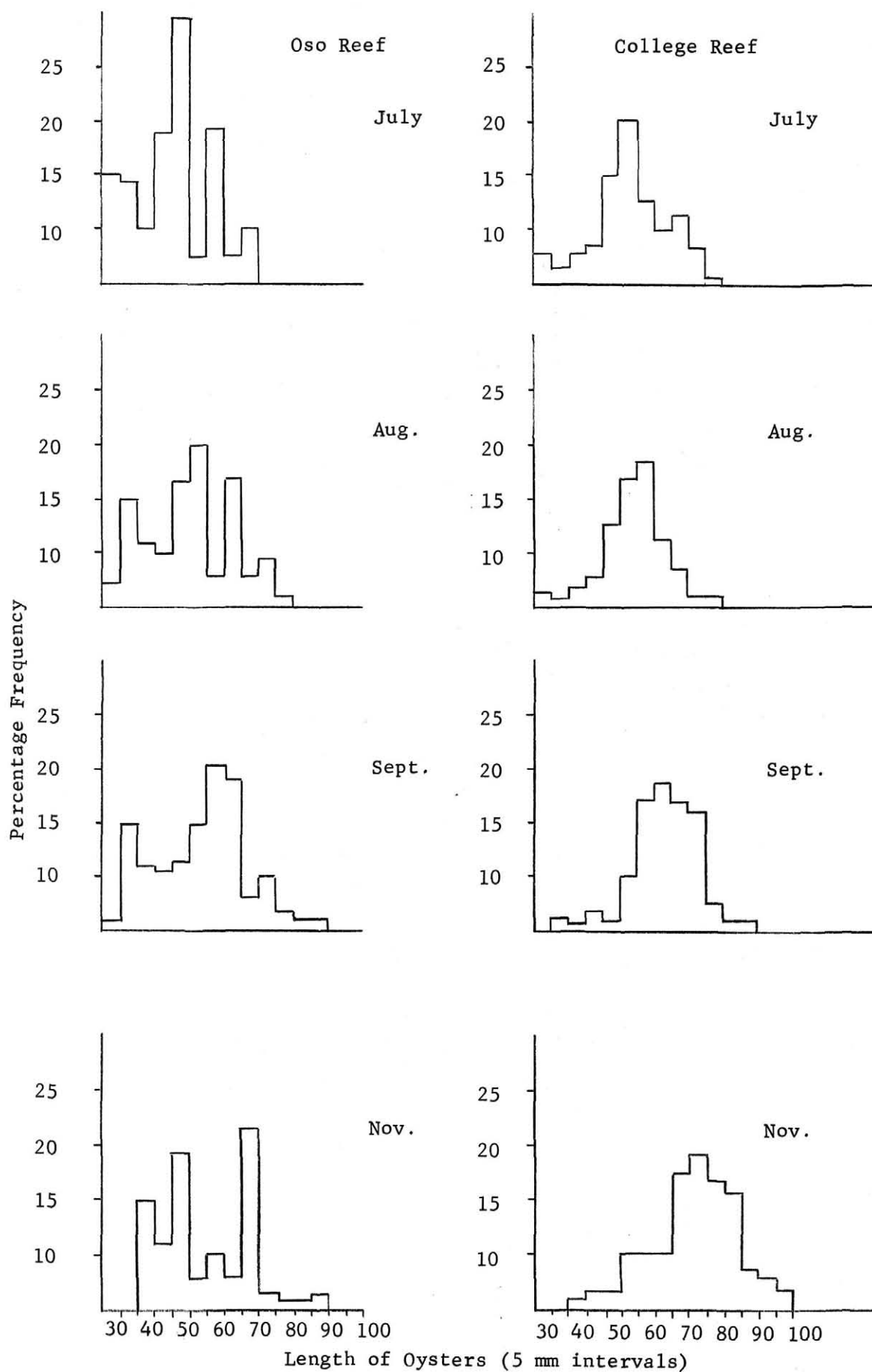


Figure 3

Per Cent Mortality  
July 1963 to December 1963

