Job Report

Rudy Martinez
Marine Biologist

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Project Name: Studies of the Blue Crab Population of the Texas Coast

Period Covered: September 1961 to December 1962 Job No. 6

Survey of Blue Crab Populations in the Corpus Christi Bay Area

Abstract: Seven stations in Corpus Christi, Nueces, Redfish and Oso Bays were sampled semi-monthly with an otter trawl. Results show peaks of abundance in February and in May, followed by a rapid decline in June as salinity increased. By August, salinity went up to over 40 ppt. and crabs became very scarce. The sex ratio was uneven, particularly in May when out of 262 crabs taken, 195 (75 per cent) were females.

Objectives: To determine the relative abundance, period of presence and distribution of blue crabs in the Corpus Christi Bay Area.

Procedure: Stations located in productive crab nursery grounds were sampled twice each month. Sampling was done with a 10-foot trawl of one-half of an inch stretch mesh with a one-fourth of an inch square mesh liner and with a twenty-foot trawl with a square mesh size of 1 1/2-inches.

Records of size, abundance, sex and environmental conditions were made at each sampling. Figure 1 is a map of Corpus Christi Bay showing location of collection stations.

Findings and Discussion: A total of 1,586 blue crabs were collected by trawl during this study period. Of this number, 912 were females and 674 were males. The sex ratio was uneven through the study period, particularly in May when the females made up 75 per cent of the total catch (Figure 3). Crabs reached peaks of abundance in February and in May but began declining rapidly in June as salinity increased to over 33 ppt. By August, the salinity went up to over 40 ppt. and crabs became very scarce (Figure 2). Table 1 shows catch per unit of effort of male and female crabs and percentage of each taken in trawl samples.

Ovigerous females were observed in April and in July. A trammel net set made at the bulkhead area in Corpus Christi Bay in April produced 94 crabs of which 89 were sponge crabs.

Prepared by: Rudy Martinez
Marine Biologist

Uluth R. Childress
Project Leader

Ernest G. Simmons
Regional Supervisor

Approved by Terrance R. Leary
Coordinator

Table 1
Catch Per Unit Effort (15-minute sample) of Crabs Taken in 10-foot Trawls

Date	Males	Females	Total Crabs	% Males	% Females
1961					
September	8.5	7.1	15.6	55	45
October	4.6	5.4	10.0	46	54
November	5.9	5.6	11.5	51	49
December	8.1	5.6	13.7	59	41
1962					
January	4.3	5.1	9.4	45	55
February	7.8	9.8	17.6	44	56
March	1.5	2.0	3.5	44	56
April	2.8	8.7	11.5	25	75
May	5.0	15.2	20.2	25	75
June	4.9	2.9	7.8	45	55
July	3.8	3.5	7.3	52	48
August	0.8	2.8	3.6	22	78
September	0.6	0.2	0.8	78	22
October	0.8	1.7	2.5	33	67
November	0.6	0.0	0.6	100	00
December	0.9	0.8	1.7	53	47

Figure 1
Crab Trawl Stations

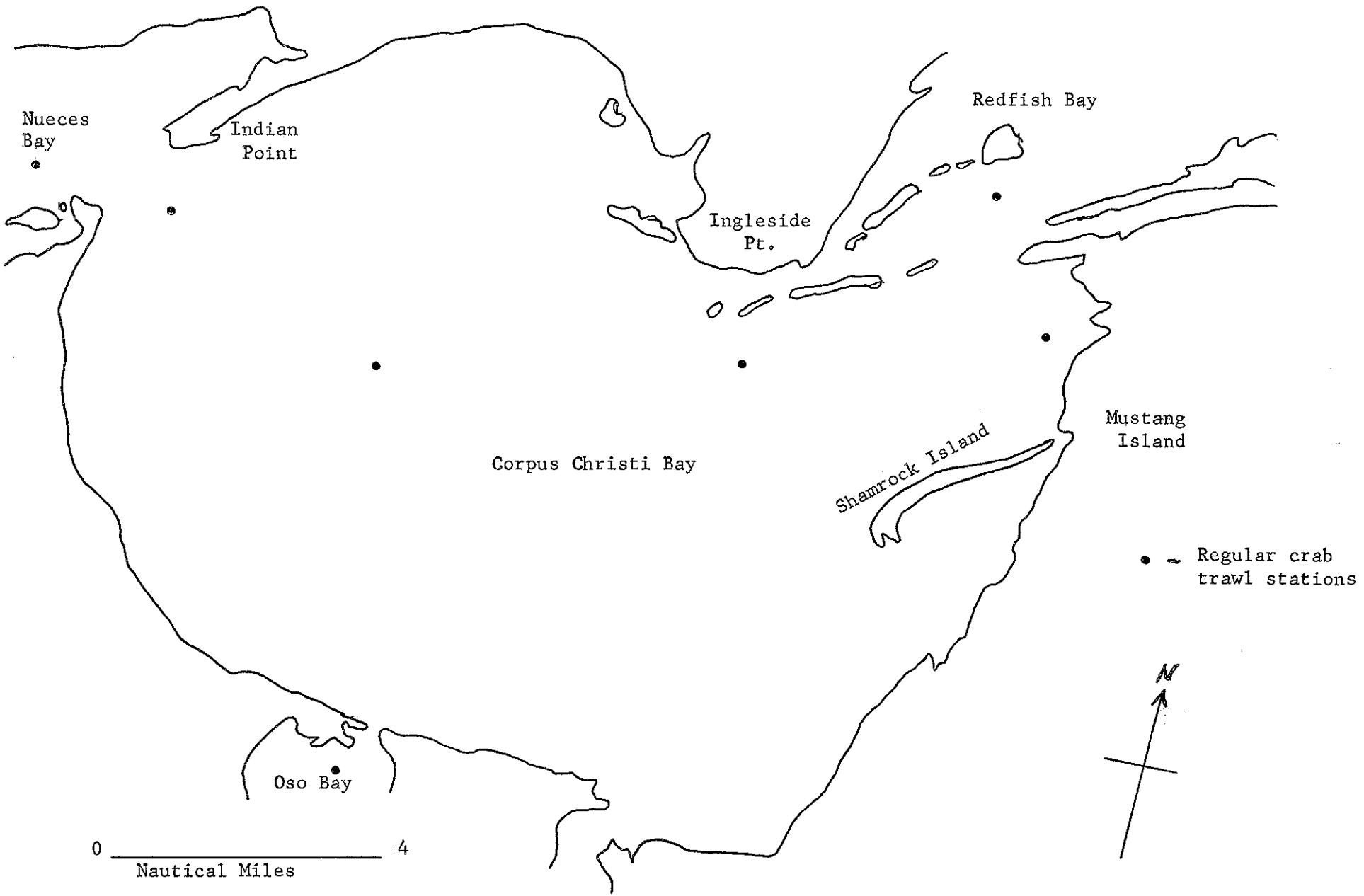

Figure 2
Average Number of Crabs Per Trawl Compared With Average Salinity

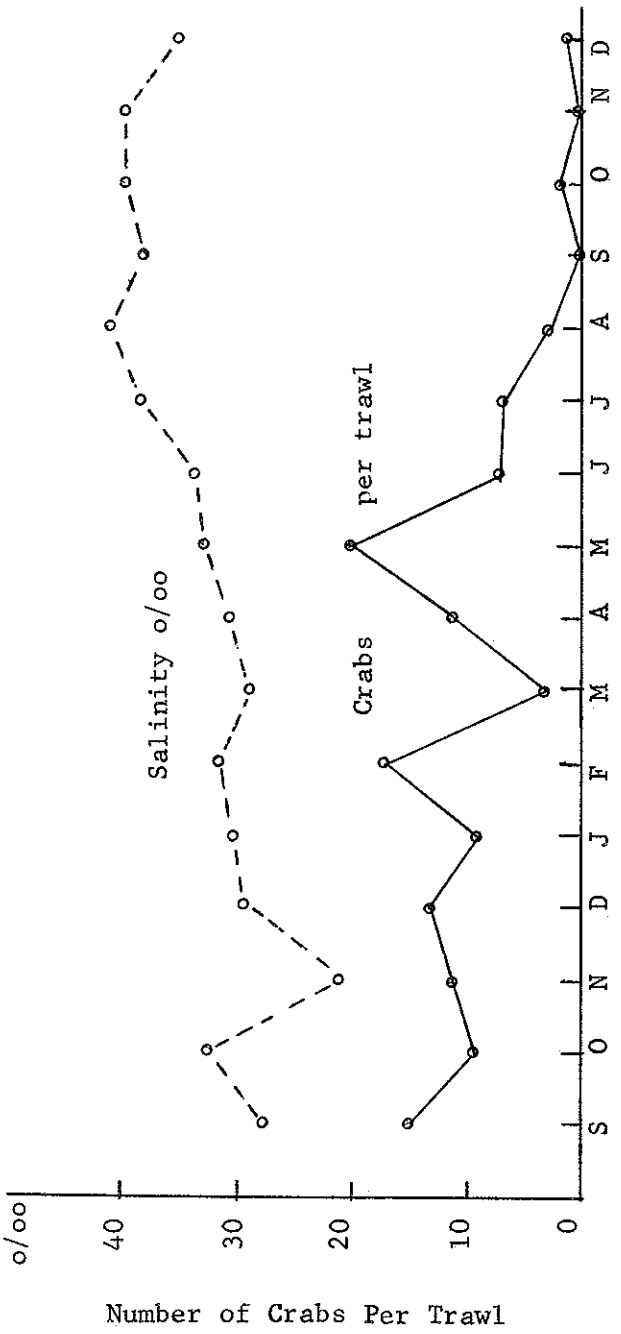

Figure 3
Comparison of Numbers of Male and Female Crabs, September 1961
to December 1962, Corpus Christi Bay Area