

Job Report

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Project No.: M-1-R-1 Date February 1, 1960
Project Name: Fisheries Survey of Area M-1.
Period Covered: February 1, 1959 to January 31, 1960. Job No. B-2

Checklist of Invertebrates of Area M-1

Objectives: To determine the invertebrates present and their relative abundance. Also migrations, growth rates, life histories and distribution will be included.

Procedure: Invertebrates were collected entirely by a 10' otter trawl with $1\frac{1}{2}$ inch stretch mesh. The same stations and methods used in Job A-2 (Checklist of the Fishes of Area M-1) were used in the invertebrate collections. All specimens collected were measured to the nearest millimeter. Figure I shows location of stations.

Findings: Phylum Ctenophora

Ctenophores became a nuisance in trawl work in the summer months. Beroë ovata Bosc and Mnemiopsis mccradyi Mayer were found to be present.

Phylum Mollusca

Crassostrea virginica (Gmelin) - Commercial Oyster - Live oysters were found at only one location in Sabine Lake. This location is near station 2. The only oysters from the reef that were measured were picked up in the trawl in February. Eighteen were measured at this time. Size ranged from 14 mm (total length) to 62 mm. Average length was 39 mm. The 0-year class and the 1-year class were represented.

Rangia cuneata Gray. This species was present in large numbers. Dead shell was present at every station. Live and dead shell were picked in large numbers mixed with soft mud at stations in the norther portion of the Lake. Live Rangia was present in other portions of the Lake but in lesser amounts.

Lolliguncula brevis Blainville Eighteen squid were picked up in trawl collections in the latter part of September at stations 1, 2, and 11. None were taken in salinities below 15.2 ppt.

Phylum Arthropoda

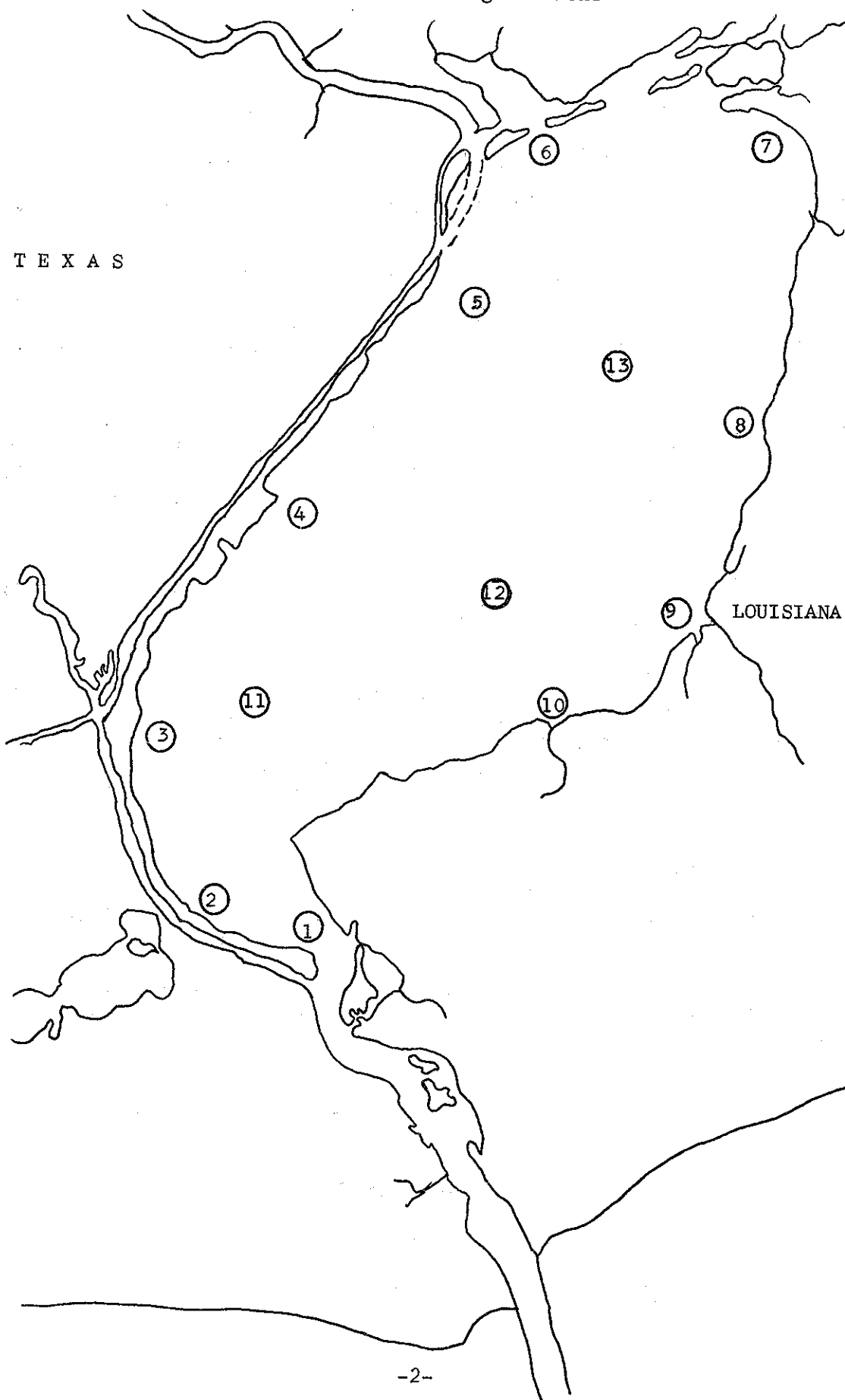
Balanus sp. Barnacles were present in abundance where suitable places for attachment exist.

Penaeus setiferus (Linnaeus). See report on Job B-3.

Penaeus aztecus Ives. See report on Job B-3.

Xiphopenaeus kroyeri (Heller) See report on Job B-3.

FIGURE I
Invertebrate Collecting Stations



Macrobrachium ohione (Smith) This species of fresh-water shrimp was very abundant in the spring as is indicated in the length-frequency chart figure II. A total of 676 were collected.

Callinectes sapidus Rathburn - Blue Crab - A total of 648 blue crabs were collected by trawl during the year long study figure III. Of this number, 370 were found to be females, with 33 of these sexually mature. The sex ratio was uneven in favor of the females, particularly in January and February.

Sabine Lake supports a small commercial crab fishery. These commercial operations are concentrated in the southern part of the Lake from the vicinity of station 1 to station 3.

Rithropanopeus harrisii (Gould). This species taken only rarely in trawl collections.

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12 September 1960

REFERENCES

- Hegner, Robert W. 1933. Invertebrate Zoology, the MacMillan Company, New York.
- Pulley, T.E. 1952. Illustrated checklist of the marine mollusks of Texas. Texas Jour. Sci., Vol. IV, No. 2.
- Miner, Roy W. 1950. Field Book of Seashore Life, Van Rees Press, New York.

Figure II

Length-Frequency Chart

Macrobrachium ohione

Month	Length in mm								Monthly Total	Average No. per collection.	
	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99			
<u>1959</u>											
February	3	5	8	11	5	3			35		4.3
March	1	9	2	7	11	4			34		4.5
April			2	14	41	18	3		78		6.0
May		1	21	71	100	18	2	1	214 meas. 244 unmeas.		35.2
June			7	12	15	2			37		3.0
July			1	9	16	5			31		2.4
August											
September					1				1		0.07
October											
November											
December											
<u>1960</u>											
January					2				2		0.15

Length-Frequency Chart

		Callinectes sapidus																				
		Length in mm																				
Month		10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150-159	160-169	170-179	180-189	190-199	Total	
1959																						
February		4	27	22	12	5	2		4	1	2	2	2	2	3	4		2	1	1	96	
March		6	30	33	22	3	2	1	1	2	2		1		5		1		1		110	
April		0	4	17	28	7	3	1	2	1	1	4	3	3	2	5	4	8	2	1	95	
May			3	4	5	3	5	4	3	3	1	1	1	3	1	4	1	8	1		52	
June				5	2	7	6	2	4	2	5	1	5	5	4	1	3	3	1		57	
July				3	2	2	2	1		2	4	2	6			4		1			29	
August				1	3			2	2	1	1	1	3	1	4	1	1	3	3	2	28	
September											3						1				4	
October				1	3		1	3	1	2	1	2	1			3	4	1	2		25	
November			5	2		1					2		1			4	1				16	
December		2	4	2	2	1			2				1	1	4	2	6	7	1		33	
1960																						
January		11	52	26	6	4	2		1												103	
																				Total	548	