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A Study of the Macrozooplankton within the Samples Taken at the Mobile Site from November 1977 through November 1978: A Data Report of the Lawrence Berkeley Laboratory

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This report brings together the results of a re-examination of zooplankton samples from the Mobile OTEC site (29°N-88°W) in the northern Gulf of Mexico for macrozooplankton larger than 15 mm. Five cruises were made to the Mobile OTEC site aboard the R/V Virginia Key. Cruise dates were:

17-20 November 1977

27 February - 2 March 1978

9-17 June 1978

15-24 August 1978

21 October - 3 November 1978

METHODS

A metered 0.75m diameter, 202 mesh, closing plankton net and a Niskin double-trip mechanism was used to make each tow. This system allowed samples to be taken at pre-determined depths without contamination from net deployment or retrieval. The depth of each tow was determined by methods of triangulation using the angle and the length of the ship's wire during the tow. Volume of water filtered by the net during each tow was calculated from digital flow meter counts.

Zooplankton samples were collected either with the net being towed from a ship which was underway or vertical hauls were made from a drifting ship. Power for vertical hauls was provided by the ship's winch. Vertical hauls often became oblique hauls depending upon weather and current conditions that often caused the ship to drift during the actual sampling time.

In the laboratory, the contents of each sample was examined under a dissecting microscope and all organisms with a body axis greater than 8mm were removed, identified, and included in the following data set.

Size Classes

Class	mm
10	8.0-8.9
11	9.0-9.9
12	10.0-19.9
13	20.0-29.9
14	30.0-39.9
15	40.0-49.9
16	> 50

MACROZOOPLANKTON

Mobile OTEC Station November 1977-October 1978

Sample No.	Zooplankton Taxa	Date	Time	Depth	Volume of water Filtered	Size Classes* 10	11	12	13	14	15	16
02	Amphipoda (Hyperiid)	11/18/77	0524	81m	$365m^3$		.3(1)	1.9(7)				
	Chaetognatha							.5(2)		1.4(5)		
	Decapoda Zoea							.3(1)				
	Euphusiacea					.5(2)		1.5(5)	1.9(7)			
	Fish, larvae and juveniles					.8(3)	.5(2)		.3(1)	.3(1)		.3(1)
	Leptocephalus larvae								.5(2)		.3(1)	.3(1)
	Lucifer faxoni							.3(1)				
04	Chaetognatha	11/19/77	0800	15m	$268m^3$			270.0(45)				6.0(1)
	Fish, larvae and juvenile							6.0(1)				
05	Euphusiacea	11/19/77	0935	102m	$314m^3$	.6(2)						

*Individuals per $100m^3$ are given for each size class with actual counts in parentheses.

MACROZOOPLANKTON (continued)

Sample No.	Zooplankton Taxa	Date	Time	Depth	Volume of water Filtered	Size Classes* 10	11	12	13	14	15	16
	Chaetognatha							.1(1)	.1(1)			
	Euphusiacea					.7(5)	.3(2)	.3(2)	.1(1)			
	Salpidae								.1(1)			
12	Chaetognatha	3/1/78	0030	80m-0m	$257m^3$			10.1(26)	11.3(29)	.4(1)		
	Decapoda Zoea					1.6(4)		1.9(5)				
	Euphusiacea					15.1(39)	9.7(25)	2.7(7)				
	Fish, larvae and juvenile					5.0(13)		5.0(13)		.4(1)		
	Lucifer faxoni							.4(1)				
	Polychaeta							1.2(3)				
	Siphonophora							3.1(8)	.8(2)	.4(1)		.4(1)
	Thecostomata							.4(1)				

MACROZOOPLANKTON (continued)

Sample No.	Zooplankton Taxa	Date	Time	Depth	Volume of water Filtered	Size Classes* 10	11	12	13	14	15	16
	Chaetognatha							.3(1)	11.2(36)	.3(1)	.3(1)	
	Decapoda Penaeid							1.5(5)	.3(1)			
	Euphusiacea					3.4(11)	11.5(37)	.5(16)				
	Fish, larvae and juvenile					.9(3)	1.2(4)					.3(1)
	Polychaeta						.3(1)					
	Salpidae							.3(1)	.3(1)			
	Siphonophora							1.9(6)				.3(1)
18	Amphipoda (Hyperiid)	6/14/78	2320	25m	$188m^3$			.5(1)	.5(1)			
	Chaetognatha							3.2(6)				
	Euphusiacea					8.0(15)	8.0(15)	8.5(16)				
	Fish, larvae and juvenile					1.1(2)		1.6(3)				

MACROZOOPLANKTON (continued)

Sample No.	Zooplankton Taxa	Date	Time	Depth	Volume of water Filtered	Size Classes* 10	11	12	13	14	15	16
	Lucifer faxoni							6.4(12)				
	Siphonophora					1.1(2)		2.1(4)				
	Stomatopoda							.5(1)				
19	Fish, larvae and juvenile	6/15/78	1040	1000m-800m	$454m^3$			.2(1)				
20	Chaetognatha	6/15/78	1215	800m-200m	$308m^3$	1.6(5)		6.7(21)	1.0(3)	.3(1)		
	Decapoda Caridean								.3(1)			
	Euphusiacea							1.6(5)				
	Fish, larvae and juvenile							.7(2)				
	Gymnostomata								.3(1)			
	Hydromedusae							.3(1)				
	Lucifer faxoni							.3(1)				

MACROZOOPLANKTON (continued)

Sample No.	Zooplankton Taxa	Date	Time	Depth	Volume of water Filtered	Size Classes* 10	11	12	13	14	15	16
	Salpidae							1.0(3)				
21	Chaetognatha	6/15/78	1300	200m-0m	191m^3			114.5(219)	1.6(3)	1.(2)		
	Decapoda Caridean							1.0(2)				
	Euphusiacea							1.6(3)				
	Fish, larvae and juvenile							.5(1)				
	Gymnostomata									.5(1)		
	Lucifer faxoni					1.0(2)		.5(1)				
	Mysidacea					.5(1)						
	Salpidae							1.0(2)				
	Stomatopoda							10.5(20)				
22	Chaetognatha	6/15/78	1345	25m	249m^3			4.0(10)				

MACROZOOPLANKTON (continued)

Sample No.	Zooplankton Taxa	Date	Time	Depth	Volume of water Filtered	Size Classes* 10	11	12	13	14	15	16
	Fish, larvae and juvenile							.4(1)				
	Polychaeta							.4(1)				
	Siphonophora					1.2(3)		.4(1)				
24	Amphipoda (Hyperiid)	8/22/78	0215	25m	338m^3			.7(3)		.3(1)		
	Cephalopoda (juvenile)							33.9(131)	4.4(17)			
	Decapoda Caridean					.3(1)	.3(1)	1.8(7)				
	Fish, larvae and juvenile							8.3(32)	.3(1)		.3(1)	
	Gymnostomata							1.3(5)	.3(1)	.3(1)		
	Lucifer faxoni							10.9(42)				
	Polychaeta							.3(1)	.3(1)			

MACROZOOPLANKTON (continued)

Sample No.	Zooplankton Taxa	Date	Time	Depth	Volume of water Filtered	Size Classes* 10	11	12	13	14	15	16
	Fish, larvae and juvenile						.6(1)					
	Gymnostomata								.6(1)			
	Lucifer faxoni						.6(1)					
	Salpidae							.6(1)				
	Siphonophora					3.4(6)		.6(1)				
	Stomatopoda							1.1(2)	1.1(2)			
28	Amiphipoda (Hyperiid)	8/22/78	1330	25m	$439m^3$				.2(1)			
	Decapoda Caridean							1.8(8)				
	Fish, larvae and juvenile							1.1(5)				
	Gymnostomata							.7(3)	.7(3)			
	Lucifer faxoni							60.7(267)				

MACROZOOPLANKTON (continued)

Sample No.	Zooplankton Taxa	Date	Time	Depth	Volume of water Filtered	Size Classes* 10	11	12	13	14	15	16
	Salpidae								2.3(10)	.2(1)		
	Siphonophora							1.6(7)	.5(2)			
30	Amphipoda (Hyperiid)	10/31/78	2140	25m	306.5m^3			.3(1)				
	Chaetognatha								.7(2)			
	Decapoda Caridean							.7(2)				
	Euphusiacea							6.5(20)				
	Fish, larvae and juvenile							2.3(7)	.3(1)			
	Gymnostomata									.7(2)		
	Leptocephalus larvae							2.9(9)	2.9(9)	.3(1)	.7(2)	
	Lucifer faxoni							3.9(12)				
	Polychaeta							.3(1)				

MACROZOOPLANKTON (continued)

Sample No.	Zooplankton Taxa	Date	Time	Depth	Volume of water Filtered	Size Classes* 10	11	12	13	14	15	16
	Leptocephalus larvae							.9(2)	.4(1)	.4(1)		
	Lucifer faxoni							.4(1)				
	Siphonophora							.9(2)				
	Stomatopoda							1.3(3)				
33	Chaetognatha	10/31/78	1150	25m	$300.2m^3$			.7(2)	.7(2)			
	Fish, larvae and juvenile							1.0(3)				
	Gymnostomata										.3(1)	
	Hyromedusae								.3(1)			
	Lucifer faxoni							69.8(21)				
	Salpidae							.3(1)				
	Siphonophora							1.3(4)				
	Stomatopoda							4.7(14)				