DISTRIBUTION OF FISH EGGS AND LARVAE, TEMPERATURE, AND SALINITY IN THE GEORGES BANK-GULF OF MAINE AREA, 1956

412



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by

Robert R. Marak, John B. Colton, Jr., Donald B. Foster, and David Miller



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DISTRIBUTION OF FISH EGGS AND LARVAE, TEMPERATURE, AND SALINITY IN THE GEORGES BANK-GULF OF MAINE AREA, 1956

by

Robert R. Marak,¹ John B. Colton, Jr., Donald B. Foster,² and David Miller Fishery Research Biologists Bureau of Commercial Fisheries U.S. Fish and Wildlife Service Woods Hole, Massachusetts

ABSTRACT

Basic data on the distribution of fish eggs and larvae in the Georges Bank-Gulf of Maine area were collected on surveys made by the Bureau of Commercial Fisheries research vessel *Albatross III* during the spring of 1956. The data are presented in tabular and graphic form. Plots and tables of surface temperature and salinity are also included.

INTRODUCTION

This is the third in a series of reports presenting basic data on fish egg and larvae surveys made on the research vessel *Albatross III* in the Georges Bank-Gulf of Maine area.

Information on the background of the surveys, objectives, methods, and procedures followed at sea and in the laboratory are given in the report for 1953 (Marak and Colton, 1961).

COLLECTION OF DATA

Five cruises were made during the spring of 1956: cruise no. 71, February 20-March 2; cruise no. 72, March 21-31; cruise no. 73, April 17-28; cruise no. 75, May 16-29; and cruise no. 76, June 11-24. The June cruise was added to the program this year to try and obtain more information on the distribution of haddock larvae.

The procedure involved continuous towing of the Hardy Plankton Recorder³ (Hardy, 1936 and 1939) at the surface and 10 meters, bathythermograph lowerings, surface temperature and salinity observations, drift bottle releases, and surface tows with a 1-meter net.⁴

A list of the species of fish eggs and larvae (with species code letters used in the tables) collected during the 1956 survey cruises is given in table 1.

Data for temperature and salinity observations in relation to 1-meter tows and Hardy Plankton Recorder gauze sections are given in tables 2-6.

The cruise plan and methods (Hardy Plankton Recorder, 1-meter net tows, and drift bottles) used aboard ship for the collection of data presented in this report are the same as those followed in the spring of 1953 (Marak and Colton, 1961).

A more complete coverage of the eastern and southern edge of Georges Bank, Browns Bank, and penetration into the Bay of Fundy was made in 1956 in an attempt to gain more information on the drift of fish eggs and larvae. Drift bottle recoveries from previous surveys suggested considerable movement of

¹ Temporarily detailed to Bureau of Commercial Fisheries Biological Laboratory, Auke Bay, Alaska,

² Presently employed at the Woods Hole Oceanographic Institution, Woods Hole, Massachusetts,

 $^{^{\$}}$ No. 3 silk was used in making the gauzes for the Hardy Plankton Recorder.

⁴ No. 0 silk was used in the 1-meter net.

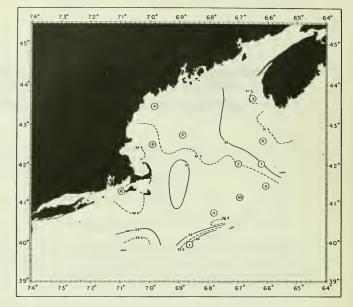


Figure 1.--Distribution of salinity and positions of 1-meter net tows, *Albatross III* cruise no. 71, February 20 to March 2, 1956.

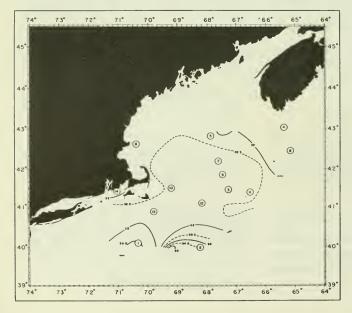


Figure 2,--Distribution of salinity and positions of 1-meter net tows, *Albatross III* cruise no. 72, March 21-31, 1956.

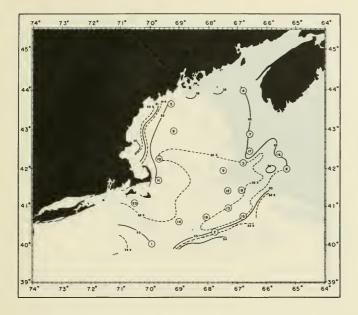


Figure 3.--Distribution of salinity and positions of 1-meter net tows, *Albatross III* cruise no. 73, April 17-28, 1956.

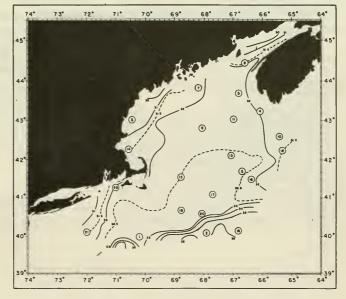
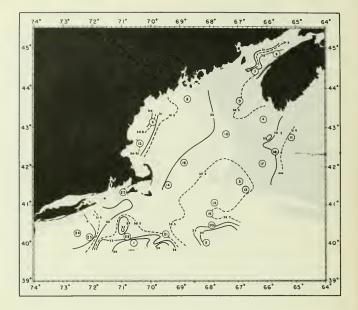
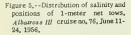


Figure 4.--Distribution of salinity and positions of 1-meter net tows, *Albatross III* cruise no. 75, May 16-29, 1956.





surface water off the eastern and southern edges of Georges Bank, and into the Bay of Fundy from Browns Bank. Positions of drift bottle releases and recoveries for 1956 may be found in Bumpus and Day (1957).

LABORATORY EXAMINATION OF SAMPLES

One-Meter Net Tows and Hardy Plankton Recorder

Analysis of the data taken with the 1-meter net and Hardy Plankton Recorder during this year was carried out in the same manner as that presented in the first report (Marak and Colton, 1961). Figures 1-5 show the locations of 1-meter net tows and tables 7-11 give the data collected. The locations of individual gauze sections exposed by the Hardy Plankton Recorder are shown on figs. 6-15, and the data obtained from these sections are given in tables 12-16. The section equivalent varied slightly with individual recorders, and with distances covered (see tables 17-21). Actual locations of 1-meter tows and reference gauze sections are given in tables 2-6.

Temperature and Salinity

Surface temperatures were used in the graphic presentation in this report as they were generally found to be indicative of temperatures in the depths of water studied (surface and 10 meters). Figures 16-20 show the distribution of surface temperature with observed values rounded off to the nearest whole $^{\circ}$ F. In areas of rapid temperature change (southern and southeast edge of Georges Bank), some isotherms were omitted to avoid confusion. Figures 1-5 show the distribution of surface salinity with observed figures rounded off to the nearest ure and salinity figures may be found in tables 2-6.

Drift Bottles

A detailed analysis of the data obtained from the drift bottles released on these cruises during the spring of 1956 has been reported by Day (1958).

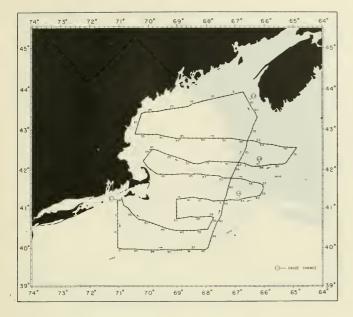


Figure 6.--Track of *Albatross III* cruise no. 71 (February 20 to March 2, 1956) giving positions for each gauze section of the surface Hardy Plankton Recorder.

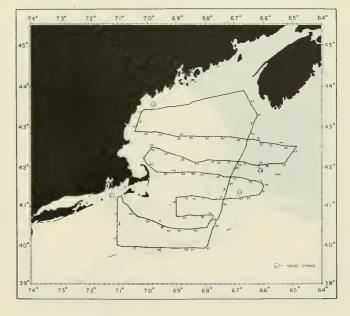


Figure 7.--Track of *Albatross III* cruise no, 71 (February 20 to March 2, 1956) giving positions for each gauze section of the 10-meter Hardy Plankton Recorder.

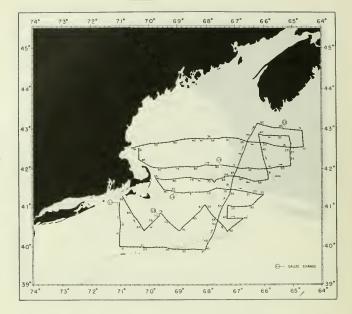


Figure 8,--Track of Albatross III cruise no. 72 (March 21-31, 1956) giving positions for each gauze section of the surface Hardy Plankton Recorder.

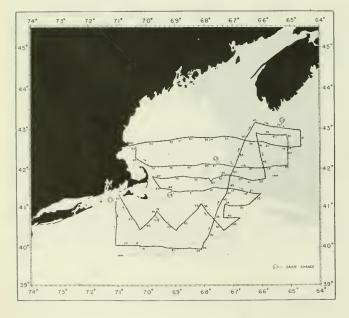


Figure 9.--Track of Albatross III cruise no. 72 (March 21-31, 1956) giving positions for each gauge section of the 10-meter Hardy Plankton Recorder.

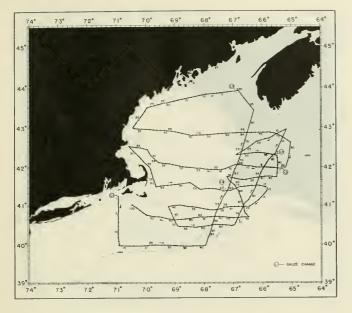


Figure 10.--Track of *Albatross III* cruise no. 73 (April 17-28, 1956) giving positions for each gauze section of the surface Hardy Plankton Recorder.

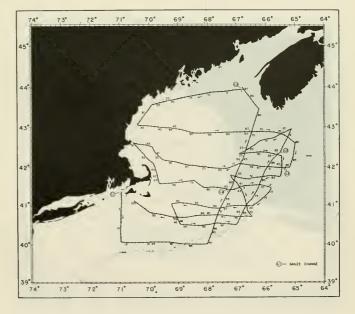
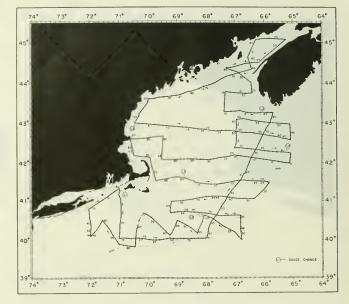
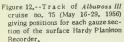


Figure 11,--Track of Albatross III cruise no. 73 (April 17-28, 1956) giving positions for each gauge section of the 10-meter Hardy Plankton Recorder.





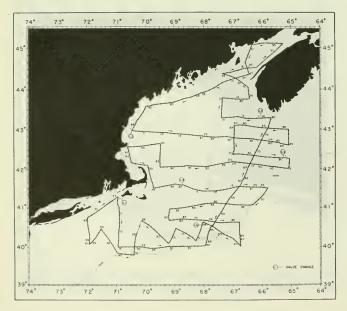


Figure 13,--Track of Albatross III cruise no. 75 (May 16-29, 1956) giving positions for each gauze section of the 10-meter Hardy Plankton Recorder.

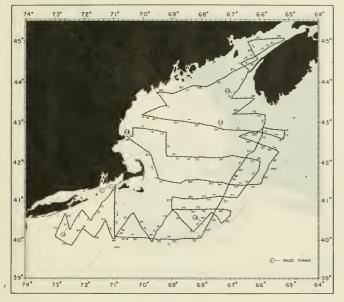


Figure 14.--Track of *Albatross III* cruise no. 76 (June 11-24, 1956) giving positions for each gauge section of the surface Hardy Plankton Recorder.

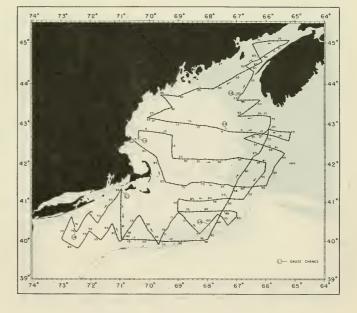


Figure 15,--Track of Albatross III cruise no. 76 (June 11-24, 1956) giving positions for each gauze section of the 10-meter Hardy Plankton Recorder.

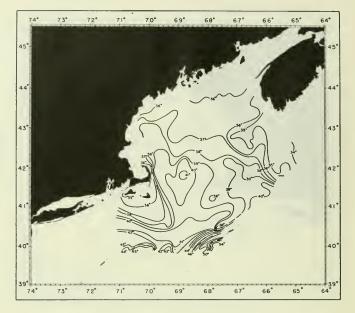


Figure 16.--Distribution of surface temperature, *Albatross III* cruise no. 71, February 20 to March 2, 1956.

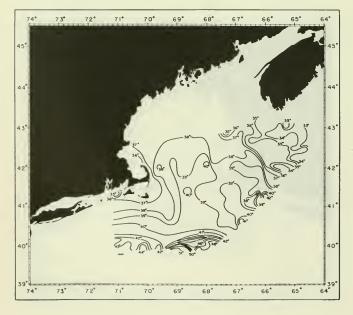


Figure 17.--Distribution of surface temperature, Albatross III cruise no. 72, March 21-31, 1956.



Figure 18.--Distribution of surface temperature, *Albatross III* cruise no. 73, April 17-28, 1956.



Figure 19,--Distribution of surface temperature, *Albatross III* cruise no, 75, May 16-29, 1956.

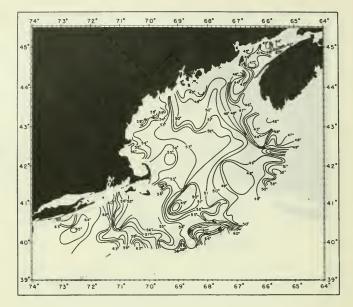


Figure 20 .-- Distribution of surface temperature, Albatross III cruise no. 76, June 11-24, 1956.

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Species code letters	Common name	Scientific name
A	American plaice	Hippoglossoides platessoides
AM	American sand lance	Ammodytes americanus
BU	Butterfish	Poronotus triacanthus
C	Atlantic cod	Gadus morhua
CN	Cunner	Tautogolabrus adspersus
CU	Cusk	Brosme brosme
G	Goosefish	Lophius americanus
Н	Haddock	Melanogrammus aeglefinus
HE	Atlantic herring	Clupea harengus harengus
LA	Lanternfish	Myctophum affine
LF	Lumpfish	Cyclopterus lumpus
LP	"Leptocephalus" stage	
M	Atlantic mackerel	Scomber scombrus
MH	Atlantic menhaden	Brevoortia tyrannus
MU	Striped mullet	Mugil cephalus
NE	Atlantic saury	Scomberesox saurus
Р	Pollock	Pollachius virens
PU	Puffer	Tetraodontidae (family)
R	Redfish	Sebastes marinus
RH	Squirrel hake	Urophycis chuss
RO	Fourheard rockling	Enchelyopus cimbrius
RU	Banded rudderfish	Seriola zonata
S	Scup	Stenotomus chrysops
SB	Threespine sticklehack	Gasterosteus aculeatus
SC	Longhorn sculpin	Myoxocephalus octodecemspinosus
SH	Silver hake	Merluccius bilinearis
SPH	Spotted hake	Urophycis regius
SR	Northern searobin	Prionotus carolinus
SSN	Striped seasnail	Liparis liparis
SU	Rough scad	Trachurus lathami
SY	Shanny	Stichaeidae (family)
U	Unidentified	•
W	Wrymouth	Cryptacanthodes maculatus
WF	Witch flounder	Glyptocephalus cynoglossus
WH	White hake	Urophycis tenuis
W1	Windowpane	Scopthalmus aquosus
WIF	Winter flounder	Pseudopheuronectes americanus
WO	Atlantic wolffish	Anashichas lupus
Y	Yellowtail flounder	Limanda ferruginea

Table 1.--Species of fish eggs and larvae (with species code letters) caught during 1956, Albatross III cruise no. 71, February 20 to March 2; cruise no. 72, March 21-31; cruise no. 73, April 17-28; cruise no. 75, May 16-29; cruise no. 76, June 11-24.

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Table 2. --Date, time, and position for temperature and salinity records in relation to 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 71, February 20-March 2, 1956

							Sur	face		
Date	Time	Lat- itude N.	Longi- tude W.	l-meter tow	Surface gauze section	10-meter gauze section	Salin- ity	Tem- pera- ture	10-meter temper- ature	
					loading l	loading 1	%	° F.		
T 1 00	17.00	419 141	71° 01'						26.0	
Feb. 20	1700	41° 14' 40°03.5'	71° 01'		1 3	2 3	32.19	36.1 36.3	36.0 36.3	
Feb. 20	1800 1905	40°03.5'	71° 01'		3 4	4	32.63	38.2	38.1	
Feb. 20 Feb. 20	2005	40°33.5'	71° 01'		6	6	52.03	39.9	39.9	
Feb. 20 Feb. 20	2105	40° 31'	71°01.2'		9	7	32.82	40.5	40.5	
Feb. 20	2205	40° 20'	71° 00'		11	9		42.4	42.2	
Feb. 20	2305	40°09.5'	71° 00'		13	10	32.99	42.5	42.5	
Feb. 21	0005	39°59.5'	70°59.5'		15	12		43.1	43.2	
Feb. 21	0105	39° 58'	70°48.5'		16	13	33.42	44.5	44.6	
Feb. 21	0200	39°58.51	70° 381		18	14		43.3	43.3	
Feb. 21	0305	39° 581	70° 26'		20	15	33.67	45.4	45.2	
Feb. 21	0400	39°56.5'	70° 15'		21	16		45.0	45.0	
Feb. 21	0500	39°56.5'	70° 001		23	18	33.72	45.7	45.6	
Feb. 21	0605	39°56.5'	69° 46'		25	19		41.8	41.9	
Feb. 21	07 05	39°57.5'	69° 33'		27	21	33.13	42.8	42.8	
Feb. 21	0805	39°57.5'	69°20.5'		29	22		43.5	43.3	
Feb. 21	0905	39° 57'	69°09.5'		31	23	32.83	41.2	41.5	
Feb. 21	1005	39°56.5'	68°55.5'		33	24		42.0	42.0	
Feb. 21	1100	39° 57'	68°43.5'		34	25	33.19	43.1	43.2	
Feb. 21	1200	39° 57'	68° 31'	1	36	26		46.2	46.2	
Feb. 21	1300	39° 57'	68° 24'		37	27	34.76	50.3	50.2	
Feb. 21	1400	39° 57'	68°10.5'		39	29		49.6	49.6	
Feb. 21	1505	39° 58'	67°59.5'		41	30	35.22	52.6	52.6	
Feb. 21	1605	40° 05'	67° 54'		42	31		53.9	54.0	
Feb. 21	1705	40°14.2'	67°49.5'		44	32	34.52	48.9	49.0	
Feb. 21	1800	40°21.5'	67° 45'		46	34 35	32.22	38.3	38.4	
Feb. 21	1900	40° 30' 40° 40'	67°41.5' 67°36'		47	36	34.44	38.6	38.5	
Feb. 21	2005 2105	40° 40'	67° 30'		51	37	32.68	40.1	39.9	
Feb. 21 Feb. 21	2205	40°53.5'	67° 26'		52	39		39.9	39.9	
Feb. 21 Feb. 21	2305	40 53.5	67° 24'		54	40	32.58	39.7	39.6	
Feb. 21 Feb. 22	0005	41° 11'	67° 22'		56	41		39.2	39.2	
Feb. 22	0100	41°18.5'	67°17.7'		57	42	32,87	39.6	39.5	
Feb. 22	0200	41° 27'	67°14.3'		59	44		39.5	39,6	
Feb. 22	0300	41°36.3'	67° 11'		61	45	32.83	39.6	39.6	
Feb. 22	0400	41° 36'	67°07.2'		63	47		39.6	39.8	
Feb. 22	0500	41°55.3'	67° 01'		65	48	32.73	39.6	39.6	
Feb. 22	0600	42°04.8'	66°55.8'	2	67	50		39.5	39.5	
Feb. 22	0805	42° 18'	66°45.5'		69	51	32.21	37.4	37.4	
Feb. 22	0905	42° 271	66° 40'		70	53		35.4	35.7	
Feb. 22	1005	42°35.5'	66° 35'		71	54	31.60	35.2	35.2	
Feb. 22	1100	42° 45'	66° 32'		73	55		35.2	35.2	
Feb. 22	1205	42° 54'	66° 26'		74	57	31.67	35.6	35.7	
Feb. 22	1300	43° 03'	66° 23'		76	58		35.8	35.9	
Feb. 22	1400	43°10.5'	66°18.5'		77	59	31.48	35.3	35.2	
Feb. 22	1500	43°18.8'	66°13.3'		78	60	01 00	34.8	34.8	
Feb. 22	1600	43°24.8'	66°17.5'		79	61	31.60	35.9	35.9	
Feb. 22	1700	43° 33'	66° 24'		81	62		35.9	35.9	
Feb. 22	1800	43°42.5'	66° 31'	3	82	63	31.43	35.6	35.6	

			I CDI GGI	,	, .,				
							Sur	face	
		Lat-	Longi-		Surface	10-meter			10-meter
Date	Time	itude	tude	l-meter	gauze	gauze	Salin-	Tem -	temper-
2000		N.	w.	tow	section	section	ity	pera-	ature
							109	ture	
							0		
					loading 2	loading 2	%	° F.	
Feb. 22	2005	43°49.51	66°35.5'		1			36.5	36.5
Feb. 22	2055	43° 56'	66° 41'		3		31.80	36.4	36.4
Feb. 22	2205	43°54.5'	66°54.5'		4			36.2	36.1
Feb. 22	2305	43° 53'	67° 06'		6		31.92	35.6	35.5
Feb. 23	0005	43° 51'	67° 18'		7			37.0	37.1
Feb. 23	0100	43° 50'	67° 30'		8		32.02	36.3	36.3
Feb. 23	0200	43° 47'	67° 41'		10			36.4	36.4
Feb. 23	0300	43° 45'	67° 53'		11		32.16	36.2	36.2
Feb. 23	0400	43° 44'	68°05.5'		12			36.4	36.4
Feb. 23	0505	43° 40'	68° 18'		14		31.99	36.4	36.4
Feb. 23	0600	43° 38'	68°27.7'		15			36.2	36.3
Feb. 23	07 05	43° 351	68° 36'		17		32.28	36.4	36.1
Feb. 23	0810	43°33.5'	68° 55'		19			36.4	36.4
Feb. 23	0905	43°30.5'	69° 08'		20		32.00	36.9	36.8
Feb. 23	1005	43°30.5'	69° 22'		22			36.7	36.7
Feb. 23	1110	43°27.5'	69° 37'		23		32.08	36.8	36.8
Feb. 23	1215	43°26.5'	69° 50'	4	25			36.4	36.5
Feb. 23	1405	43°26.5'	70° 04'		26	3	32.23	36.1	36.1
Feb. 23	1500	43°23.6'	70°13.8'		28	5		36.3	36.4
Feb. 23	1600	43°11.7'	70° 19'		30	7	32.42	37.6	37.4
Feb. 23	1700	43°02.5'	70° 23'		31	9		37.9	37.9
Feb. 23	1800	42° 54'	70° 241		33	12	32.58	37.7	37.6
Feb. 23	1905	42° 54'	70°09.5'		35	14		38.3	38.3
Feb. 23	2005	42°53.5'	69° 54'		37	17	32.64	38.4	38.4
Feb. 23	2105	42° 54'	69°41.5'		39	19		37.9	37.7
Feb. 23	2205	42° 52'	69° 27'		40	21	32.13	37.2	37.2
Feb. 23	2305	42°49.5'	69°12.5'		42	23		36.6	36.6
Feb. 24	0005	42°46.5'	68°59.5'	5	44	25	32.06	36.8	36.8
Feb. 24	0100	42° 48'	68° 52'		45	27		37.6	37.7
Feb. 24	0205	42°47.5' 42°47.5'	68° 40' 68° 26'		46	28	32.28	37.6 37.2	37.6
Feb. 24	0305				48	32	32.09	36.7	36.7
Feb. 24 Feb. 24	0400	42°48.5' 42°48'	68° 14' 68°00.5'		50	34	52.05	36.9	36.9
Feb. 24 Feb. 24	0600	42° 48'	67°47.5'		50	36	32.29	37.4	37.4
Feb. 24 Feb. 24	0700	42°47.5'	67° 34'		53	38		37.5	37.5
Feb. 24	0805	42°47.5'	67°19.5'		55	40	31.74	35.3	35.4
Feb. 24	0905	42°46.5'	67° 04'		57	43		35.0	35.1
Feb. 24	1005	42° 45'	66° 50'		59	45	31.59	35.4	35.4
Feb. 24	1105	42°43.5'	66* 35'		60	47		35.6	35.5
Feb. 24	1205	42° 44'	66° 20'		62	49	31.70	35.8	35.8
Feb. 24	1300	42° 42'	66°07.8'	6	63	51		35.9	36.1
Feb. 24	1400	42° 39'	65°59.5'		64	53	31.63	34.8	34.8
Feb. 24	1500	42° 38'	65°45.5'		66	55		34.6	34.5
Feb. 24	1600	42° 36'	65° 32'		68	57	31.47	34.6	34.5
Feb. 24	1700	42°35.8'	65° 19'		69	59		34.7	34.4
Feb. 24	1800	42°35.5'	65°06.5'		71	61	31.66	34.1	33.9
Feb. 24	1905	42° 34'	64° 52'		73	63		34.0	33.9
Feb. 24	2005	42° 25'	65° 00'		75	65	31.91	33.8	33.9
Feb. 24	2105	42° 17'	65° 08'		77	67		34.1	34,1
Feb. 24	2205	42°10.5'	65° 14'		78	69	31.89	34.4	34.4

 Table 2. --Date, time, and position for temperature and salinity records in relation to 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 71, February 20-March 2, 1956--Continued

Table 2Date, time, and position for temperature and salinity records in relation to
1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 71,
February 20-March 2, 1956Continued

		Lat-	Longi-		Surface	10-meter	Sur	face	10-meter
Date	Time	itude N.	tude W.	l-meter tow	gauze section	gauze section	Salin- ity	Tem- pera- ture	temper- ature
							0,		
Feb. 24	2305	42° 08'	65° 26'		79	71	%	°F. 35.4	25.4
Feb. 25	0005	42°08.5'	65° 37'		81	73	31.62	34.4	35.4 34.6
Feb. 25	0100	42°07.51	65° 50'		83	74		34.6	34.6
Feb. 25	0205	42° 061	66° 01'	7	84	76	31.92	35.6	35.7
					loading 3	loading 3			
Feb. 25	0255	42° 06'	66° 09'		2	1		36.3	36.2
Feb. 25 Feb. 25	0505 0600	42°06.1' 42°10'	66° 25' 66° 38.8'		4	3 5	32.43	38.4	38.3
Feb. 25	07 05	42° 11'	66° 54'		7	5	 32,38	37.7 38.1	37.7 38.1
Feb. 25	0805	42° 12'	67° 04'		9	9		38.8	38.8
Feb. 25	0905	42°12.5'	67° 17'		10	11	32,60	39.5	39.5
Feb. 25	1005	42° 12'	67° 30'		12	13		39.5	39.4
Feb. 25	1105	42° 12'	67° 41'		13	15	32.44	38.7	38.5
Feb. 25	1205	42° 13'	67° 54'		15	17		38.0	37.8
Feb. 25 Feb. 25	1300	42°11.8' 42°09.5'			16	18	32.39	38.5	
Feb. 25	1400 1500	42°09.3'	68°13.5' 68°25.2'		17 19	19 21	32,60	39.2 39.0	
Feb. 25	1600	42° 141	68°37.5'		21	23	52.00	38.8	
Feb. 25	1700	42°17.1'	68°49.6'		22	25	32,78	39.9	
Feb. 25	1800	42°20.5'	69° 01'		24	27		38.3	
Feb. 25	1900	42°23.4'	69°14.6'		25	29	32.32	38.3	
Feb. 25	2000	42°26.8'	69°26.5'		27	31		39.3	
Feb. 27	1740	42° 30'	69°52.3'	8	30	35	32.81	39.5	39.4
Feb. 27 Feb. 27	1905 2005	42° 22' 42°12.5'	70° 00' 70° 08'		35 36	40 43		38.8	38.8
Feb. 27	2105	42° 05'	70° 08'		37	43	32.48	37.0 35.9	37.0 36.0
Feb. 27	2205	41° 58'	69° 48'		38	45	32,70	39.1	39.1
Feb. 27	2305	41° 54'	69° 38'		39	48		39.8	39.8
Feb. 28	0005	41° 53'	69° 25'		40	50	32.92	39.9	39.9
Feb. 28	0100	41°52.7'	69°12.3'		41	51		39.8	39.8
Feb. 28	0200	41°52.7'	69°00.8'		42	53	33.10	41.1	41.1
Feb. 28	0300	41°53.1'	68°47.6'		43	55		41.2	41.2
Feb. 28 Feb. 28	0400 0500	41°53.3' 41°53.5'	68°35.2' 68°24.5'		44 45	56 58	32.98	40.7 39.4	40.8
Feb. 28	0200	41°50.5'	67° 44'		48	63	32,61	39.4	39.2
Feb. 29	0300	41°49.5'	67°32.8'		49	65		39.3	39.3
Feb. 29	0400	41 48.5	67° 21'		50	66	32.60	39.0	39.1
Feb. 29	0500	41°47.5'	67°09.7'		51	68		39.2	39.0
Feb. 29	0600	41°46.5'	66° 58'		52	69	32.76	39.1	39.1
Feb. 29	07 05	41° 46'	66° 45'		53	70		39.3	39.5
Feb. 29 Feb. 29	0805	41° 41' 41° 42'	66°34.5' 66° 23'		54 55	72 74	32.78	39.6	39.6
Feb. 29 Feb. 29	0905	41° 42'	66° 12'		56	74	32.76	39.8 39.8	39.8
Feb. 29	1105	41° 35'	66°00.5'		57	77	52.10	40.0	39.9
Feb. 29	1210	41* 31'	65°59.5'	9	57	79	32.81	40.2	40.2
Feb. 29	1400	41° 20'	66°07.5'		60	82		39.8	39.8
Feb. 29	1500	41°18.5'	66°20.5'		61	84	32.85	40.0	40.0
Feb. 29	1600	41°18.4'	66°29.7'		62	85		40.1	40.0
Feb. 29	1700	41°16.5'			63	86	32.86	39.8	39.8
Feb. 29	1800	41°15.5'	06 49		63	87		39.5	39.5

		Lat-	Longi-		Surface	10-meter	Surf	ace	10-meter
Date	Time		tude 1-meter W. tow	ter gauze	gauze section	Salin- ity	Tem- pera- ture	temper - ature	
					loading 4	loading 4	°/00	°F.	
Feb. 29	2005	41°13.5'	66° 581	10	1	1	32.70	39.1	39.1
Feb. 29	2105	41° 14'	67° 10'		3	3		39.2	39.3
Feb. 29	2205	41°12.5'			4	5	32.86	38.8	38.9
Feb. 29	2305	41° 13'	67° 35'		6	6		38.6	38.8
Mar. 1	0005	41° 12'	67° 45'		7	8	32.77	38.6	38.7
Mar. 1	0100	41°15.4'	67° 56'		8	9		38.1	38.3
Mar. 1	0200	41°16.5'	68° 07'		10	11 12	32.60	38.8 38.9	38.9 38.8
Mar. 1	0300	41°17.4' 41° 18'	68° 17' 67°28,2'		11 12	12	32,92	39.5	39.4
Mar. 1 Mar. 1	0400 0500	41°18' 41°16.5'	68°42.2'		12	15	32.32	39.7	39.6
Mar. 1 Mar. 1	0610	41°15.5'			15	17	33.07	40.3	40.3
Mar. 1	0705	41 07	68°59.5'		17	19		40.2	40.2
Mar. 1	0805	40° 52'	68°59.5'		19	22	32,99	39.4	39.4
Mar. 1	0905	40° 45'	68°57.5'		20	23		39.7	39.8
Mar. 1	1010	40°47.4'	68°41.7'		22	25	32.56	39.9	39.9
Mar. 1	1105	40°47.5'	68° 30'		23	27		39.8	39.8
Mar. 1	1200	40• 47 '	68° 17'		25	28	32.48	39.6	39.5
Mar. 1	1300	40°49.7'	68°03.81		26	30		39.8	39.7
Mar. 1	1410	40°49.5'	67°48.5'		28	32	32.59	40.5	40.5
Mar. 1	1430	40°48.5'	67°43.7'	11	28	32		40.1	40.1
Mar. 1	1600	40°37.7'			31	35	32.78	40.7	40.8
Mar. 1	1705	40° 29' 40° 29'	67° 56'		33 35	37 38	32.80	40.9 40.8	41.0 40.7
Mar. 1	1800	40° 29'	68°08.8' 68° 22'		30	40	32.80	40.8	40.4
Mar. 1 Mar. 1	2010	40° 27'	68° 34'		38	40	32,64	40.4	40.2
Mar. 1 Mar. 1	2105	40° 27'	68° 48'		40	44	52.04	40.3	40.1
Mar. 1	2205	40° 28'	69° 001		42	46	32,83	40.1	40.1
Mar. 1	2305	40° 28'	69°13.5'		43	48		39.9	39.8
Mar. 2	0005	40°31.5'			45	50	32.78	38.3	38.3
Mar. 2	0105	40° 351	69° 37'		47	51		38.6	38.7
Mar. 2	0205	40°38.5'			48	53	32.56	37.3	37.4
Mar. 2	0305	40° 40'	70° 001		50	55		37.0	37.1
Mar. 2	0405	40° 43'	70° 10'		52	57	32.58	37.1	37.1
Mar. 2	0505	40* 45'	70° 20'		53	58		37.6	36.7
Mar. 2	0605	40° 54'	70° 32'		55	60	32.37	36.8	36.9
Mar. 2	0705	41° 02'	70° 42'		57	63		36.6	36.5
Mar. 2	0805	41 07'	70° 49'		59	64	31.99	35.5	35.4 35.0
Mar. 2	0850	41° 17'	70°52.91	12	60	66		35.1	35.0
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 Table 2. --Date, time, and position for temperature and salinity records in relation to

 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 71,

 February 20-March 2, 1956--Continued

Table 3. --Date, time, and position for temperature and salinity records in relation to 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 72, March 21-31, 1956

							Sur	face	1
Date	Time	Lat- itude W.	Longi- tude W.	1-meter tow	Surface gauze section	10-meter gauze section	Salin- ity	Tem- pera- ture	10-mete temper ature
					loading 1	loading 1	%	°F.	
Mar. 21	1200	41° 20'	70° 001				31.54	35.3	
Mar. 21	1300	41° 06'	71° 02'			1		37.0	37.1
Mar. 21	1400	40° 581	71°03.2'		2	2	32.47	37.2	37.1
Mar. 21	1505	40° 46'	71° 01'		5	3		38.4	38.4
Mar. 21	1605	40°33.5'	71° 00'		7	5	32.82	39.9	39.9
Mar. 21	1705	40° 27'	71° 02'		9	6		40.6	40.5
Mar. 21	1800	40° 19!	71°02.5'		11	7	32.87	40.9	40.9
Mar. 21	1900	40° 08'	71° 03'		12	8		43.8	43.7
Mar. 21	2000	40°02.3'	70° 56'		15	9		42.4	42.4
Mar. 21	2100	40°01.7'	70°47.7'	~ -	16	10		43.8	43.8
Mar. 21	2200	40°01.8'	70°37.7'		18	11	32.27	42.9	43.1
Mar. 21	2300	40°01.2"	70°23.5'	1	20	12		42.8	42.8
Mar. 22	0005	40° 01'	70°13.5'		21	15	33.73	44.6	44.7
Mar. 22	0200	40° 00'	70°00.2'		24	16		42.9	43.0
Mar. 22	0310	40° 01'	69° 48'		26	17	33.14	41.6	41.6
Mar. 22	0405	40° 01' 40° 00'	69° 38' 69° 26'		28 29	17 18	32,91	42.6	42.7
Mar. 22	$0505 \\ 0605$	39°:581	69° 15'		31	19	52.91	47.5	40.9
Mar. 22 Mar. 22	0705	39 .50	69° 03'		33	20	34.95	50.9	50.8
Mar. 22	0805	39° 57'	68° 51'		35	21	34.33	50.4	50.5
Mar. 22	0905	39° 57'	68° 39'		36	22	34.76	50.3	50.3
Mar. 22	1005	39° 57'	68° 27'		38	23		45.9	46.0
Mar. 22	1105	39°56.5'	68° 16'	2	40	24	34.45	48.8	48.9
Mar. 22	1215	39°57.5'	68°04.3'		41	26		48.0	48.0
Mar. 22	1400	40°04.2'	68° 01'		44	27	34.01	46.9	46.9
Mar. 22	1500	40° 09'	67° 58'		45	28		47.9	47.9
Mar. 22	1605	40° 17'	67° 50'		47	30	33.21	42.1	42.1
Mar. 22	1705	40° 27'	67°44.5'		49	31		39.9	39.8
Mar. 22	1805	40° 35!	67°41.5'		50	33	32.61	39.3	39.4
Mar. 22	1905	40°42.5'	67° 37'		52	35		39.2	39.2
Mar. 22	2000	40°54.8'	67°32.8'		54	37	32.72	39.3	39.3
Mar. 22	2105	41° 05'	67° 27'		56	39		39.3	39.5
Mar. 22	2205	41° 13'	67° 21'		57	40	32.68	39.2	39.3
Mar. 22	2305	41*19.5'	67° 15'		59	42	20 00	39.0	38.9 38.9
Mar. 23	0005	41° 27'	67°10.5'	3	61 63	45 47	32.63	38.9 38.9	38.9
Mar. 23	0200	41° 39' 41° 49'	67° 08' 67°05.6'		64	49	32,54	38.8	38.9
Mar. 23	0300	41° 49' 41° 57'	67° 001		66	50	52, 54	39.3	39.5
Mar. 23 Mar. 23	0405 0505	41° 09'	66°53.5'		68	53	32.67	39.1	39.3
Mar. 23	0605	42° 19'	66° 48'		70	55		37.5	37.7
Mar. 23	0705	42° 28'	66° 44'		71	56	32,42	38.1	38.1
Mar. 23	0810	42° 38'	66° 39'		73	58		35.6	36.3
Mar. 23	0905	42°46.5'			74	60	31.76	35.2	35.1
Mar. 23	1005	42° 54'	66° 27'		76	61		35.9	36.0
Mar. 23	1100	43° 02'	66° 22'		77	63	31.70	34.9	34.8
Mar. 23	1200	43° 09'	66° 11'		79	66		34.7	34.7
Mar. 23	1300	43° 07'	65°58.5'		81	67	31.56	34.4	34.4
Mar. 23	1405	42° 55'	65° 42'		83	69		34.5	33.9
Mar. 23	1500	43°03.7'			84	71	31.54	33.4	33.9
Mar. 23	1550	43°03.7'	65° 21'	4	85	72		35.5	35.0

				ch br-5r,	1,50 001				
							Sur	face	
		Lat-	Longi-	l-meter	Surface	10-meter		Tem-	10-meter
Date	Time	itude	tude		gauze	gauze	Salin-		temper-
		W.	W.	tow	section	section	ity	pera-	ature
							1 UV	ture	1
					loading 2	loading 2	%	° F .	
Mar. 23	1810	43°01.5'	65° 00'		3	6	31.63	33.7	33.7
Mar. 23	1905	43° 00'	64° 48'		4	7		33.7	33.7
Mar. 23	2000	42° 56'	64° 40'		6	8	31.52	33.3	33.2
Mar. 23	2100	42° 45'	64° 39'		8	10		33.3	33.1
Mar. 23	2205	42° 351	64° 40'		10	12	31,97	33.9	34.0
Mar. 23	2305	42°34,5'	64° 51'		12	13		33.2	33.2
Mar. 24	0005	42° 34'	65° 04'		13	15	31.69	33.6	33.6
Mar. 24	0100	42°25.7'	65° 15'		15	16		35.2	35.2
Mar. 24	0200	42°36.5'	65° 29'		.17	18	31.75	35.1	35.1
Mar. 24	0305	42° 391	65° 44'		19	20		35.6	35.7
Mar. 24	0405	42•42.5'	66° 001		21	21	31.96	36.1	36.1
Mar. 24	0505	42°42.5'	66° 12'		22	23		35.5	35.6
Mar. 24	0605	42°42.5'	66°25,5'		24	24	31.75	34.8	35.0
Mar. 24	0705	42°43.5'	66°38,5'		25	26		35.3	35.0
Mar. 24	0810	42° 48'	66° 55'		28	28	32.36	37.6	37.7
Mar. 24	0910	42• 49'	67° 12'		30	30		36.4	36.5
Mar. 24	1005	42• 49'	67°24.5'		31	31	31.78	34.9	34.9
Mar. 24	1105	42° 48'	67° 39'		33	33		37.7	37.5
Mar. 24	1205	42° 48'	67° 51'	5	36	36	32.31	37.7	37.8
Mar. 24	1400	42° 48'	68° 12'		38	38		37.9	38.0
Mar. 24	1500	42°48.7'	68° 26'		40	40	32.36	37.7	37.7
Mar. 24	1600	42°47.5'	68°41.5'		42	42		38.1	
Mar. 24	17 00	42° 47'	68°54.3'		44	43	32.45	38.0	
Mar. 24	1800	42° 45'	69° 07'		45	45		38.1	
Mar. 24	1900	42° 43'	69° 20'		47	46	32.43	37.9	
Mar. 26	0945	42° 34'	70° 23'	6	55	62	32.50	37.7	37.7
Mar. 26	1100	42° 25'	70° 22'		62	63		36.5	36.5
Mar. 26	1205	42° 14'	70° 17'		64	66	32.21	36.0	36.0
Mar. 26	1300	42°09.5'	70° 08'		66	67		37.2	37.3
Mar. 26	1400	42° 041	69° 52'		68	69	32.48	38.2	38.1
Mar. 26	1500	42° 03'	69° 39'		70	71		39.1	39.1
Mar. 26	1605	42° 03'	69° 24'		72	73	32.66	38.7	38.8
Mar. 26	1705	42° 05'	69°10.5'		74	75		39.4	39.4
Mar. 26	1805	42° 05'	68° 55'		76	77	32.73	38.7	38.7
Mar. 26	1905	42°05.5'	68° 42'		77	79		38.5	38.6
Mar. 26	2005	42° 05 ¹	68°27.5'		79	80	32.70	38.9	38.9
Mar. 26	2105	42° 06'	68° 16'		81	82		39.3	39.4
Mar. 26	2205	42° 081	68°02.5'		83	84	32.93	40.0	40.0
Mar. 26	2305	42° 07'	67° 49'		85	86		38.0	38.0
Mar. 27	0005	42°07.5'	67°34.2'	7	86	87	32.69	38.8	39.4
14	0010	40000 51			loading 3	loading 3			
Mar. 27	0210	42°06.5'	67°13.5'		3	3		39.0	39.1
Mar. 27	0300	42°04.2'	67° 02'		5	5	32.67	38.9	39.2
Mar. 27	0400	42°02.5'	66° 461		7	7		38.9	39.0
Mar. 27	0505	42° 04'	66° 351		9	9	32.74	39.2	39.2
Mar. 27	0605	42° 03'	66°23.5'		11	10		39.7	39.7
Mar. 27	07 05	42° 02'	66° 11'		13	12	32.76	39.3	39.4
Mar. 27	0810	42°02.5'	65° 57'		15	14		36.0	35.9
Mar. 27	0905	42°03.51	00-40		16	15	31.89	33.9	33.9

Table 3. --Date, time, and position for temperature and salinity records in relation to 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 72, March 21-31, 1956--Continued

Table 3Date, time, and position for temperature and salinity records in	n relation to
1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruit	ise no. 72,
March 21-31, 1956Continued	

		Lat	Longi		Surface	10 motor	Sur	face	
Date	Time	itude W.	tude W.	l-meter tow	gauze section	gauze section	Salin- ity	Tem- pera-	10-meter temper- ature
Date Mar. 27 Mar. 28 Mar. 28	Time 1005 1100 1215 1300 1605 1805 1905 2005 2105 2205 2305 0005 0105 0205 0300 0405 0505 0605 0705 1005 1005 1005 1005 1005 1105 1200 1400 1530 1605 1705 1805 1905 1805 1905 2005 2105 2205 1005				Section 18 20 23 25 26 29 30 31 33 35 36 38 40 41 43 45 47 49 51 53 55 57 58 60 62 64 65 67 69 70 73 74 76 78 79	section 17 19 21 22 24 27 28 29 31 32 34 35 37 38 40 42 44 46 48 49 51 52 54 55 57 58 59 64 66 68 69 71 73 74 76	ity % 31.94 31.78 31.73 31.70 31.58 31.56 31.84 31.92 32.09 32.43 32.66 32.80 32.64 32.85 32.90 32.97 32.83	pera- ture *F. 33.8 33.9 34.3 34.0 34.6 34.5 33.6 33.6 33.6 33.5 33.6 33.5 33.6 33.5 35.6 35.5 35.6 35.5 35.6 35.5 35.6 35.5 35.6 35.5 35.6 35.6	ature 33.7 33.8 35.7 34.3 34.0 34.6 34.6 34.5 34.3 35.5 35.6 35.5 35.6 35.5 35.6 35.5 35.5 37.5 37.6 39.4 39.3 39.3 39.3 39.9 39.7 39.3 39.9 39.9 39.2
Mar. 28 Mar. 28 Mar. 28 Mar. 28 Mar. 29 Mar. 29 Mar. 29	2105 2205 2305 2400 0100 0200 0300	41° 46' 41° 45' 41°48.7' 41°40.3' 41° 33' 41° 29'	69°16.5' 69° 31' 69° 47.2' 69° 41' 69° 33.8' 69°21.8'		81 83 85 86 88 90	77 79 82 83 85 85	32.66 32.50 32.46	38.7 38.2 37.9 37.0 37.3 38.2	38.7 38.2 37.9 37.0 37.3 38.2
Mar. 29 Mar. 29 Mar. 29 Mar. 29 Mar. 29 Mar. 29 Mar. 29 Mar. 29	0410 0605 0705 0805 0900 1000 1100 1200	41° 27' 41°24.3' 41° 26' 41° 26' 41° 26' 41° 26' 41° 26' 41°29.5' 41°32.5'	69°06.5' 68° 49' 68° 36' 68° 26' 68° 14' 68°01.3' 67° 50' 67° 35'		92 loading 4 3 5 6 8 9 11 13	88 loading 4 3 4 5 7 8 10 11	33.02 32.73 32.69 32.65	38.1 40.1 40.1 38.9 38.8 38.8 38.8 38.8 38.9	38.3 40.3 40.1 38.8 38.8 38.8 38.8 38.8 38.8 38.8

Table 3Date, time, and position for temperature and salinity records in relation to
1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 72,
March 21-31, 1956Continued

						10	Surf	ace	10
	-	Lat-	Longi-	l-meter	Surface	10-meter		Tem-	10-meter temper -
Date	Time	itude	tude	tow	gauze section	gauze section	Salin-	pera-	ature
		w.	w.		section	Section	ity	ture	ature
							0,		
					15	10	%	° F. 39.0	38.5
Mar. 29	1300	41° 30'	67° 19'		15	13	20 55		38.5
Mar. 29	1400	41° 30'	67°02.5'		17 19	15 17	32.55	$39.7 \\ 38.4$	38.2
Mar. 29	1500	41°26.5' 41°24.5'	66° 45' 66° 27'	11	21	18	32.64	39.4	38.8
Mar. 29	1605 1705	41°24.5' 41°23'	66° 18'		23	21		37.1	36.9
Mar. 29 Mar. 29	1805	41° 21'	66° 04'		25	23	33.36	42.3	43.4
Mar. 29 Mar. 29	1905	41 21	66°15.5'		27	25		39.7	39.9
Mar. 29	2005	41° 07'	66°25.5'		29	27	32,50	38.2	38.5
Mar. 29	2105	41° 04'	66° 38'		31	29		37.5	37.5
Mar. 29	2205	41° 04'	66° 52'		33	31	32,52	38.9	38.7
Mar. 29	2300	41° 04'	66° 07'		35	33		39.0	38.5
Mar. 30	0005	41° 02'	67°17.5'		37	35	32,53	39.3	39.1
Mar. 30	0100	40• 54'	67°18.3'		38	37		39.0	38.8
Mar. 30	0200	40°45.8'	67° 13'		41	39	32.51	38.8	38.9
Mar. 30	0300	40°45.8'	67° 02'		43	41		38.9	38.9
Mar. 30	0405	40° 45'	66° 47'		45	43	32.87	40.0	40.1
Mar. 30	0505	40° 40'	66° 54'		46	44		41.5	41.5
Mar. 30	0605	40° 34'	67° 05'		48	46	32.57	39.1	39.0
Mar. 30	07 05	40° 25'	67° 15'		50	48		39.6	39.5
Mar. 30	0805	40° 31'	67° 24'		52	49	32.68	39.1	39.1
Mar. 30	0900	40°37.5'			54	51		38.7	38.7
Mar. 30	1000	40° 46'	67°43.8'		56	53	32.63	39.5	39.5
Mar. 30	1105	40° 54'	67°54.5'		58	55		39.5	39.3
Mar. 30	1215	41° 05'	68°03.8'		61	56	32.76	39.2 39.4	39.1 39.4
Mar. 30	1400	40° 58'	68°13.5'		62	60	32,79	39.4	39.4
Mar. 30	1500	40*51.3			63	61 63	54.19	39.6	39.7
Mar. 30	1605	40° 46'	68° 30'		65 67	64	32.80	39.5	39.5
Mar. 30	1705	40° 39' 40° 32'	68° 39' 68° 50, 5'		69	67	52.00	39.4	39.4
Mar. 30 Mar. 30	1805 1905	40° 26'	68°57.5		71	68	32,64	39.5	39.6
Mar. 30 Mar. 30	2005	40° 30'	69° 06'	13	73	69		39.7	39.6
Mar. 30 Mar. 30	2100	40°36.5			74	71	32.75	38.7	38.7
Mar. 30 Mar. 30	2200	40°43.5			76	73		37.7	37.7
Mar. 30		40°51.3			78	75	32,60	37.9	38.0
Mar. 31	0005	40° 51'	69° 42'		78	77		38.0	38.2
	0000	10 01	00 12		loading 5	loading 5			
Mar. 31	0200	40° 45'	69°48.5		74	78	32.80	39.0	39.0
Mar. 31	0300	40*38.5			75	79		39.2	39.3
Mar. 31	0405	40°30.5			77	81	32.95	39.4	39.4
Mar. 31	0505	40° 27'	70°12.5		79	82		40.0	40.1
Mar. 31	0605	40° 34'	70° 20'		81	83	32.76	39.9	40.0
Mar. 31		40° 43'	70°28.5		83	85		39.6	39.7
Mar. 31		40° 50'	70° 34'		84	86	32.76		38.8
Mar. 31		40°56.5			86	87		38.1	38.3
Mar. 31	1000	41° 05'	70°46.5		87	88	32.41	37.5	37.5
Mar. 31	1125	41°28.5	70° 56'	14	89	90		36.8	36.7

Table 4. --Date, time, and position for temperature and salinity records in relation to 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 73, April 17-28, 1956

		1		1	1				1
		Lat-	Longi-		Surface	10-meter	Sur	face	10-meter
Date	Time	itude	tude	l-meter	gauze	gauze		Tem-	temper-
		N.	W.	tow	section	section	Salin-	pera-	ature
		1			Section	Section	ity	ture	
							%	° F.	
Apr. 17	1040	41°17.4'	71° 00'		1	1	32.12	40.1	40.0
Apr. 17	1200	41°07.3'	71° 00'		2	3		40.3	40.6
Apr. 17	1300	40°58.51	70°59.3'		3	4	32,62	41.3	41.3
Apr. 17	1400	40°48.7'	71° 00'		5	6		41.6	41.1
Apr. 17	1500	40°38.8'	71° 00'		7	8	32,81	41.9	41.8
Apr. 17	1605	40°30.4'	71°00.2'		8	9		42.4	42.1
Apr. 17	1705	40°20.6'	71°00.4'		10	11	33, 18	44.2	44.3
Apr. 17	1805	40° 13'	71°00.8'		11	12		44.7	44.4
Apr. 17	1905	40°02.5'	70°59.6'		13	14	33.88	46.9	45.8
Apr. 17	2000	40°00.51	70° 51'	~ -	14	15		41.4	41.2
Apr. 17	2100	40° 00'	70° 391		16	16	33.21	44.5	44.4
Apr. 17	2200	40°00.51	70°25.5'		18	18		44.6	44.8
Apr. 17	2300	40°00.5'	70° 13'		19	20	33.37	44.8	45.0
Apr. 18	0000	40° 01'	69°58.5'	1	21	21		45.0	47.1
Apr. 18	0200	40°01.5'	69°42.6'		25	26	32.61	41.5	41.5
Apr. 18	0300	40°01.5'	69°28.5'		28	28		41.8	41.7
Apr. 18	0405	40°01.5'	69°15.3'		29	30	32,60	41.4	41.5
Apr. 18	0505	40°00.5'	69°02.3'		31	31		43.9	44.0
Apr. 18	0605	40° 00'	68°49.5'		33	33	34.06	48.2	48.6
Apr. 18	07 05	40° 00'	68°35.2'		36	35		46.6	46.8
Apr. 18	0800	40° 00'	68° 22'		38	37	34.03	47.8	47.8
Apr. 18	0900	40° 00'	68°10.5'		39	38		49.9	49.6
Apr. 18	1000	40° 00'	68° 00'		41	39	34.91	52.4	52.3
Apr. 18	1100	40°11.7'	67°54.3'		43	41		53.5	53.5
Apr. 18	1215	40° 21'	67°49.5'	2	47	43	33.08	44.9	45.9
Apr. 18	1400	40°36.5'	67°44.1'		50	48		41.8	41.6
Apr. 18	1500	40°45.9'	67°40.2'		51	50	32.50	41.6	41.3
Apr. 18	1605	40°56.9'	67°34.9'		54	52		42.4	42.0
Apr. 18	1705	41°06.4'	67° 28'		56	54	32.55	41.1	39.7
Apr. 18	1805	41°16.7'	67°21.8'		58	56		40,6	40.4
Apr. 18	1905	41°25.3'	67°13.6'		60	58	32,59	40.6	40.4
Apr. 18	2000	41°33.7'	67°09.3'		62	59	34.33	40.0	40.3
Apr. 18	2100	41° 44'	67°05.3'		64	61	32,64	40.5	40.3
Apr. 18	2200	41.52.71	67°01.7'		65	63	32,04	40.3	40.4
Apr. 18	2300	42°00.7'	66° 57'		67	65	32.60	40.1	40.1
Apr. 19	0005	42°08.7'	66°51.3'	3	70	66		41.3	41.2
Apr. 19	0205	42° 23'	66° 44'		72	71	31,99	39.4	39.1
Apr. 19	0305	42° 34'	66° 40'		74	72		39.6	39.3
Apr. 19	0405	42° 44'	66°36.9'		76	74	31.69	37.0	37.0
Apr. 19	0505	42° 54'	66°32.5'		78	76		36.7	36.2
Apr. 19	0605	43° 04'	66°28.5'		79	77	31.74	36.7	36.6
Apr. 19	07 05	43° 12'	66° 25'		81	79		37.8	37.8
Apr. 19	0805	43°22.9'	66°20,4'		83	81	31.63	35.9	35.7
Apr. 19	0900	43° 32'	66°23.5'		85	83		36.1	35.7
Apr. 19	1000	43° 40'	66°33.8'		87	84	31,92	37.3	37.1
Apr. 19	1100	43°47.5'	66°42.5'		88	86	51.52	37.9	37.8
Apr. 19	1205	43°58.2'	66° 53'	4	90	87	31.98	37.9	38.0
p1. 10	1400	10 00.2	00 00	-	loading 2	loading 2	51.50	01.0	00.0
Apr. 19	1400	43°55.3'	67°04.1'		2 2			20.0	
Apr. 19	1500	43° 54'	67° 13'		4	3	22 24	38.9	38.8
p1. 10	1000	10 04.	01 12,		4	4	32.21	39.8	39.6

Cable 4Date, time, and position for temperature and salinity records in relati	on to
1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no.	73,
April 17-28, 1956Continued	

				•					
							Sur	face	
		Lat-	Longi-		Surface	10-meter	J		10-meter
Date	Time	itude	tude	1-meter	gauze	gauze	Salin-	Tem -	temper-
Date	1 mile	N.	W.	tow	section	section		pera-	ature
	1	14.	VV -		section	section	ity	ture	ature
								Luic	
					1		1 _	1	1
							%	°F.	
Apr. 19	1605	43°52.3'	67°29.5'		6	6	100	41.1	20.2
			67° 44'	•					39.3
Apr. 19	1705	43°51.8'			8	8	32.03	38.9	38.3
Apr. 19	1805	43°50.41			10	10		39.8	39.3
Apr. 19	1905	43°48.4'	68°13.2'		12	11	32.21	39.7	38.4
Apr. 19	2000	43°46.5'	68°25.5'		13	13		39.9	39.9
Apr. 19	2100	43°44.5'	68° 40'		15	15	32.03	38.2	37.4
Apr. 19	2200	43°42.2'	68°54.8'		17	17		38.5	38.0
Apr. 19	2300	43° 40'	69°08.8'		19	19	32.31	39.3	38.5
Apr. 20	0005	43°38.2'	69° 19'	5	20				
						20		40.0	37.5
Apr. 20	0205	43°34.7'	69°43.8'		24	25	25.27	40.1	36.9
Apr. 20	0305	43°31.1'	69°58.7'		26	26		39.9	37.0
Apr. 20	0405	43°22.5'	70°07.7'		28	29	30.17	40.9	38.9
Apr. 20	0505	43° 15'	70°15.3'		30	30		41.1	40.3
Apr. 20	0605	43°06.7'	70°23.8'		32	32	30,47	40.8	38.9
Apr. 20	07 05	42°59.5'	70° 28'		33	34		40.5	39.8
Apr. 20	0800	42°58.7'	70°15.3'		35				
						36	31.59	41.3	39.5
Apr. 20	0900	42°58.3'	70° 00'		37	38		39.9	39.7
Apr. 20	1000	42°57.3'	69° 46'		39	40	32.42	41.2	40.0
Apr. 20	1100	42° 57'	69° 30'		41	42		41.0	39.5
Apr. 20	1205	42° 56'	69°17.5'	6	42	43	32.31	41.1	39.8
Apr. 20	1420	42° 53'	68° 52'		47	48		42.5	39.9
Apr. 20	1500	42°51.7'	68°45.5'		48	49	32,23	41.0	39.5
Apr. 20	1605	42°49.6'	68°30.3'		50	51		41.2	40.0
Apr. 20	1705	42°49.7'	68°16.3'		52		1		
Apr. 20	1805					53	32.38	41.8	41.0
		42°48.8'	68°03.2'		53	54		41.1	40.4
Apr. 20	1905	42°49.8'	67° 49'		55	56	32.24	40.4	40.2
Apr. 20	2000	42°50.7'	67°36.2'		57	58		40.2	40.3
Apr. 20	2100	42°51.2'	67°21.7'		59	60	32.11	40.2	39,8
Apr. 20	2200	42°51.7'	67°07.8'		61	62		38.8	39.4
Apr. 20	2305	42°52.2'	66°52.5'		63	64	32.22	39.8	40.0
Apr. 21	0005	42°52.8'	66°38.2'	7	64	67		37.6	37.5
Apr. 21	0210	42° 53'	66° 00'		68	69	31.77		
Apr. 21	0310	42°53,1'	66°02.8'		70			36.5	36.2
Apr. 21		42°53.3'				71		36.3	36.0
	0420		65° 46'		72	73	31.94	36.3	36.3
Apr. 21	0500	42°52.2'	65°37.5'		74	75		36.2	36.1
Apr. 21	0605	42°48.7'	65°25.8'		75	76	31.56	34.9	34.7
Apr. 21	0705	42°43.71	65°12.2'		76	78		36.0	36.0
Apr. 21	0800	42° 38'	65°01.5'		78	80	31.56	34.8	34.8
Apr. 21	0900	42°26.61	65°03.7'		81	82		37.9	37.9
Apr. 21	1000	42°15.5'	65°05.5'		82	84	31.86	36.6	36.6
Apr. 21	1100	42°05'	65°10.2'		84				
						86		38.2	38.3
Apr. 21	1200	42°00.8'	65°21.2'	8	86	88	32.01	37.2	37.2
					loading 3	loading 3			
Apr. 21	1400	42° 00'	65°34.5'		2	3		38.5	38.4
Apr. 21	1500	42°01.6'	65°48.6'		4	4	31.81	37.1	37.1
Apr. 21	1605	42°01.51	66° 01'		6	6		37.7	37.6
Apr. 21	1705	42°01.2'	66°13.1'		8	8	32.22	39.0	39.0
Apr. 21	1805	42°02.6'	66°25.2'		9	9	34.44		
Apr. 21	1905	42° 03'	66° 37'					41.0	41.0
					11	11	32.60	40.1	40.2
Apr. 21	2000	42°05.4'	66°48.8'		13	12		40.4	40.5

Table 4. --Date, time, and position for temperature and salinity records in relation to 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 73, April 17-28, 1956--Continued

							Sur	face	
Date	Time	Lat- itude N.	Longi- tude W.	l-meter tow	Surface gauze section	10-meter gauze section	Salin-	Tem- pera-	10-meter temper- ature
							ity	ture	
							%.	° F.	
Apr. 21	2100	42°04.7'	67° 00'		14	14	32.61	40.4	40.5
Apr. 21	2200	42°00.5	67° 10'		16	15		41.4	41.5
Apr. 21	2300	41°58.4'	67° 20'		17	17	32,79	41.6	41.6
Apr. 22	0005	41°56.7'	67°32.7'	9	20	20		41.6	41.8
Apr. 22	0205	41°57.6'	67°52.7'	~ -	22	22	32.62	41.6	41.6
Apr. 22	0305	41°58.8'	68°05.2'		24	24		40.9	40.9
Apr. 22	0405	41°59.5'	68°17.5'		26	26	32.59	41.0	39.9
Apr. 22	0505	42°01.6'	68° 30'		28	28		41.5	41.5
Apr. 22	0605	42°01.3'	68°40.5'		29	29	32.62	41.5	41.4
Apr. 22	0705	42°02.7'	68°51.5'		31	31		41.4	41.4
Apr. 22	0805	42°04.8'	69°04.5'		32	33	32,49	40.3	40.2
Apr. 22	0900	42°06.4'	69°16.2'		34	34		40.6	40.1
Apr. 22 Apr. 22	1000	42°06.8' 42°08.8'	69° 28' 69° 38'		36	36	32.40	40.3	40.1
Apr. 22 Apr. 22		42°08.8'		10	37	38	29 64	41.0	40.2
Apr. 22 Apr. 22	1215 1405	42° 14' 42° 20'	69°46.1' 69°53.5'	10	40 41	39 42	32.64	41.8	41.7
Apr. 22	1505	42° 28'	69°59.5'		41	42	32.15	40.5	40.5
Apr. 22	1605	42°30.5'	70°14.5'		45	46	52.15	41.0	39.8 42.6
Apr. 22	1705	42°31.4'	70°27.5'		45	48	29.75	42.9	42.0
Apr. 22	1805	42° 32'	70° 37'		48	50	29.15	40.3	39.9
Apr. 22	1905	42°24.5'	70°26.6'		50	52	30.71	40.3	41.0
Apr. 22	2000	42°16.7'	70° 17'		51	54		40.1	39.9
Apr. 22	2100	42° 09'	70°07.21		54	56	31.86	40.3	40,1
Apr. 22	2200	42°01.8'	69°55.7'		56	58		39.7	39.8
Apr. 22	2300	41°49.7'	69°49.7'		57	59	31.98	40.1	40.1
Apr. 23	0005	41°40.71	69° 46'	11	59	62		40.4	39,9
Apr. 23	0205	41°31.4'	69° 35'		64	67	32.25	39.8	39.8
Apr. 23	0305	41°32.7'	69° 22'		66	69		40.6	40.6
Apr. 23	0405	41° 34'	69°07.31		68	71	32.42	40.3	40,3
Apr. 23	0505	41°35.5'	68°52.5'		70	73		41.0	39.8
Apr. 23	0605	41°36.6'	68° 41'		71	74	32.53	40.9	40.8
Apr. 23	0705	41°37.51	68°30.3'		73	76		41.7	41.6
Apr. 23	0800	41° 32'	68° 201		74	77	32.74	41.7	41.5
Apr. 23	0900	41°27.8'	68°09.3'		76	79		41.9	41.9
Apr. 23	1000	41°28.5'	67°55.5'		78	81	32,70	42.1	41.6
Apr. 23	1100	41° 28'	67°40.5'		80	83		42.0	41.8
Apr. 23	1215	41^25.41	67°21.8'	12	82	85 ,	32.62	41.9	41.7
					loading 4	loading 4			
Apr. 23	1410	41°25.2'	67° 09'		2	2		41.4	41.4
Apr. 23	1510	41° 28'	66° 58'		4	4	32.65	41.2	41.2
Apr. 23	1605	41°31.7'	66° 47'		5	5		40.1	40.1
Apr. 23	1705	41°32.2	66°34.3'		7	7	32.42	39.6	39.6
Apr. 23	1805	41°33.2°	66° 23'		8	8		40.0	40.0
Apr. 23	1905	41°33.31	66° 11'		10	10	32.27	39.0	39.0
Apr. 23	2000	41°31.4	65° 57'		12	12	22 65	39.1	38.9
Apr. 24	0605	41°09.5'	66°12.4'		17	16	33.65	45.6	46.0
Apr. 24 Apr. 24	07 05 08 05	41°04.2' 41°01.2'	66°21.3' 66°32.5'		19 20	17 19	32.31	40.5 39.2	40.5 39.2
Apr. 24 Apr. 24	0805						1 1		
Apr. 24	0900	41°00.7	66°45.5'		22	21		39.8	39.7

 Table 4. --Date, time, and position for temperature and salinity records in relation to

 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 73,

 April 17-28, 1956--Continued

				r -					
	1	-					Sur	face	
		Lat-	Longi -		Surface	10-meter			10-meter
Date	Time	itude	tude	1-meter	gauze	gauze		Tem-	
Date	1 mile	N.	W.	tow	section	section	Salin-	pera-	temper-
		1.	vv .		section	Section	ity	ture	ature
	1							tur c	
	(%	° F.	1
4 0.4	1000	41°00.6'	66° 57'	(23	22	32.37	40.0	40.1
Apr. 24	1000								
Apr. 24	1105	41°00.5'	67°09.3'		25	24		40.3	40.3
Apr. 24	1205	40°59.4'	67°21.7'	13	28	25	32.53	40.1	40.0
Apr. 24	1410	40° 56'	67°38.7'		30	29		41.4	41.2
Apr. 24	1505	40°56.91	67° 52'		31	30	32.58	41.5	41.6
Apr. 24	1605	40°58.2'	68°06.3'		33	32		42.0	41.9
Apr. 24	1705	41°00.8'	68° 20'		35	34	32.69	41.8	41.8
Apr. 24	1805	41°01.8'	68° 34'		37	36		41.9	41.9
Apr. 24	1905	41° 03'	68°46.8'	1	38	38	32.75	41.4	41.4
Apr. 24	2000	41°03.5'	69° 001		40	40		40.5	40.4
Apr. 24	2100	41°02.3'	69°10.8'		41	41	32.52	40.5	40.5
Apr. 24	2200	40°55.8'	69° 14'	1	42	43		40.5	40.4
Apr. 24	2300	40° 48'	69°08.2'		44	45	32.53	40.7	40.7
Apr. 24 Apr. 25	0005	40°36.2'	69°02.3'	14	45	46		41.2	41.2
Apr. 25 Apr. 25	0210	40°29.5'	68°43.0'		54	51	32.63	41.1	41.1
	0210	40°29.0'	68°29.0'		56	52		40.8	40.8
Apr. 25						54	32.54	40.8	40.8
Apr. 25	0405	40°28.3'	68°18.0'	1	58				
Apr. 25	0505	40°29.8'	68°06.0'		60	56		38.9	38.9
Apr. 25	0605	40°31.4'	67°53.5'		61	57	32.29	39.4	39.4
Apr. 25	0705	40°33.5'	67°42.5'		63	59		39.2	39.2
Apr. 25	0805	40°33.1'	67°29.5'		65	60	32.30	39.7	39.7
Apr. 25	0900	40°32.3'	67° 18'		66	62		41.9	41.9
Apr. 25	1000	40°31.4'	67° 04'		68	64	33.58	46.2	46.3
Apr. 25	1100	40° 37'	66° 56'		70	65		45.6	45.4
Apr. 25	1205	40°47.2'	66°56.2'	15	71	66	32.38	39.8	39.7
Apr. 25	1405	40°59.7'	66° 43'		76	71		40.2	40.0
Apr. 25	1505	41° 07'	66°36.2'		78	73	32.48	40.3	40.2
Apr. 25	1605	41° 13'	66°28.2'		79	75		40.5	40.5
Apr. 25	1705	41°20.5'	66° 23'		80	76	32,52	40.0	40.0
Apr. 25	1805	41°27.8'	66°17.6'		82	78		40.0	40.0
Apr. 25	1905	41°37'	66°12.8'		84	80	32,51	39.2	39.2
Apr. 25	2005	41° 45'	66° 08'		85	81		40.6	40.5
	2100	41°56'	66° 03'		87	84	32.02	37.7	37.8
Apr. 25	2200	41 50 42°04.3'			89	86	52.02	39.3	39.5
Apr. 25						88	32.29	38.6	39.1
Apr. 25	2300	42°13.7'	65°46.6'		91				36.5
Apr. 26	0005	42°21.3'	65°35.1'	16	92	89		36.5	30.5
	0005	100.001	05000 01		loading 5	loading 5	21 00	25.4	25 2
Apr. 26	0205	42° 30'	65°28.8'		8	2	31.63	35.4	35.2
Apr. 26	0305	42° 39'	65° 23'		10	4		35.9	35.8
Apr. 26	0405	42.48.5			11	6	31.60	34.5	34.6
Apr. 26	0505	42*57.5'			13	8		34.7	34.5
Apr. 26	0605	42*55.5			14	9	31.62	34.6	
Apr. 26	07 05	42* 51'	65°33.3'		16	11		36.6	36.6
Apr. 26	0805	42* 45'	65°45.5'		18	13	31.96	39.9	36.9
Apr. 26	0900	42.43.5	66*00.31		19	15		36.9	36.6
Apr. 26	1000	42* 40'	66*14.5		21	17	31.92	37.1	36.9
Apr. 26	1100	42.33.5			22	19		37.1	36.7
Apr. 26	1205	42*23.3			25	20	31.86	36.7	36.2
Apr. 26	1405	42°19.8'			27	24		40.2	40.2
Apr. 26	1505	42*21.3			29	26	31.85	36.6	36.6
Apr. 26	1605		66° 27'		31	29		36.8	36.7
Apr. 20	1003	1 44 44.0	00 21	1 1	1 21	43		00.0	1 30.1

Table 4. --Date, time, and position for temperature and salinity records in relation to 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 73, April 17-28, 1956--Continued

		Lat-	Longi-	l-meter	Surface	10-meter	Surfa	ace	10-meter
Date	Time	itude N.	ide tude tow gau	gauze section	gauze section	Salin- ity	Tem- pera- ture	temper- ature	
							0/	° F.	
Apr. 26	1705	42°23.7'	66° 12'		33	31	32,46	r. 39.1	39.2
Apr. 26	1805	42°22.5'	66°57.5'		34	33		36.7	36.4
Apr. 26	1905	42°20.8'	65° 45'		36	35	32.01	37.3	37.4
Apr. 26	2005	42°19.3'	65° 35'		37	36		36.9	36.7
Apr. 26	2100	42°14.3'	65°29,6'		38	37	32,19	38.3	38.1
Apr. 26	2200	42°04.31	65° 29'		40	39		38.7	38.6
Apr. 26	2300	41°55.5'	65° 29'		42	41	32.59	38.7	39.3
Apr. 27	0000	41°46.5'	65°30.4'		43	42		38.4	38.5
Apr. 27	0110	41° 47'	65° 44'		45	45	32.56	39.7	39.5
Apr. 27	0205	41°47.5'	65°56.8'	~ ~	47	46		39.3	39.2
Apr. 27	0305	41°45.7'	66°08.3'		48	48	32.52	40.2	40.4
Apr. 27	0405	41°44.6'	66°19.9'		50	49		40.1	40.1
Apr. 27	0505	41°43.2'	66°33.6'		52	51	32.58	40.6	40.6
Apr. 27	0705	41°42.3'	66° 48'		53	53		41.3	41.3
Apr. 27	0800	41°44.4'	67° 02'		55	55	32.77	41.7	41.4
Apr. 27	0905	41°47.2'	67°15.2'		57	57		41.8	41.9
Apr. 27	1000	41°40.5'	67° 10'		58	58	32.66	41.4	41.3
Apr. 27	1100	41° 35'	67° 001		60	60		41.1	39.9
Apr. 27	1205	41°26.8'	66°53.9'	18	60	61	32.62	41.0	39.8
Apr. 27	1405	41° 12'	66°44.7'		64	66		40.2	40.0
Apr. 27	1505	41°03.3'	66°41.1'		66	67	32.36	39.7	39.2
Apr. 27	1605	40°52.4' 40°44.5'	66°37.8' 66°30'		68 69	69 71	22 41	44.0	44.1 45.7
Apr. 27 Apr. 27	17 05 1805	40°44.5'	66°43.6'		72	73	33.41	46.8	47.0
Apr. 27 Apr. 27	1905	40°43.7'	66°56.2'		73	74	32.36	39.7	39.8
Apr. 27	2000	40°43.8'	67°09.5'		75	76	54.50	40.8	41.1
Apr. 27	2100	40° 45'	67° 24'		77	78	32.37	40.7	40.1
Apr. 27	2200	40° 46'	67°37.7'		79	79		40.8	41.6
Apr. 27	2300	40°45.3'	67°50,6'		80	81	32, 54	40.9	41.2
Apr. 28	0005	40°44.5'	68°05.8'	19	83	82		40.6	40.5
Apr. 28	0200	40°43.4'	68°27.5'		85	85	32,62	41.5	41.5
Apr. 28	0310	40° 42'	68°40.2'		87	87		41.8	41.8
Apr. 28	0405	40°41.1'	68°53,7'		88	88	32.73	41.5	41.4
Apr. 28	0505	40°40.81	69°07,5'		90	90		40.9	40.9
Apr. 28	0605	40°42.31	69° 21'		92	91	32.48	40.3	41.2
Apr. 28	0705	40° 45'	69°35.9'		93	93		41.9	41.8
Apr. 28	0800	40°45.8'	69°48.9'		95	94	32.26	42.3	42.4
Apr. 28	0900	40°47.9'	70° 021		96	96		42.5	41.9
Apr. 28	1000	40°54.2'	70° 13'		98	98	32.31	42.4	42.4
Apr. 28	1100	40°59.5'	70°23.5'		99	99		41.9	41.8
Apr. 28	1200	41°04.4'	70°34.7'	20	100	100	32.44	42.5	42.4
Apr. 28	1300	41° 08'	70° 42'					43.5	43.1
Apr. 28	1400	41•11.3'	70°49.4'				32.25	42.5	42.3

 Table 5. --Date, time, and position for temperature and salinity records in relation to

 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 75,

 May 16-29, 1956

							Sur	face	
		Lat-	Longi -	1-meter	Surface	10-meter		m	10-meter
Date	Time	itude	tude	tow	gauze	gauze	Salin-	Tem- pera-	temper-
		N.	w.		section	section	ity	ture	ature
								ture	
					loading 1	loading 1	%	° F.	
			ļ						
May 16	1200	41°17.3'	71° 00'		1	1	32.19	47.1	47.1
May 16	1300	41°07.8'	71° 01'		2	2		47.1	46.6
May 16 May 16	1400	41°01.2' 40°51.2'	70°57.6' 70°57.2'		4 5	3 5	32.31	47.0	46.2
May 16	1600	40°39.7'	70°56.8'		7	7	32,64	47.2 47.6	46.5
May 16	17 05	40°29.7'	70°57.2'		9	9	52.04	46.3	44.3
May 16	1805	40°20.5'	70°58.61		11	11	32,47	45.1	44.6
May 16	1905	40°09.1'	70°58,6'		13	13		46.6	44.8
May 16	2005	40°00.51	71° 00'		14	14	32.57	44.1	43.8
May 16	2100	40°00.61	70° 49'		16	16		45.7	45.3
May 16	2200	40° 00'	70° 37'		17	17	32.91	45.9	45.8
May 16	2300	40°00.8'	70° 26'		19	19		45.3	44.8
May 16	2400	40°00.3'	70°11.8'	1	22	22	32.52	44.6	44.1
May 17	0200	39°57.8'	69°52.5'		24	24		46.6	48.4
May 17 May 17	0300	39°57.8' 39°59.3'	69° 41' 69°28.4'		26 27	25 27	33.74	49.4	53.8
May 17 May 17	0505	40°00.9'	69°17.5'		29	29	35.31	54.7 58.5	55.3
May 17	0605	40°00.4'	69°05.5'		31	30		60.5	60.8
May 17	0705	40°00.5'	68°52.5'		32	32	35.64	63.0	63.1
May 17	0800	40°00.5'	68° 40'		34	34		67.9	68.6
May 17	0900	40°00.7'	68°28.2'		36	35	36.42	69.2	69.2
May 17	1000	40° 01'	68°17.2'		37	36		69.4	68.2
May 17	1100	40°01.2'	68°04.5'		39	39	35.26	61.4	61.7
May 17	1208	40°06.2'	67°55.8'	2	42	40		59.9	59.9
May 17	1403	40°20.5'	67° 53'		44	44	35.74	64.0	65.5
May 17	1503	40°28.4' 40°37.8'	67°48.3' 67°38'		26	45		66.6	66.7
May 17 May 17	1605 1705	40°37.8' 40°47.3'	67°30.3'		48 50	47	32.51	44.7	43.9
May 17 May 17	1807	40° 56'	67° 23'		52	49 51	32.53	44.7 43.9	43.2
May 17	1907	41° 06'	67° 14'		54	53	32.00	43.5	43.2
May 17	2000	41°15.7'	67°06.8'		56	55	32.88	43.5	42.4
May 17	2100	41° 22'	66° 58'		57	56		43.8	42.7
May 17	2200	41° 27'	66° 52'		59	57	32.78	43.7	43.4
May 17	2300	41°34.7'	66°44.3'		60	59		42.7	42.7
May 18	0010	41°43.5'	66°39.2'	3	65	60	32.66	42.6	42.4
May 18	0205	41° 57'	66° 30'		67	64		42.3	42.3
May 18	0305	42° 07'	66°25.6'		69	66	32.49	43.0	42.9
May 18	0405	42° 15'	66° 20'		70	68		41.7	41.7
May 18	0505	42°24.2' 42°32.3'	66°13.2'		72	69	32.17	41.1	41.1
May 18 May 18	0707	42°42.4'	66°01.4'		73 75	71 73	22.26	40.3	39.9
May 18	0805	42° 52'	65*54.5'		77	75	32.36	39.5 38.9	39.3
May 18	0900	43°01.5'	65° 46'		79	77	31.89	39.9	39.6
May 18	1000	43°10.5'	65° 43'		81	79		38.5	38.0
May 18	1100	43°15.4'	65°45.6'		82	81	31.90	38.6	
-					loading 2	loading 2			
May 18	1208	43°15.2'	66°01.5'	4	1	1		39.9	
May 18	1400	43°14.3'	66° 19'		3	3	32.06	39.4	39.4
May 18	1508	43°15.4'	66°35.8'		5	5		40.0	40.0
May 18	1610	43-17.8	66°50.5'		7	7	32.25	41.6	41.6

Table 5Date, time, and position for temperature and salinity reco	rds in relation to
1-meter tows and Hardy Plankton Recorder gauze sections Albatross II	/ cruise no. 75,
May 16-29, 1956Continued	

				1	• • • •				
		Lat-	Longi-		Surface	10-meter	Surface		
Date	Time	itude	tude	1-meter	gauze	gauze		Tem-	10-meter
Date	1 mile	N.	W.	tow	section	section	Salin-	pera-	temper- ature
							ity	ture	ature
							0/		
Mor 19	1705	43°16.7'	67°03.3'		8	9	%.	° F. 39,4	39.3
May 18	1805	43°16.5'	67°17.3'		10	10	32.20	41.2	41.1
May 18 May 18	1905	43° 22'	67°23.7'		11	11		41.5	41.4
May 18	2000	43°30.8'	67°22.1'		13	13	32,13	41.1	41.1
May 18	2100	43°41.2'	67°21.3'		15	15		41.0	40.8
May 18	2200	43°45.2'	67°15.5'		16	16	32,35	41.0	41.0
May 18	2300	43°44.2'	67°00.5'		17	17		41.4	41.3
May 19	0065	43°43.7'	66°45.6'	5	19	19	32.43	41.1	41.1
May 19	0208	43° 45'	66°25.7'		24	24		39.8	39.7
May 19	0300	43°55.5'	66°26.2'		27	26	31.93	39.5	39.4
May 19	0410	44° 04'	66° 331		29	29		40.2	40.3
May 19	0510	44° 11'	66°46.5'		31	31	32.30	40.4	40.4
May 19	0605	44° 16'	66°58.5'		33	33		39.8	39.8
May 19	0710	44•18.7'	67°11.5'		35	35	32.15	40.1	40.1
May 19	0805	44°21.5'	67° 16'		35	35		39.8	39.8
May 19	0900	44°22.5'	67°05.3'		36	37	32.08	39.4	38.7
May 19	1000	44°25.4'	66° 53'		38	39		39.6	39.1
May 19	1100	44°27.3'	66° 43'		39	40	31.43	39.9	38.3
May 19	1208	44°29.5'	66°32.5'	6	41	41		40.8	39.9
May 19	1410	44°30.5'	66°11.5'		44	44	32.09	41.3	40.9
May 19	1505	44°41.5'	65°53.8'		47	47		40.4	39.8
May 19	1605	44° 49'	65°40.3'		49	49	31.48	40.2	39.9
May 19	1705	44°57.2'	65°26.3' 65°15.2'		51 53	51 53	31.41	40.0	40.0
May 19 May 10	1800 1905	45°04.2' 45°04.4'	65° 27'		55	55	31.41	39.5	39.2
May 19 May 19	2000	45°04.4	65°40.4'		56	56	29,61	41.7	41.6
May 19 May 19	2100	45 04.5	65° 53'		57	57	23.01	41.6	41.2
May 19	2200	45°03.8'	66°06.5'		59	59	36,95	41.8	39.8
May 19	2300	44°58.2'	66° 20'		60	61		40.7	40.6
May 20	0015	44° 48'	66° 27'		62	63	30,26	40.7	40.1
May 20	0105	44°38.7'	66°27.3'		63	64		41.2	39.7
May 20	0205	44" 33'	66°31.5'		64	65	31.26	39.7	39.5
May 20	0305	44°22.5'	66°27.5'		65	67		40.3	40.2
May 20	0410	44°18.8'	66°33,2'		67	68	32.30	40.8	40.6
May 20	0505	44°16.5'	66° 43'		68	69		40.6	39.5
May 20	0605	44° 14'	66° 53'		69	71	32.20	41.2	41.1
May 20	0705	44° 12'	67° 05'		70	72		40.9	40.7
May 20	0800	44°09.5'			72	73	32.16	41.1	41.0
May 20	0900	44°05.5'	67°29.5'		73	75		41.5	41.2
May 20	1000	44 00'	67° 42'		74	76	32.06	40.6	40.4
May 20	1100	43°55.7'	67° 55'		76	77		40.5	39.4
May 20	1207	43°52.1'	68°08.8'	7	78	79	31.92	40.8	40.7
May 20	1405	43°46.5'	68°31.7'		80	81		42.6	41.8
May 20	1505	43*44.4'	68°44.5'		82	83	31.50	45.2	42.0
May 20	1605	43°40.4'	68°57.3'		83	84	21 64	42.9	40.9
May 20	17 05	43*39.3	69°12.3'	*-	85	86	31.64	43,6	42.3
May 20	1805	43°38.3'	69° 30' 69°40.5'		87	88 89	29.64	44.6	42.9
May 20 May 20	1905 2000	43° 37' 43°34.7'	69°40.5'		1				
May 20 May 20	2100	43°28.1'			89	90 92	30 78	45.2	43.6
may 20	2100	43-20.1	10-03.71		91	92	30.78	45.3	44.1

Surface 10-meter Lat-Longi-Surface 10-meter 1-meter gauze Date Time itude gauze Tem tempertude Salintow ature N. w. section section peraity ture °/00 °F. May 20 2200 43°19.5' 70°12.5' 93 94 45.8 45.0 - --May 20 2300 43°11.5' 70°20.5' 94 95 30.85 46.2 45.3 loading 3 loading 3 0005 43°02.8' 70° 27' 8 May 21 44.6 42.9 1 1 - -70°20 7' May 21 0200 42°57.8' 2 3 30,79 45.4 - -44.4 May 21 0300 42°57.4' 70° 10' 4 45.4 - -4 45.1 - -May 21 42°56.0' 69° 54' 0410 - -6 6 30,98 45.8 45.4 May 21 0505 42°55.8' 69° 42' - -7 8 45.2 44.1 ---May 21 0605 42°55.1' 69°27.8' --9 10 32.67 43.5 43.1 May 21 07 05 42°54.3' 69°11.7' - -11 12 ---43.6 42.9 32.20 May 21 0805 42°53.4' 68°55.7' - -13 14 42.8 41.7 May 21 0900 42°52.1' 68° 44' - -14 16 43.3 42.3 - -May 21 42°51.9' 68°29.8' 1005 -----16 18 32.11 43.4 41.9 May 21 1100 42°50.3' 68°19.3' _ _ 17 19 44.4 43.8 ---9 May 21 1203 42°50,1' 68° 02' 32.06 19 21 43.7 42.6 May 21 42°47.8' 67°38.5' ---25 43.0 1408 24 44.3 - -May 21 1505 42° 48' 67° 25' _ _ 26 27 32.26 44.5 42.9 42°48.6' 67° 13' 27 28 May 21 1610 -----44.0 41.9 May 21 1700 29 30 32.22 42°46.5' 67° 00' --43.1 41.4 May 21 40.4 1805 42°45.4' 66° 47' - -30 32 41.5 - -May 21 1900 42°45.3' 66° 36' 31 33 32.05 41.0 40.3 - -May 21 2000 42°45.3' 66° 24' - -33 34 42.3 41.3 - -42°42.9' May 21 2100 66°08.3' 35 36 32.24 40.3 39.5 - -May 21 2200 42°42.41 65°55.3' 36 41.5 40.5 38 --May 21 2300 42° 40' 65°38.3' - -38 40 31.75 40.6 39.3 May 22 0005 42° 38' 65° 221 10 40 42 - -40.3 39.9 May 22 0200 42°38.5' 65°03.5' - -44 45 31.56 39.8 39.0 May 22 0300 42° 47' 65°03.4' - -46 47 40.5 39.7 ---May 22 42° 59' 31.94 0405 65°03.3' - -48 49 40.0 40.2 May 22 65° 18' 0505 42°59.2' - -49 51 ---40.9 40.0 May 22 0605 43° 00' 65° 33' 31.76 39.9 39.2 - -51 53 May 22 43°00.21 65°48.2' 39.5 0705 39.5 - -53 54 - -May 22 0810 43°02.1' 66°03.5' - -54 56 32.23 39.6 39.4 May 22 0900 43 03' 66°17.5' - -56 58 40.2 39.4 ---May 22 1000 43° 04' 66° 30' - -57 59 32.09 39.9 40.7 43°05.7' 66°44.5' May 22 1100 - -59 61 39.8 - -41.1 May 22 1207 43°04.3' 66° 51' 59 62 32.29 42.2 41.3 11 May 22 42°50.7' 66°57.7' 1400 - -64 66 43.2 43.0 - -May 22 1502 42°38.6' 66°57.2' 32.22 42.9 - -66 68 43.0 May 22 1605 42°27.5' 66°56.8' _ _ 67 69 42.4 42.2 - -May 22 1700 42°20,9' 67° 00' - -69 70 32.20 43.1 42.9 May 22 1805 42°21.8' 66°45.7' --70 72 - -43.0 42.9 May 22 1910 42°20.5' 66° 32' - -72 73 32.14 43.0 42.8 May 22 2000 42° 19' 66° 18' 42.8 - --73 75 - -42.9 42.5 May 22 2100 42°17.5' 66° 05' -----75 76 32.17 42.7 May 22 2200 42°16.5' 65° 49' 78 42.7 - -76 ---43.4 May 22 2300 42°16.3' 65°34.5' 31.61 39.2 37.9 - -78 79 May 23 0005 42°15,4' 65°15,3' 12 80 39.6 39.5 81 --loading 4 loading 4 May 23 0207 42º 12' 65°02.7' - -2 3 31.44 40.0 38.8 May 23 0305 42°03.2' 65°03.8' 4 ---5 ---41.7 41.3

Table 5Date, time, and position for temperature and salinity records in relation to									
1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 75,									
May 16-29, 1956Continued									

Table 5Date, time, and position for temperature and salinity records in relation to									
1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 75,									
May 16-29, 1956Continued									

			r						
							Surface		
		Lat-	Longi-	1-meter	Surface	10-meter			10-meter
Date	Time	itude	tude		gauze	gauze	Salin-	Tem-	temper-
		N.	w.	tow	section	section	ity	pera-	ature
							ŕ	ture	
					-				
							%	° F.	
Mar. 0.0	0400	42° 00'	65° 12'		6	7	31.20	41.4	41.5
May 23	0400	42°00' 43°03.1'	65° 32'		9	9	51.20	41.4	41.5
May 23			65° 39'		10	10		43.1	43.0
May 23	0605	42°03.5' 42°04.2'	65°52.5'		10	12	32.34	42.1	41.7
May 23		42°05.21	66° 07'		14	14	32.94	43.0	43.0
May 23 May 23	0800	42°06.8'	66° 20'		15	15	52.34	43.2	42.8
	1000	42° 08'	66° 35'		17	17	32.71	42.7	42.5
May 23 May 23	1100	42° 09'	66° 47'		19	19		42.8	42.5
May 23 May 23	1205	42°10.4'	67° 02'	13	23	23	32.59	43.4	43.3
May 23	1357	42°08.3'	67°17.8'		25	25	52.05	43.9	
May 23	1505	42°06.5'	67°31.1'		27	27	32, 55	44.2	
May 23	1600	42°05.2'	67° 43'		28	28		44.8	43.5
May 23 May 23	1705	42 03.8	67° 56'		30	30	32.47	44.9	44.7
May 23	1805	42*03.8	68*07.5		32	32		44.6	44.5
May 23	1905	42°03.9'	68°21.8'		34	34	32,48	44.5	44.2
May 23	2000	42°04.7'	68°34.8'		36	36		44.4	44.2
May 23 May 23	2100	42°03.8'	68°45.2'		38	37	32.36	43.9	43.8
May 23	2200	42°03.7'	68° 56'		39	39		44.6	44.4
May 23	2305	42.03.6	69°12.3'		41	41	32.41	45.0	44.9
May 24	0005	42°03.5'	69*26.2'		43	43		45.4	45.4
May 24	0105	42.03.3	69°32.9'		45	44	32.21	44.6	44.6
May 24	0205	42* 13'	69°32.5'		46	45		44.9	44.9
May 24	0305	42*19.5'	69°32.1'		47	46	31.93	45.1	45.1
May 24	0405	42*28.2	69° 31'		49	48		45.7	45.6
May 24	0505	42*38.2	69°31.5'		50	50	31.69	45.5	45.4
May 24	0605	42*38.2'	69°44.2'		53	52		45.4	45.4
May 24	07 05	42°36.7'	69*56.21		55	54	31.64	46.1	46.1
May 24	0805	42°35.5'	70 08		56	56		46.1	46.1
May 24	0910	42.34.21	70°20.8'		58	57	31.38	44.3	44.2
May 24	1005	42°34.2'	70° 32'		59	58		40.7	40.1
May 24	1100	42 28	70°36.5'		62	61	31.40	45.3	44.8
May 24	1205	42 17.6	70°33.8'	14	65	65		45.6	44.5
May 24	1400	42° 08'	70 21'		67	67	31.77	44.8	
May 24	1500	42 071	70° 08'		69	68		45.8	
May 24	1600	42° 04'	69° 54'		71	70	31.82	45.4	
May 24	1700	41°52.5'	69° 52'		73	71		44.7	
May 24	1803	41.41.61	69°49.8'		75	73	31.96	45.3	44.8
May 24	1900	41°32.5'	69° 45'		77	75		43.1	43.1
May 24	2000	41* 32'	69° 36'		78	76	32.26	44.1	44.0
May 24	2100	41°33.8'	69°24.7'		80	77		44.1	44.1
May 24	2200	41.35.81	69°12.2'		81	79	32.28	44.5	44.5
May 24	2300	41*37.21	69°00.21		83	80		44.5	44.5
May 25	0005	41° 35'	68°45.4'	15	85	82	32.48	43.1	43.2
v					loading 5	loading 5			
May 25	0200	41°31.6'	68°29.6'		3	3		44.7	44.6
May 25	0307	41°26.5'	68° 12'		5	5	32.74	45.9	46.1
May 25	0414	41*26'	67°59.5'		7	7		45.8	46.0
May 25	0500	41°26.2'	67° 45'		9	9	32.87	45.7	45.8
May 25	0610	41°26.3'			11	10		45.5	45.6
May 25	0700	41° 27'	67* 201		12	12	32,69	45.2	44.9
	1	1	1	1					

Table 5 Date, time, and position for temperature and salinity records in relation to	
1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 75,	
May 16-29, 1956Continued	

_		Lat-	Longi-		Surface	10-meter	Sur	face	10-meter
Date	Time	itude N.	tude W.	1-meter tow	gauze section	gauze section	Salin- ity	Tem- pera- ture	temper- ature
							%	°F.	
May 25	0810	41°29.8'	67°10.5'		14	14	100	44.5	44.4
May 25	0900	41°31.5'	66°57.5'		16	16	32,79	44.1	43.8
May 25	1000	41°32.5'	66° 47'		17	17	54.15	43.6	43.3
May 25	1100	41°31.6'	66° 32'		19	19	32.18	43.3	42.0
May 25	1205	41°31.6'	66°18.7'	16	21	21	52.10	41.6	40.2
May 25	1405	41°31.2'	65°56'		26	25	31.92	44.4	44.3
May 25	1505	41*26.5	65°49.5'		27	27		44.2	43.4
May 25	1605	41°18.3'	65°57.7'		29	29	31.99	44.0	42.7
May 25	1705	41° 12'	66° 06'		31	30		42.9	42.1
May 25	1800	41° 06'	66° 15'		32	32	32.11	43.1	41.8
May 25	1905	41° 04'	66°28.1'		34	34		43.6	41.9
May 25	2000	41 04'	66° 42'		36	35	32.22	44.3	42.1
May 25	2100	41.04.3	66*56.8'		38	37		44.7	43.8
May 25	2200	41 05'	67°09.5'		40	39	32,62	44.5	43.0
May 25	2300	41*06.81	67°25.5'		43	41		45.6	44.6
May 26	0005	41*07.2	67° 40'	17	44	44	32.74	45.6	45.3
May 26	0205	41°06.5'	68° 00'		47	47		45.1	45.2
May 26	0305	41• 04'	68°13.5'		50	49	32.67	45.6	45.8
May 26	0410	41°02.2'	68°29.5'		52	51		45.1	45.1
May 26	0500	41.00.5	68° 381		53	52	32.73	44.7	44.7
May 26	0605	40°59.5'	68°50.5'		55	54		43.4	43.4
May 26	0708	40° 59'	69° 06'		57	57	32.60	43.4	43.4
May 26	0800	40° 55'	69°12.8'		59	58		43.3	43.0
May 26	0900	40°47.2"	69°14.8'		61	60	32.42	43.7	43.6
May 26	1000	40° 41'	69° 10'		63	61		- 45.3	44.7
May 26	1100	40•42.8'	68°57.7'		65	63	32.54	46.9	46.3
May 26	1205	40*43.3'	68°45.3'	18	68	65		45.0	45.0
May 26	1410	40°42.5' 40° 42'	68° 23'		71	69	32.54	48.4	45.8
May 26 May 26	1505 1605		68° 09'		73	71		49.1	47.2
	1700	40°40.6' 40°27.5'	67°55.3'		75	73	32.54	48.6	46.4
May 26 May 26	1805	40°37.21	67°39.5' 67°29.3'		77	75 76		48.9	46.9
May 26	1900	40°37.5'	67° 15'		80	78	32.58	49.1	54.5
May 26	2000	40°38.3'	67*03.5		82	80	34.35	58.4 68.4	67.8
May 26	2100	40°38.5'	66°49.5'		84	81	34.30	69.2	69.5
May 26	2200	40° 32'	66*46.61		85	82	35.70	60.2	69.8
May 26	2300	40° 21'	66°46.7'		86	83		68.0	68.3
May 27	0005	40° 10'	66°45.8'		88	87		64.8	
May 27	0105	40.05.51	66°45.7'	19	90	89	35.67	69.1	69.0
May 27	0205	40" 05"	66° 50'		92	90		67.4	67.6
May 27	0305	40°11.7'	66°59.5'		94	92	35.49	66.4	66.5
May 27	0405	40*16.51	67°12.5'		96	93		66.0	66.2
May 27	0505	40°20.71	67°24.7'		97	95	35,96	68.0	68.1
May 27	0600	40° 27'	67* 331		98	96		60.3	60.4
May 27	0705	40° 33'	67° 46'		100	98	33.93	52.9	52.4
May 27	0810	40*37.21	68°01.8'	20	102	99		44.9	
					loading 6	loading 6			
May 27	1000	40°28.5'	68°05.5'		99	2	33.14	48.8	48.7
		408 0.01	68° 08'		0.0				
May 27 May 27	$\begin{array}{c}1100\\1210\end{array}$	40° 23' 40°15.5'			98 96	3 5	~-	64.4	63.9

Table 5. --Date, time, and position for temperature and salinity records in relation to 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 75, May 16-29, 1956--Continued

			1				S	face	
		Lat-	Longi-		Surface	10-meter	Sur	Lace	10-meter
Date	Time	itude	tude	1-meter	gauze	gauze	C . 1'	Tem-	temper-
		N.	W.	tow	section	section	Salin-	pera-	ature
							ity	ture	
		1	1				٥,		
							60	° F.	
May 27	1300	40° 09'	68°16.7'		95	6		63.3	63.2
May 27	1405	40• 17'	68°28.8'		92	8	32.74	46.8	46.2
May 27	1502	40° 22'	68°38.5'		90	10		48.2	48.1
May 27	1605	40*25.5	68°50.3'		88	11	32.58	46.1	46.1
May 27	1700	40°28.5'	68°58.5'		87	13		46.1	45.8
May 27	1805	40*20.21	69°03.7'		85	14	32.59	47.9	47.9
May 27	1900	40° 14'	69°06.51		83	16		46.9	46.8
May 27	2000	40.08.51	69° 12'		82	17		51.7	52.2
May 28	0900	40• 21"	70°21.2'		67	29	32.60	48.4	48.2
May 28	1000	40° 15'	70° 24'		66	30		48.8	48.5
May 28	1100	40 07'	70°25.4'		65	32	32.58	47.8	
May 28	1205	39* 57*	70° 26'		63	34		61.4	
May 28	1310	39*46.5'	70°27.8'		62	36	34.88	57.4	57.4
May 28	1405	39•47.71	70°40.7'		60	38		56.5	56.3
May 28	1505	39*49.5	70*53.51		59	40	35.62	61.6	61.2
May 28	1600	39* 54'	71° 04'		57	42		60.0	59.9
May 28	1705	40.03.5	71°11.7'		55	44	32.68	49.4	49.5
May 28	1800	40°11.5'	71• 18'		53	46		51.1	48.6
May 28	1905	40• 18'	71*25.5'		52	47	32.09	51.2	49.3
May 28	2000	40*27.5	71*33.5'		50	50		51.5	49.6
May 28	2100	40° 23'	71°39.5'		48	52	31.17	51.4	51.2
May 28	2200	40*13.5	71*47.61		46	54		51.1	50.0
May 28	2300	40.06.51	71* 56*		45	56	31.54	51.2	50.0
May 29	0005	40°08.5'	72° 00'	21	44	57		51.7	52.2
May 29	0200	40°17.8'	71°59.5'		41	60	31.14	51.4	51.4
May 29	0305	40*30.5*	72°02.3'		39	62		51.4	51.4
May 29	0405	40*40.5	72*03.4'		37	64	30.68	50.6	50.6
May 29	0505	40*48.2'	71° 59'		35	67		50.2	50.3
May 29	0600	40* 531	71° 47'		33	69	30,60	48.0	47.9
May 29	0705	40° 59'	71°37.3'		31	71		47.6	47.5
May 29	0800	41* 04'	71° 27'		30	73	31.37	48.4	48.0
May 29	0900	40* 10'	71° 16'		28	75		48.5	48.6
May 29	1020	41°17.5'	71° 00'	22	26	77	31.91	50.3	50.0
				1					1

Table 6Date, time, and position for temperature and salinity records in relation to
1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 76,
June 11-24, 1956

							Surf	ace	
		Lat-	Longi-	1	Surface	10-meter			10-meter
Date	Time	itude	tude	1-meter	gauze	gauze	Salin-	Tem-	temper-
		N.	w.	tow	section	section	ity	pera-	ature
								ture	
							%	0.5	
					loading l	loading l	/00	° F.	
June 11	1430	41°17.5'	71° 00'		1	1	32.09	56.0	53.6
June 11	1600	41°04.5'	71° 01'		3	3		56.6	54.6
June 11	1700	40°54.71	71° 01'		5	4	31.58	57.9	55.3
June 11	1800	40°45.81	70°01.2'		6	6		56.6	54.8
June 11	1905	40° 351	71°00.8'		8	8	33.24	55.8	53.5
June 11	2007	40°24.3'	71°00.7'		10	10		55.2	54.3
June 11	2105	40°16.4'	71° 01'		11	11	34.10	59.8	59.1
June 11	2205	40°06.3'	71° 00'		13	12		59.6	58.6
June 11	2305	40° 01'	70° 54'		14	14	34.70	61.4	
June 12	0000	39*59.51	70°37.5'	1	16	15		59.1	59.3
June 12	0210	40°00.7'	70°18.1'		20	19	34.91	62.3	62.5
June 12	0305	40° 00'	70°05.51		22	21		59.0	55.6
June 12	0405	39*59.8'	69°53.2'		23	23	32.64	54.4	60.6
June 12	0505	39°57.8'	69° 36'		25	25		54.2	52.2
June 12	0605	39°58.2'	69° 24'		27	26	33.09	55.9	60.3
June 12	0705	39°58.5'	69° 11'		28	28		56.1	56.7
June 12	0805	39*58.5'	68°57.6'		30	30	32.48	54.5	54.4
June 12	0905	39°58.5'	68° 45'		31	32		57.4	61.4
June 12	1005	40° 00'	68" 34'		33	33	32.64	53.9	53.7
June 12	1105	40.00.51	68°20.5'		34	35		54.1	53.9
June 12	1205	40° 01'	68° 08'	2	37	36	34.93	62.3	62.7
June 12	1405	40°10.5'	67° 55'		39	40		64.2	63.8
June 12	1505	40*19.5'	67°49.5'		41	42	34,02	59.5	60.3
June 12	1605	40°27.5'	67°43.2'		43	44		59,8	58.5
June 12	1705	40°35.1'	67°37.5'		44	45	32.55	51.5	55.6
June 12	1805	40° 47'	67°31.5'		47	48		51.2	48.2
June 12	1905	40°52.3'	67° 25'		48	49	32.96	50.7	47.5
June 12	2005	41° 01*	67°18.5'		50	50		50.7	47.5
June 12	2100	41.07.3	67° 15'		51	52	32.84	47.6	46.8
June 12	2205	41°17.4	67°09.5'	H-	53	54		47.5	47.3
June 12	2305	41 27.9	67° 04'		55	56	32.66	46.8	46.7
June 13	0005	41°36.5'	66°58.5'	3	58	58		46.5	46.2
June 13	0205	41°50.2'	66° 44'		60	60		45.5	45.4
June 13	0305	42°00.2'	66°34.5'		62	62		44.7	44.6
June 13	0405	42° 11'	66° 26'		64	64	32.34	45.0	44.8
June 13	0505	42°17.9'	66°13.5'		66	66		46.6	46.6
	0605	42° 26'	66°08.2'		68	68	32.30	46.9	46.9
June 13 June 13	07 05	42° 26'	66° 02'		69	69	32.30	40.9	40.9
June 13	0805	42°40.5'	65°58.5'		71	71	33.07	43.6	43.5
		42° 51'	65° 58'		73	73		43.3	44.0
June 13	0905	42° 51' 43° 01'	65° 58'		75	75	32,43	43.3	41.6
June 13	1000	43° 10'	65° 54'		76	76	56.45	41.9	41.0
June 13	1100			1	76			41.9	41.4
June 13	1205	43*11.8'	66°09.5'	4		79	32.36		
June 13	1405	43° 11'	66°34.7'		82	82	1	44.1	42.5
June 13	1505	43°11.5'	66° 49'		83	83	32.42	46.5	45.4
June 13	1605	43° 11'	67° 001		84	84	20 00	48.0	45.9
June 13	1705	43° 14'	66°49.5'		85	85	32.86	47.1	46.7
June 13	1805	43°21.3'	66° 39'		86	87		46.5	45.8
June 13	1905	43*26.3	66°28.4'		88	89	32.47	46.1	43.7
June 13	2005	43° 23'	86°16.8'		90	92		45.4	41.9

Table 6Date,	time, and positio	on for tempera	ture and sali	inity record	s in relation to
1-meter tows and	d Hardy Plankton	Recorder gau	ze sections	Albatrass 111	cruise no. 76,
	June	11-24, 1956	Continued		

		Lat-	Longi-		Surface	10-meter	Sur	face	10-meter
Date	Time	itude N.	tude W.	l-meter tow	gauze section	gauze section	Salin- ity	Tem- pera- ture	temper - ature
							%	° F.	
June 13	2110	43° 25'	66°29.4'		92	93	32.56	46.0	43.3
June 13	2205	43° 35'	66° 43'		93	95		46.0	44.4
June 13	2305	43° 351	66° 56'	5	95	96	32.48	47.2	45.6
					loading 2				
June 14	0005	43*39.3	66°59.5'		1	97	~	44.9	44.7
	0040	10010 51				loading 2	00 74	40.0	45.1
June 14	0210 0305	43°48.5' 43°55.9'	66° 48' 66° 42'		2 4	99 97	32.74	46.6 43.7	45.1 42.6
June 14 June 14	0305	43-55.9	66°34.3'		6	95	32.87	45.2	43.9
June 14	0505	44° 17'	66° 30'		9	92		43.3	43.1
June 14	0605	44°22.5'	66° 40'		11	90	32,17	42.9	43.0
June 14	0705	44°28.5'	66°39.5'		11	89		43.2	43.0
June 14	0805	44* 321	66°31.5'		13	88	30,93	47.1	42.6
June 14	0905	44°34.5'	66° 21'		14	87		47.7	45.1
June 14	1005	44*37.5	66° 09'		16	85	32.17	45.6	42.9
June 14	1105	44°44.5'	65°58.8'		18	83		45.3	42.7
June 14	1205	44*50.51	65°44.5'	6	20	81	32.19	47.8	46.9
June 14	1405	45*02.5'	65°19.3'		25	76		46.5	45.4
June 14	1505	45*03.5	65°29.5'		26	75	31.74	43.6	42.1
June 14	1605	45° 03'	65°40.8'		27	74		44.5	41.1
June 14	1705	45°02.5'	65° 52'		29	72	30.86	48.9	43.2
June 14	1805	45° 01'	66° 06'		30	71		48.5	42.4
June 14	1905	44°59.7'	66° 20'		32	69 68	30.19	45.8	42.0
June 14	2005	44° 56'	66° 32'		33	67	31.61	46.8	46.3
June 14	2105	44°47.2' 44°37.2'	66°24.5' 66°17.3'		36	65	51.01	46.5	46.4
June 14 June 14	2310	44°29.5'	66° 18'		38	62	31.67	45.7	45.1
June 15	0005	44°25.5'	66° 27'	7	41	60		44.1	43.3
June 15	0205	44 19	66°44.5'		43	57	32.24	46.7	46.5
June 15	0305	44 15'	66° 55'		45	56		45.1	45.1
June 15	0405	44 10'	67° 08'		47	54	32.44	45.0	44.8
June 15	0505	44° 04'	67°19.3'		49	52		49.1	48.0
June 15	0605	44° 00'	67°31.5'		51	51	32.08	49.3	46.8
June 15	0705	43• 541	67°44.1'		52	49		50.0	48.7
June 15	0810	43• 51'	67° 56'		54	47	32.11	49.5	48.3
June 15	0910	43*51.2'	68°11.5'		56	46		46.5	43.9
June 15	1005	43* 51'	68° 25'		58	44	31.86	48.3	43.1
June 15	1105	43°47.2'	68°37.8'		59	42		48.4	45.1
June 15	1205	43*43.7	68°49.2'	8	61	41	31,88	47.8	46.0
June 15	1405	43*39.91	69° 13'		64	38	31,77	53.8	44.9
June 15	1505 1605	43°39.5' 43° 39'	69°24.2' 69°38.2'		65 66	36 34	31.77	54.0	48.9
June 15 June 15	1705	43*32.5	69* 291		68	33	31.26	54.8	50.9
June 15 June 15	1805	43° 26'	69°21.8'		69	30		53.5	53.0
June 15	1905	43° 20'	69° 24'		71	29	31.34	55.1	54.1
June 15	2005	43*18.2'	69*34.5		72	27		54.7	52.1
June 15	2105	43•13.6			73	26	31.10	59.6	56.1
June 15	2205	43.09.81			75	24		54.2	53.0
June 15	2310	43*05.5		9	76	23	30.01	59.2	48.5

 Table 6. --Date, time, and position for temperature and salinity records in relation to

 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 76,

 June 11-24, 1956--Continued

		Lat-	Longi-		Surface	10-meter	Sur	face	-10-meter
Date	Time	itude	tude	l-meter	gauze	gauze	Salin-	Tem-	temper-
		N.	w.	tow	section	section	ity	pera-	ature
							/	ture	
							0,		
						1	%	° F.	1
June 16	0010	43° 06'	70°02.5'		76	23		54.7	44.7
June 16	0205	43°22.2'	69°39.5'		80	20	31.68	53.7	50.6
June 16	0305	43°00.2'	69°25.5'		81	18		52.5	51.1
June 16	0405	43° 00'	69°14.5' 69° 00'		82 84	17 15	32.10	52.4 50.1	51.4
June 16 June 16	0505	42° 58' 42° 58'	68° 471		86	13	31.77	52.1	51.4
June 16	07 05	42°57.5'	68° 351		87	12		52.0	51.6
June 16	0810	42*55.5'	68° 20'		89	10	36.00	50.2	48.1
June 16	0905	42° 55'	68°07.51		90	9		51.8	49.8
June 16	1005	42° 531	67° 54'		92	7	31.98	52.2	51.3
June 16	1105	42° 521	67°41.3'		93	6		52.0	48.3
June 16	1205	42•49.61	67°27.2'	10	95	4	31.95	51.4	49.3
June 16	1405	42° 48'	67° 13'		loading 3	loading 3		52.0	48.7
June 16	1505	42° 48'	66° 59'		3	4	32.33	50.5	47.3
June 16	1605	42°47.3'	66° 45'		5	5		50.8	49.0
June 16	1705	42° 47'	66°32.5'		6	7	32.02	47.2	42.2
June 16	1805	42*46.2'	66°19.5'		7	8		44.3	43.2
June 16	1905	42° 46'	66° 06'		9	10	32.52	44.4	42.9
June 16	2005	42°42.8'	65° 51'		11	12		47.3	43.7
June 16	2105 2205	42° 41' 42°37.5'	65°37.9'		12	14 15	31.89	48.4 46.5	46.6
June 16 June 16	2205	42°36.5'	65°131		16	17	31.35	48.2	47.0
June 17	0005	42°44.81	65°11.5'	11	19	21		47.4	43.2
June 17	0205	42°48.5'	65° 26'		21	22	31.72	46.6	43.6
June 17	0305	42*49.5	65° 43'		22	24		46.9	41.9
June 17	0405	42*50.51	65° 56'		23	26	32.48	44.8	42.8
June 17	0505	42° 42'	66° 11'		25	28		44.8	43.6
June 17	0605	42° 43' 42° 40'	66° 25' 66°38'		26	30 31	32.28	45.1 50.3	44.7
June 17 June 17	0705	42° 40'	66° 41'		28	32	32,19	51.0	49.1
June 17	0905	42° 33'	66° 28'		29	34		49.5	46.8
June 17	1005	42*29.51	66° 14'		31	35	31.82	49.5	47.3
June 17	1105	42 271	66° 00'	12	32	37		50.5	48.4
June 17	1210	42°22.8'	65°45.1'		33	39	32.10	52.5	47.6
June 17	1410	42° 17'	65° 26'		36	43		50.8	48.6
June 17	1510	42° 12'	65° 27'		38	45	31.37	48.7	44.8
June 17	1605 1705	42° 04' 41°51.5'	65° 35' 65°43.5'		40 42	47 48	32.14	51.0 52.1	49.8
June 17 June 17	1805	41° 45'	65° 481		44	50		49.7	46.1
June 17	1905	41° 38'	65*53.5 ¹		45	52	32.00	52.0	49.1
June 17	2005	41*28.5	65° 57'		46	53		49.8	47.7
June 17	2105	41*25.5'	66° 10'		48	56	32.17	49.5	48.9
June 17	2205	41° 25'	66°21.5'		50	57		46.7	46.4
June 17	2305	41*24'	66° 33'		51	58	32.55	48.2	47.1
June 18	0005	41*24.5	66° 45' 67° 10'	13	54	60 63	32,66	47.7	45.8
June 18 June 18	0205 0305	41° 25' 41°27.5'	67°23.5'		56 58	65	32.00	48.5	40.5
June 18	0405	41 27.5	67°41.5'		60	67	32.58	50.2	50.2
June 18	0505	41 29'	67 56		62	69		50.9	50.9
June 18	0605	41° 30'	68° 11'		64	70	32.60	51.4	51.4

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Table 6. --Date, time, and position for temperature and salinity records in relation to 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 76, June 11-24, 1956--Continued

							Sur	face	
		Lat-	Longi-	l-meter	Surface	10-meter			10-meter
Date	Time	itude	tude	tow	gauze	gauze	Salin-	Tem -	temper-
	1	N.	Ψ.	100	section	section	ity	pera-	ature
							109	ture	
	1						0.		
	1						/	° F.	
7 10	07.05	41000 51	000 001		05	7.0		-	50.0
June 18	07 05	41*29.5'			65	72		50.1	50.3
June 18	0810	41° 28'	68° 36'		67	73	32,50	49.6	49.3
June 18	0905	41•24.5			68	75		53.1	52.7
June 18	1010	41° 25'	69° 02'		70	77	32.10	52.4	52.4
June 18	1105	41*27.5'		14	71	78		54.0	49.9
June 18	1210	41°29.5'	69°29.7'		74	80	32.05	50.1	47.9
June 18	1405	41° 40'	69° 34'		75	81		53.9	52.7
June 18	1505	41*38.5'	69° 38'		76	83	31.56	54.3	53.6
June 18	1605	41° 55'	69°42.5'		77	84		54.4	53.8
June 18	1705	42°04.5'	69° 46'		79	86	31.59	54.4	53.7
June 18	1805	42* 121	69°54.5'		81	88		53.7	51.8
June 18	1905	42°16.5'	70°08.5'		83	90	31.62	55.9	51.5
June 18	2005	42° 23'	70° 29'		84	92		55.5	54.6
June 18	2105	42°28.5'	70° 291		85	93	30.37	55.2	51.8
June 18	2205	42*34.2'	70*39.71		86	94		55.7	
June 18	2330	42°34.5'	70° 271	15	86	94		56.1	
June 10	2330	44 54.5	10 21.	15				30.1	1
T	0040	40407 51	70800 51		loading 4	loading 4	20.02	54.8	53.9
June 19	0010	42°37.5'	70°26.5'		1	1	30.83		
June 19	0105	42• 46'	70° 25'		2	3		53.4	51.4
June 19	0210	42° 461	70° 14'		4	4	30.81	53.7	51.5
June 19	0305	42*46.8	70° 021		5	5		53.3	52.7
June 19	0405	42° 44'	69°58.5'		7	7	31.82	53.1	53.0
June 19	0505	42° 43'	69°36.5'		8	9		53.0	52.9
June 19	0605	42° 44'	69°22.5'		10	11	31.89	52.5	52.5
June 19	0705	42* 391	69°16.5'		12	12		53.6	53.3
June 19	0815	42*27.5*	69° 17'		14	15	31.93	54.6	54.6
June 19	0900	42° 201	69° 17'		15	16		55.0	54.9
June 19	1005	42° 11'	69° 17'		17	17	31.80	55.5	54.7
June 19	1100	42 06'	69°10.5'		18	18		55.4	55.0
June 19	1215	42.05.5	68°54.8'	16	19	20	32.08	53.6	52.0
June 19	1405	42*04.81	68° 32'		23	23		53.5	53.0
June 19	1505	42 051	68° 18'		24	25	32.44	53.2	52.9
June 19	1605	42°06.3'	68° 04'		25	27		52.1	50.1
June 19	1705	42* 05'	67• 501		27	28	32,50	51.9	51.8
June 19	1805	42° 05'	67* 36'		28	30		51.3	49.6
June 19	1905	42 05	67° 24'		29	31	32,55	48.1	46.7
June 19	2005	42° 07'	67 09		31	33		47.3	47.2
	2105	42°08.5'	66° 57'		32	34	32.38	49.3	48.9
June 19		42° 06'	66° 41'		34	36	52.50	49.6	48.9
June 19	2205				35	38	32,30	48.9	48.5
June 19	2305	42*05.5	66° 25'	17			32.30	48.6	48.5
June 20	0005	42*03.7'	66°10.4'	17	37	39			
June 20	0205	41• 44'	66* 06'		42	44	32.33	48.5	48.0
June 20	0305	41• 37'	66• 14'		43	46		48.1	48.0
June 20	0405	41° 28'	66° 24†		45	47	32.14	48.2	47.5
June 20	0505	41 21'	66° 321		46	48		47.9	47.2
June 20	0605	41° 12'	66° 40'		48	50	32.28	48.9	48.7
June 20	07 05	41 04'	66*48.5		49	52		48.6	47.1
June 20	0810	41.04.5			51	54	32.56	49.7	48.6
June 20	0905	41* 05!	67° 13'		52	55		51.4	48.4
June 20	1005	41*05.3	67 • 27 . 5'		53	56	32.62	52.0	50.8
		1		1	1	1			

Table 6. --Date, time, and position for temperature and salinity records in relation to 1-meter tows and Hardy Plankton Recorder gauze sections Albatross III cruise no. 76, June 11-24, 1956--Continued

		Lat-	Longi-		Surface	10-meter	Sur	face	10
Date	Time	itude	tude	1-meter	gauze	gauze		Tem -	10-meter
Date	Inne	N.	W.	tow	section	section	Salin-	pera-	temper-
					Section	Section	ity	ture	ature
		ļ					%	° F.	
June 20	1105	41° 03'	67°44.5'	18	55	58		50.4	48.1
June 20	1205	41°03.2'	67° 51'		57	60	32.63	50.0	48.9
June 20	1405	41°01.3'	68° 13'		59	63		51.3	51.1
June 20	1505	41.01.2'	68°26.5'		60	65	32.66	49.9	49.2
June 20	1605	41• 01'	68° 41'		62	66		49.4	49.5
June 20	1705	41*02.5*	68° 56†		64	69	32.59	48.1	47.4
June 20	1805	40° 57'	69°02.6'		65	70		47.8	46.8
June 20	1905	40• 481	69°02.8'		67	72	32.43	48.1	45.9
June 20	2005	40°44.5'	68° 561		68	73		50.7	50.0
June 20	2105	40°44.3'	68° 43'		69	75	32.13	52.8	50.4
June 20	2205	40• 44'	68° 30'		71	76		53.0	48.1
June 20	2305	40*44.5	68° 15'		72	78	32.56	53.2	51.3
June 21 June 21	0005	40°45.7' 40°46'	68°00.8' 67°40.5'	19	73 78	80 83		50.8	51.3
June 21	0205	40 40.	67°27.5'		79	85	32.40	52.0 50.7	50.9 49.9
June 21	0405	40 45.3	67° 15'		80	86	32.33	48.7	49.9
June 21	0505	40°44.31	67° 02'		82	88	34.33	49.1	48.6
June 21	0605	40° 37'	67° 02'		83	90	32,20	49.1	48.3
June 21	0705	40° 28'	67°14.5'		85	92		64.0	64.0
June 21	0805	40°25'	67° 20'		86	94	34,52	62.1	62.9
June 21	0905	40°35.5'	67° 29		88	96		50.4	49.6
June 21	1005	40° 41'	67°41.5'		90	98	32.26	50.5	49.3
June 21	1100	40°35.5'	67°47.5'		91	99		50.5	46.9
					loading 5	loading 5			
June 21	1207	40°27.8'	67°56.5'	20	1	1	32.69	58.6	58.6
June 21	1405	40°17.5'	68° 091		3	3		60.8	60.4
June 21	1510	40°11.5'	68° 18'		5	5	34,22	61.5	61.9
June 21	1605	40°18.5'	68°27.5		6	7		56.9	56.1
June 21	1705	40° 25'	68° 36!		8	9	32.62	53.7	51.8
June 21	1805	40° 32' 40° 40'	68°45.5'		10	10		53.9	53.2
June 21 June 21	1905 2005	40° 40' 40' 40'	68° 54' 69° 04'		11 14	12 14	32.54	51.5	50.0
June 21	2105	40° 35'	69°10.5'		14	14	32.53	51.4 52.6	49.0
June 21	22105	40 271	69° 28'		16	15	34.00	54.7	52.3
June 21	2305	40°20.5'	69°22.5'		17	18	32.46	54.9	54.8
June 22	0010	40°12.5'	69°31.4'	21	21	19		57.8	57.7
June 22	0210	39 57	69• 40'		23	23	34.73	65.0	65.0
June 22	0305	39° 56'	69°45.5'		24	25		64.2	64.4
June 22	0405	40° 04'	69° 52'		26	26	33.68	60.2	60.7
June 22	0505	40°11.5'	70° 00'		27	28		57.1	56.6
June 22	0605	40°19.5'	70°08.5'		29	30	32.40	56.1	55.3
June 22	0705	40° 27'	70° 14'		31	31		56.1	55.6
June 22	0810	40• 361	70°24.5'		33	33	32,36	56.3	56.3
June 22	0905	40° 321	70* 301		35	35		57.1	56.7
June 22	1000	40° 24'	70°37.5'		36	36	32.60	58.3	56.6
June 22	1105	40° 16'	70° 44'		38	37		58.9	58.1
June 22	1205	40°08.3'	70°52.5'	22	42	40	32.93	60.6	58.8
June 22	1405	39° 581	71° 04'		44	43		63.1	62.3
June 22	1505	40° 06°	71° 10'		46	44	32.69	60.2	57.3
June 22	1605	40° 14'	71° 13'		47	46		59.7	58.4

			Jui	ie 11-24,	1950Cont	Inded			
		Lat-	Longi -		Surface	10-meter	Sur	face	10-meter
Date	Time	itude N.	tude W.	l-meter tow	gauze section	gauze section	Salin- ity	Tem - pera - ture	temper- ature
June 22 June 22 June 22 June 22 June 22 June 22 June 23 June 23 June 23 June 23 June 23 June 23 June 23 June 23 June 23 June 23	1705 1805 1905 2005 2105 2200 2200 0200 0205 0310 0405 0505 0605 0705 0805 0900	40° 24' 40°20.5' 40° 12' 40° 05' 39°58.5' 40° 03' 40° 03' 40° 00' 40°10.1' 39° 45' 39° 45.5' 39° 48' 39° 54' 40° 00' 40° 10' 40° 18' 40° 28'	71°17.5' 71°23' 71°28' 71°35.5' 71°44' 71°51' 72°09.2' 72°22.5' 72°31' 72°2.5' 72°54' 73°04' 72°58' 72°52.5' 72°48'	 23 	49 51 53 55 56 57 58 64 67 68 70 71 73 74 76 77	48 49 51 53 54 56 57 59 62 64 65 67 68 70 71 73	% 32.24 32.30 33.20 30.73 30.73 31.03 30.87 30.58	° F. 62.4 62.4 60.4 60.2 62.2 62.4 63.1 63.0 63.1 63.5 64.2 63.8 64.0 63.5 7	$\begin{array}{c} 60.1\\ 59.9\\ 57.9\\ 59.0\\ 61.1\\ 60.0\\ 61.3\\ 62.4\\ 59.4\\ 60.5\\ 63.4\\ 62.7\\ 63.1\\ 62.4\\ 61.5\\ 59.1 \end{array}$
June 23 June 23 June 23	1000 1100	40° 28' 40° 34' 40° 25'	72° 42' 72° 39.5'		78 82 loading 6	74	30.71	61.3 61.5	58.8
June 23 June 24	$\begin{array}{c} 1205\\ 1405\\ 1505\\ 1605\\ 1705\\ 1805\\ 2010\\ 2105\\ 2205\\ 2305\\ 0005\\ 0100\\ 0135\\ \end{array}$	40°15.2' 40° 17' 40° 26' 40° 35' 40° 40' 40° 33' 40° 27' 40° 33' 40° 40.5' 40° 51.5' 40° 57' 41° 06' 41° 14' 41° 17'	72°34.9' 72°28' 72°22' 72°15' 72°07.5' 72°00' 71°52' 71°44' 71°36' 71°28' 71°18' 71°18' 71°10' 71°03' 71°00'	24 25	1 2 3 5 6 9 10 12 13 15 16 18 19 20	78 80 81 83 84 86 87 89 91 93 94 96 97 98	30.93 30.79 31.12 31.46 31.64 32.09 32.11 32.10	$\begin{array}{c} 64.9\\ 65.2\\ 64.7\\ 64.5\\ 64.0\\ 64.2\\ 63.3\\ 63.0\\ 63.0\\ 62.3\\ 60.2\\ 60.0\\ 59.6\\ 59.0 \end{array}$	

Table 6. --Date, time, and position for temperature and salinity records in relation to 1-meter tows and Hardy Plankton Recorder gauze sections *Albatross III* cruise no. 76, June 11-24, 1956--Continued

	Tow			Number	Modal	Number	Average	
No.	Date	Time	Species	of eggs	stage	of larvae	diameter or length	Range
1	Feb. 21	1215	-	-	-	-	##. _	##. -
2	Feb. 22	0625	H-C *H HE AM	12 - -	- - -	19 1 1	1.47 3.84 32.0 17.0	1.36-1.54 3.17-4.71 -
3	Feb. 22	1800	No tow	-	-	-	-	-
4	Feb. 23	1220	-	-	-	-	-	-
5	Feb. 24	0050	-	-	-	-	-	-
6	Feb. 24	1310	*C	-	-	1	1.50	-
7	Feb. 25	0320	HE	-	-	10	36.0	-
8	Feb. 27	1750	HE	-	-	1	42.0	-
9	Feb. 29	1230	H-C A *H *C *A	62 1 - -	VI V - -	- 80 27 4	1.55 2.29 4.11 4.66 5.36	1.45-1.63
10	Feb. 29	1835	H-C A *H *C *A AM C H	73 20 - - - - -	V - - - -	- 34 43 10 2 2 1	1.55 2.36 4.10 4.51 4.93 8.30 3.85 3.52	1.41-1.67 2.11-2.64 3.39-4.58 4.00-4.93 4.18-5.90 8.10-8.50 3.52-4.18
11	Mar. 1	1430	H-C	15	111	-	1.52	1.41-1.63
12	Mar. 2	0900	AM H	-	-	110 7	18.0 7.23	9.00-23.0 6.60-7.48

Table 7.--Stages and sizes of fish eggs and larvae taken with 1-meter net on Albatross III cruise no. 71, February 20-March 2, 1956

Tow Number Number Average Modal Species of of diameter Range stage Time eggs larvae or length Date No. 末衣。 nn. 0010 1 Mar. 22 -_ _ _ -2 Mar. 22 1230 _ -_ --_ 1.50-1.58 3 Mar. 23 0020 H-C 15 V 1.55 -V 2.36 2.24-2.46 Α 6 3.52-4.49 ×Н 18 4.15 _ жC 11 4.63 4.31-5.10 -_ 5.48 ×Α 4 5.28-5.85 -_ 4 4.22-5.37 С _ 4.62 3.78 3.04-4.18 6 Η _ _ 4 Mar. 23 1550-_ 1615 5 Mar. 24 1240 _ ---_ 0950 Н 11 IΙ 1.53 1.45-1.58 6 Mar. 26 4 4.19 4.09-4.40 ×Н _ 5 v 1.45-1.54 7 Mar. 27 0020 H-C 1.49 . ×Η 9 4.13 3.43-4.53 _ _ 3.96-4.84 5 4.51 жC _ _ Н 1 7.44 -HE 1 39.0 -----AM 1 20.6 -_ _ ×Η 1 3.83 8 Mar. 27 1515 _ _ 3.74 ×Α 1 _ ---4.21 4.18-4.27 9 Mar. 28 1215 ×Η 2 ... _ жC 5 4.66 4.18-4.84 _ Η 1 4.09 _ -С 1 3.21 ... _ _ 10 Mar. 29 0420 -_ ----V 1.52 1.36-1.63 11 Mar. 29 1610 H-C 43 ---2.29-2.42 A 3 III 2.33 28 3.76 3.43-4.40 ×Η ----11 3.96 3.52-4.22 жC -4.22-4.66 ×Α 2 4.44 --

Table 8.--Stages and sizes of fish eggs and larvae taken with 1-meter net on Albatross III cruise no. 72, March 21-31, 1956

*Hatched aboard ship.

Mar. 30

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1215

H-C

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1.50-1.54

2.17-2.55

4.00-4.66

4.93-4.93

5.50-6.38

2.73-3.56

3.34-6.34

16.0-24.0

12.0-35.0

1.51

2.34

4.36

4.93

5.88

3.27

4.84

19.3

20.8

Table 8.--Stages and sizes of fish eggs and larvae taken with 1-meter net on Albatross III cruise no. 72, March 21-31, 1956--Continued

	Tow		Number	Modal	Number	Average			
No.	Date	Time	Species	of eggs	stage	of larvae	diameter or length	Range	
13	Mar. 31	0030	H-C *H HE AM A H	19 - - - -	V - - -	- 12 1 32 2 2 2 2	RE. 1.54 4.07 4.80 41.8 24.5 4.40 6.19	ER. 1.41-1.63 3.74-4.71 	
14	Mar. 31	1135	*RO AM	-	-	1 1	2.20 6.02	Ξ	

Table 9.--Stages and sizes of fish eggs and larvae taken with 1-meter net on Albatross III cruise no. 73, April 17-28, 1956

	Tow		Species	Number	Modal	Number	Average	Deene
No.	Date	Time	apecres	eggs	stage	larvae	diameter or length	Range
l	Apr. 18	0015	-	-	-	-	##. -	88.
2	Apr. 18	1215	H-C Y *H *C *A *Y	4 2 - - -	VI - - -	- 6 18 3 2	1.50 0.88 4.08 4.47 5.42 2.77	1.45-1.58 - 3.96-4.27 3.96-4.88 4.53-5.94 2.64-2.90
3	Apr. 19	0015	H-C *H *C P HE	17 - - -	v - - -	- 21 2 2 7	1.48 4.13 4.73 18.0 42.7	1.41-1.54 3.74-4.49 * 4.40-5.06 14.0-22.0 38.0-47.0
4	Apr. 19	1215	H-C A *H *C *A	118 13 - -	v - - -	- 58 70 4	1.55 2.45 4.24 4.63 5.49	1.41-1.67 2.20-2.77 3.78-4.84 4.05-5.19 5.02-5.85
5	Apr. 20	0005	*H *A HE WO	1 1 5 13		1 5	4.31 5.37 40.0 22.8	- 31.0-44.0 22.0-24.0
6	Apr. 20	1220	-	-	-	-	-	-
7	Apr. 21	0015	H-C A *H *C *A HE AM	5 10 - - - -	V - - -	- 12 7 25 5 1	1.54 2.46 4.17 4.33 5.54 43.6 32.0	1.50-1.58 2.29-2.68 3.92-4.58 4.05-4.58 5.06-6.07 41.0-46.0
8	Apr. 21	1215	*H *C *A	- -		8 4 2	4.08 4.47 5.50	3.96-4.27 4.18-4.84 5.19-5.51
9	Apr. 22	0015	H-C Y *H *C *Y P AM	25 6 - - - -	IV - - - -	- 75 10 13 1 6	1.47 0.86 4.15 4.28 2.79 50.0 22.0	1.41-1.54 0.79-0.92 3.61-4.66 3.48-4.62 2.42-3.12 16.0-40.0
10	Apr. 22	1220	-	-	-	-	-	-
11	Apr. 23	0015	*H *C *A *Y			21 11 8 2	4.11 4.21 5.41 2.51	3.74-4.62 3.74-4.62 4.75-6.25 2.38-2.64

Table 9.--Stages and sizes of fish eggs and larvae taken with 1-meter net on Albatross III cruise no. 73, April 17-28, 1956--Continued

	Tow			Number	Modal	Number	Average	Pango
No.	Date	Time	Species	of eggs	stage	of larvae	diameter or length	Range
11 Cont. 12	Apr. 23	1215	*RO HE AM *H *C *A C AM			3 3 4 1 3 2	 2.16 48.0 12.0 3.92 4.49 5.41 4.36 23.0 	2.16 44.0-52.0 3.52-4.58 3.58-4.76 21.0-25.0
13	Apr. 24	1215	H-C Y A *H *C *Y	19 11 - -	V V IV - -	- - 19 1 23	1.40 0.85 2.11 3.76 4.36 2.59	1.28-1.54 0.80-0.88 3.12-4.53 2.20-3.04
14	Apr. 25	0015	H-C Y *H *Y H C HE	175 9 - - - -	V - - - -	- 84 6 7 5 3	1.43 0.84 4.28 2.77 4.92 6.39 43.3	1.24-1.55 0.78-0.89 3.65-4.99 2.55-2.95 3.57-7.50 3.85-7.28 42.0-46.0
15	Apr. 25	1215	H-C Y CU *H *C *Y *A *CU *SPH	45 4 - - - - -	V V - - - -	- - 88 8 6 3 1 1	1.44 0.85 1.40 4.09 4.28 2.87 5.85 4.05 37.0	1.33-1.54 0.80-0.88 - - 3.17-4.66 3.96-4.84 2.73-2.95 5.37-6.38 -
16	Apr. 26	0015	H-C A CU *H *A *CU *C HE	101 7 5 - - - - -	V IV - - - -	- 23 14 5 1 6	1.46 2.32 1.34 3.72 5.07 4.15 4.27 46.2	1.37-1.63 2.22-2.42 1.29-1.41 3.21-4.13 4.31-6.25 3.96-4.22 - 43.0-48.0
17	Apr. 26	1215	H-C A *H *C *A *CU	64 11 - -	V V - - -	- 22 2 15 1	1.47 2.31 3.83 4.35 4.68 4.14	1.41-1.63 2.16-2.73 3.43-4.31 4.31-4.40 4.14-5.06
18	Apr. 27	1215	H-C A *H	30 1 -	IV IV -	55	1.39 2.29 4.07	1.29-1.47 - 3.52-4.53

Table 9.--Stages and sizes of fish eggs and larvae taken with 1-meter net on Albatross III cruise no. 73, April 17-28, 1956--Continued

	Точ		Species	Number	Modal	Number	Average diameter	Range
No.	Date	Time	opecies	eggs	stage	larvae	or length	nange
18 Cont. 19	Apr. 28	0005	*C *Y *A *H		-	10 3 2 3 1	##. 4.42 2.86 5.19 4.09 2.86	RE. 3.96-4.80 2.82-2.90 5.10-5.28 3.65-4.58
20	Apr. 28	1200	*H *A AM P	-	-	1 1 3 1 4 40	4.75 4.11 5.98 26.5 14.6	- - 3.74-4.49 - 23.0-29.0 10.0-23.0
			SC	-	-	1	14.0	-

Table 10.--Stages and sizes of fish eggs and larvae taken with 1-meter net on Albatross III cruise no. 75, May 16-29, 1956

	Tow		0	Number	Modal	Number	Average	Destro
No.	Date	Time	Species	of eggs	stage	of larvae	diameter or length	Range
1	May 17	0015	*WF *CU H RH C	- - - -	- - -	3 3 6 1 1	4.90 3.89 4.70 7.80 6.70	#8. 4.80-4.97 3.83-3.96 3.00-6.20 - -
2	May 17	1215	MU	-	-	ı	12.0	-
3	Мау 18	0015	*H *C *Y *CU HE WH			2 1 6 1 3 1	4.09 4.66 2.69 4.00 47.0 53.0	3.96-4.22 2.38-2.95 42. 0-50.0
4	May 18	1220	*H P SC	- - -	- - -	1 2 1	3.78 23.5 16.0	- 21.0 -26.0 -
5	Мау 19	0015	*H *R0 *A P	- - -	- - -	12 2 1 1	4.07 1.94 4.75 30.0	3.96-4.22 1.85-2.02 - -
6	May 19	1215	P ₩O	-	-	1 2	26.0 26.0	- 23.0 -29.0
7	Мау 20	1215	*H *R0 *A LF	- - -	- - -	1 1 1 2	3.96 2.07 4.75 31.5	- - 25.0 -38.0
8	May 21	0020	H-C A RO *H *C *A *Y *RO *CU *CU *WF AM HE	16 4 12 - - - - - - -	V V - - - - - -	- - 8 3 7 28 20 2 2 2 2 34 2	1.42 2.12 0.83 3.94 4.08 4.86 2.72 1.95 3.46 4.36 20.9 33.5	1.26-1.54 $1.98-2.16$ $0.79-0.87$ $3.70-4.14$ $3.74-4.40$ $4.49-5.41$ $2.38-3.08$ $1.80-2.33$ $3.21-3.70$ $4.09-4.62$ $10.0-28.0$ $32.0-35.0$
9	Мау 21	1220	RO *RO *CU	20 - -	V - -	- 57 1	0.83 2.07 3.52	0.74-0.88 1.80-2.42 -
10	Мау 22	0015	×H ×CU ₩H	- - -	-	14 6 4	4.08 3.99 45.8	3.56-4.75 3.34-4.66 43.0 -48.0

Table 10.--Stages and sizes of fish eggs and larvae taken with 1-meter net on Albatross III cruise no, 75, May 16-29, 1956--Continued

	Tow		Species	Number	Modal	Number	Average diameter	Range
No.	Date	Time	Species	eggs	stage	larvae	or length	itange
11	May 22	1215	*H *CU	-	-	1 2	RR. 3.61 4.16	#R. - 4.05-4.27
12	May 23	0020	*H *RO WH		-	11 1 1	4.07 1.89 44.0	3.77-4.48 - -
13	May 23	1220	*Y *RO P	-	- - -	2 2 2	2.73 1.92 24.5	2.55-2.90 1.85-1.98 21.0 -28.0
14	May 24	1215	RO *RO *WF *C *Y C SY	10 - - - - - -	V - - - - -	- 16 8 1 2 3 23	0.84 2.07 4.81 3.74 2.80 6.50 7.93	0.75-0.89 1.89-2.29 4.40-5.02 - 2.73-2.86 4.70-8.70 6.30-10.0
15	May 25	0020	H Y RO *H *Y *RO	7 11 - - -	V V II - -	- - 4 11 1	1.41 0.85 0.84 4.11 2.74 2.07	1.36-1.45 0.82-0.92 - 4.05-4.18 2.42-2.99
16	May 25	1215	*Y *RO		-	3 1	2.87 2.11	2.77-3.08
17	May 26	0015	C H WH Y			43 53 1 2	8.06 6.71 27.0 7.42	6.60-9.90 4.95-8.85 - 5.55-9.30
18	Мау 26	1215	*Y H	-	-	8 4	2.70 6.00	2.42-2.95 4.35-6.90
19	Мау 27	0015	RU MU LA RH U SU			1 1 4 1 1 1	39.0 25.0 24.5 22.0 14.0 22.0	- - 23.0 -27.0 - -
20	May 27	0810	*SH *WF BU SR H M			15 1 2 1 1	2.91 4.58 18.0 10.5 10.8 32.0	2.73-3.12 - 10.0 -11.0 -
21	May 29	0015	H WH	-	-	7 9	22.4 53.3	16.0 -29.0 40.0 -63.0

*Hatched aboard ship.

19.

Table 10.--Stages and sizes of fish eggs and larvae taken with 1-meter net on Albacross III cruise no. 75, May 16-29, 1956--Continued

	Tow	Species	Number	Modal	Number	Average			
No.	Date	Time	opecies	eggs	stage	of larvae	diameter or length	Range	
22	Мау 29	1020	CN RO *CN *RO *M P AM	57 6 - - - -	V II - - - -	- 47 3 4 1 18	кл. 0.90 0.78 3.15 2.23 3.62 21.0 7.48	m. 0.83-0.97 0.75-0.83 2.68-3.43 2.20-2.29 3.30-3.83 - 5.25-10.20	

Table 11.--Stages and sizes of fish eggs and larvae taken with 1-meter net on Albatross III cruise no. 76, June 11-24, 1956

	Tow			Number	Modal	Number	Average	D
No.	Date	Time	Species	of eggs	stage	of larvae	diameter or length	Range
1	June 12	0000	U U *U *U *U MU NE U	13 2 - - - -	V V - - - -	- - 3 23 3 2 1 1	<pre>***. 0.78 1.19 0.75 2.56 1.92 1.95 24.0 23.0 7.05</pre>	*** 0.75-0.84 1.06-1.32 - 2.46-2.68 1.58-2.20 1.76-2.07 23.0-25.0 -
2	June 12	1215	RU MU WH U PU			1 1 1 1	32.0 23.0 20.0 13.0 13.0	-
3	June 13	0015	WH C	-	-	1 5	30.0 13.0	_ 11.0-16.0
4	June 13	1215	CU Y *WF *RO *CU *Y	19 1 - - -	IV - - - -	- 3 1 1	1.27 0.81 5.28 2.07 3.34 3.21	1.20-1.36
5	June 14	0015	Р	-	-	ı	33.0	-
6	June 14	1215	WF RO *WF *RO	35 22 -	V V -	- - 18 1	1.25 0.79 5.07 1.98	1.16-1.34 0.75-0.81 4.58-5.46 -
7	June 15	0015	LF HE P			2 12 2	34.5 42.4 27.0	27.0-42.0 38.0-47.0 25.0-29.0
8	June 15	1215	RO *RO *WF	6 - -	IV - -	- 1 1	0.83 2.29 5.10	0.79-0.88 - -
9	June 16	0015	LF AM WH			1 6 30	35.0 43.8 49.7	- 32.0-51.0 38.0-68.0
10	June 16	1215	RO CU *RO *CU *M RH	34 29 - - -		- 34 9 2 1	0.80 - 1.82 3.69 3.16 36.0	0.75-0.85 1.63-1.98 3.52-4.05 3.12-3.21
11	June 17	0015	CU RO	14 5	v v	-	1.27 0.81	1.15-1.32 0.75-0.85

Table 11.--Stages and sizes of fish eggs and larvae taken with 1-meter net on Albatross III cruise no. 76, June 11-24, 1956--Continued

	Tow		a .	Number	Modal	Number	Average		
No.	Date	Time	Species	of eggs	stage	of larvae	diameter or length	Range	
ll Cont.		*CU *\\F *H *RO				10 2 2 3	4.10 4.62 3.26 2.02	**. 3.60-4.62 - 1.89-2.20	
12	June 17	1215	CU U *CU *RO *G *Y *CN	13 68 22 - - - -		- - 3 1 1 1	1.25 1.25 0.78 3.74 1.76 2.99 3.04 3.26	1.19-1.36 1.19-1.36 0.75-0.88 3.52-4.27 - - -	
13	June 18	0015	Y 12 V - 0.85 *Y - - 35 2.70 RH - - 2 40.5 SY - - 1 9.0 H - - 1 5.25		35 2.70 2 40.5 - 1 9.0		2.70 40.5 9.0	0.81-0.87 2.51-3.08 39.0-42.0 - -	
14	June 18	1220	WF RO *WF *RO *CU *RH *Y C	4 - - - - -		- - 2 4 1 2 3 1	1.29 0.80 4.71 2.01 3.96 1.92 2.82 9.15	1.23-1.36 0.76-0.84 4.58-4.84 1.94-2.11 1.89-1.94 2.60-2.95	
15	June 18	2220	WF RO RH *RO *RN *CU *CU SB RH Y C H	3 15 1 - - - - - -	IV III - - - - - - - - - - - -	- - 4 19 4 1 2 7 1 6 1 1	1.26 0.81 0.70 4.62 1.95 1.96 4.05 2.64 23.1 51.0 12.1 7.8 5.0	1.24-1.29 0.78-0.84 4.18-5.06 1.76-2.20 1.76-2.07 	
16	June 19	1215	CU RH RO *CU *RH *RO	1 15 10 - -	IV V - - -	- - 1 18 16	1.37 0.70 0.82 3.83 1.93 1.96	0.67-0.71 0.80-0.87 1.80-2.02 1.72-2.11	
17	June 20	0010	CU WH	14 -	V -	-2	1.28 31.5	1.23-1.40 30.0-33.0	

*Hatched aboard ship.

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Table 11.--Stages and sizes of fish eggs and larvae taken with 1-meter net on Albatross III cruise no. 76, June 11-24, 1956--Continued

	Tow			Number	Modal	Number	Average	
No.	Date	Time	Species	of eggs	stage	of larvae	diameter or length	Range
							88.	RA .
18	June 20	1210	-	-	-	-	-	-
19	June 21	0015	*RH	-	-	2	1.90	1.85-1.94
			*M Y	-	-	1 194	2.86	-
			I	-	-	194	7.26	4.65-14.25
20	June 21	1215	SH	14	v	-	0.92	0.88-0.97
			RH CN	10	v v	-	0.69	0.65-0.71
			U	8	v	-	0.92	0.94-1.01
			U	10	v	-	0.72	0.70-0.75
			U	2	v	-	0.75	-
			*SH	-	- 1	34	2.94	2.73-3.21
			*RH	-	-	44	1.93	1.76-2.07
			*CN	-	-	2	2.88	2.86-2.90
			¥Ŭ ¥Ŭ	-	-	16 2	2.83	2.64-3.08
			+0 +U	-	1 -	20	2.02	1.76-2.42
			+U +U	_	_	1	2.86	-
21	June 22	0015	RH	44	V V	-	0.70	0.66-0.74
			U U	31 16	v	-	0.70	0.66-0.73
			*RH	10	-	54	2.00	1.80-2.11
			*U	_	_	25	1.94	1.67-2.20
			*U	-	- 1	8	2.80	2.51-3.08
			WH	-	-	5	37.4	30.0-45.0
			SH	-	-	278	5.73	3.0-8.2
			RH Y	-	-	1 4	9.0	6.0-12.0
			I	-	-	4	0.4	0.0-12.0
22	June 22	1215	υ	38	V	-	1.31	1.23-1.33
			U	30	II	-	0.77	0.74-0.83
			₩Ŭ ₩Ŭ	-	-	33 21	3.03	2.73-3.21
			0× ₩U		1	3	1.91	1.76-2.02
			*U	-	_	l í	4.31	-
			WH	-	-	2	29.5	28.0-31.0
			CU	-	-	1	5.0	-
23	June 23	0015	RH	30	v	-	0.70	0.67-0.73
			SH	2	v	-	0.86	0.85-0.86
			U	1	v	-	0.97	-
			*RH	1 -	-	42	2.09	1.89-2.29
			*SH *U	-	-	9	2.96	2.73-3.12
			RO	-	-	3	2.82	2.77-2.86
	7	2027	DIT					
24	June 23	1215	RH	20	V V	-	0.70	0.67-0.74
			*RH	1	- V	54	2.10	1.76-2:24
			*SH]	2	3.04	-
		1	*U	-	-	ĩ	2.77	

Table 11.--Stages and sizes of fish eggs and larvae taken with 1-meter net on Albatross III cruise no. 76, June 11-24, 1956--Continued

	Tow		Species	Number	Modal	Number	Average diameter	Range
No.	Date	Time	operior	eggs	stage	larvae	or length	
24 Cont. 25	June 24	une 24 0140		- 35 4 27 24 7	- V V V V V	1	жя. 12.5 0.84 0.94 0.68 0.77 0.93 2.64	
			*CN *SH *U *U *U WH RO CN WI SSN WIF MH SH SH U U U U U U		-	1 42 3 1 1 1 1 1 1 1 1 1 1 1 1 1	2.74 2.05 2.54 1.89 36.0 8.5 7.0 2.54 3.00 7.0 7.0 7.0 7.0 5.88 2.61 1.51 2.46 2.8 1.61 1.77 2.29	2.64-2.86 1.85-2.20 2.42-2.77 7.0-10.0 1.82-2.94 2.31-3.57 4.48-8.25 1.80-3.75 1.26-2.03 1.89-3.57 1.55-2.00 1.54-2.17 1.96-2.66

Table 12.--Stages and sizes of fish eggs and larvae taken with the Hardy Plankton Recorder on Albatross III cruise no. 71, February 20-March 2, 1956

Loading	Gauze	Species			ber of dicates					La	rvae	
number	section	-p	I	II	III	IV	v	VI	Species	Number	Length	Range
l	1 2 3 4-36								U AM AM	1 1 1	mm. 4.4 18. 9.7	mm. - -
	37-60 61 62 63 64 65							- - - -	AM HE U AM	- 1 1 - 1	- 15.6 50 - - 10	
	66 67 68 69 70 71 72 73-82	H H H			- - - - -				HE	1	50 - - - - -	
2	1-24 25-30 31 32 33 34 35-39 40 41 42-44 45-63 64-84	- H H H H										
3	2-30 34 35 36-45 47-48 49 50 51 52 53 - 55 56 55 56 57 59-61 62	- н - нннснснснс - н		- - - - - - - - - - - - - - - - - - -	- - - 2 1 3 - 2 3 1 - - 2 3 1 - -				- - - - - - - - - - - - - - - - - - -		17	

						IIIdee						
Loading	Gauze	Species				f eggs ed stag				La	rvae	
number	section		I	II	III	IV	v	VI	Species	Number	Length	Range
3											mm.	mm.
Cont.	(2)	C	-	-	-	-	1	2	-	-	-	-
	63	H C	-	1 -	ī	- 1	-	-	-	1		-
			_	-	-	-	1	1				
4	1-4	-	-	-	-	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-	HE	3	45.3 50	40-48
	67	-	-	-	-	-	-	-	HE HE	1	50	-
	8-27	-	-	1					-	-	-	_
	28	Н	-	1	-	-	-	-	-	-	-	-
	30-45	-	-	-	-	-	-	-	-	-	-	-
	46	-	-	-	-	-	-	-	HE	1	50	-
	47 48	н	-	-	1 -	-	-	-	-	-	-	-
	40		-	-	-	_	_	-	HE	2	37.5	35-40
	50	-	-	-	-	-	-	-	HE	1	35	-
	51	-	-	-	-	-	-	-	-	-	-	-
	52	-	-	-	-	-	-	-	HE	2	36.5	30-43
	53 54	-	-	-	-	-	-	-	HE	2	42.5	40-45
	55	-	-	-	-			-	HE	3	40.0	+0-4)
	56-59	-	1 -	_	_	-	_	-	-	-	-	-
	60	-	-	-	-	-	-	-	AM	2	-	-
				· · · · · · · · · · · · · · · · · · ·	10	Meter	8					
					1		Ι					
1	2	-	-	-	-	-	-	- 1	AM	2	18	14-22
	3	-	- 1	-	-	-	-	-	AM	1 4	8.8	-
	4	-	-	-	-	-	-	-	U HE	5	23.6	15-35
	5		-			-	-	_	AM	ĺí	12.0	_
	-	-	-	-	- 1	-	-	-	U	1	-	-
	6	-	-	-	-	-	-	-	MA	1	13	-
		-	-	-	-	-	-	-	HE	1	- 18	-
	7	-	-	-	-	-	-	1	AM HE	1	-	-
		_	-	-	-	-	-	-	U	2	_	-
	8	-	-	-	-	-	-	-	HE	1	-	-
	9-26	-	-	-	-	-	-	-	-	-	-	-
	27 28-42	-	-	-	-	-	-	-	HE	1 -	1	-
	43	-	1 -		_	_	-		AM	2	10.5	10-11
	44	-	-	-	-	-	-	-	HE	ĩ	40	-
	45	-	-	-	-	-	-	-	-	-	-	-
	46	H	-	-	1	-	-	-	HE	1	-	-
	47-48	- н	-	-	1	-	-	-	-	-	1	1
	49 50-52	н –	-	-		-	-	-	-	1		1
	53	Н	-	-	-	1	1	-			-	-
	54-61	-	-	-	-	-	-	-	-	-	-	-
	62	-	-	-	-	-	-	-	HE	1	32	-
	63	-	' -	- 1	I	-	1 -	- 1	-	-	· -	

Loading	Gauze	Species				eggs d stag				Larv	ae	
number	section		I	II	III	IV	V	VI	Species	Number	Length	Range
2	1-26	-	-	I	-	-	-	-	-	-		<i>mm</i> .
	27-51 52-75	-	-	-	-	-	-	-	. – –	-	-	-
	76	н	-	_	1	_	_	_	-	-	_	_
	77	-	-	-	-	-	-	-	-	-	-	-
3	1-35	-	-	-	-	-	-	-	-	_	-	-
	39-45	-	-	-	-	-	-	-	-	-	-	-
	46	H	-	-	-	1	-	-	-	-	-	-
	47 - 51 52	- H	-	-	-	-	-	-	-	-	-	-
	53-58	-	-	-	-	-	_	_	_	-	-	-
	60-72	-	-	-	-	-	-	-	-	-	-	-
	73	Н	-	-	1	2	-	-	-	-	-	-
	74	H C	-	-	1	5	-	-	-	-	-	-
	75	н	-	-	3	-	ī	_	_	1	-	1
		C	-		1	-	-	-	-	-	-	-
	76	Н	-	-	1	4	1	-	-	-	-	-
	77	C H	-	2	1 2	1	-	-	-	-	-	-
		С	-	~	~ =	1	-	-	-	_	-	-
	78	Ĥ	-	-	1	ĩ	-	-	-	-	-	-
	79	Н	-	-	1	3	-	-	-	-	-	-
	43	С	-	-	-	1	-	-	-	-	-	-
	81 82	- H	-	-	-	- 1	-	-	-	-	-	-
	83	Н	-	-	2	-	_	_	_	-	-	_
	84	Н	-	-	1	-	-	-	- 1	-	-	-
	85	Н	- 1	-	-	1	-	-	-	-	-	-
	86 87	H H	-	-	-	1	-	-	-	-	1	-
			-	-	-	-	-		-		-	-
4	1-13	-	-	-	-	-	-	-	-	-	-	-
	14 15-18	-	-	-	-	-	-	-	HE	1	35	
	19	Н	-	_	1	-	-	_	-	-	-	-
	20	-	-	-	-	-	-	-	-	-	-	-
	21 22	Н	-	-	-	-	1	-	-	-	-	-
	22	-	-	-	-	-	_	-	Ē	2	3.3	3.0-3.6
	24-32	_	-	-	-	-	_	_	-	-	-	-
	34-50	-	-	-	-	-	-	-	-	-	-	-
	51	Н	-	1	-	-	-	-	C	1	4.4	-
	52 53	-	-	-	-	-	-	-	С -	1 -	4.9	-
	54	-	-	-	-	-	-	-	c	1	1 -	-
	55	-	-	-	-	-	-	-	HE	i	-	-
	56-58	-	-	-	-	-	-	-	-	-	-	-
	59 60	-	-	-	-	-	-	-	HE	1	39	1 -
	61	-	-	-	-	-	-	-	HE	2	38	-
	62	-	_	-	_	_	-	-	-	-	-	-
	63	-	-	-	-	-	-	-	HE	1	-	-
	64-65	-	-	-	-	-	-	-		-	-	-
	66	-	-	-	-	-	-	-	U	1	-	

Loading	Gauze	Species			umber o indica					Larva	e	
number	section	opecies	I	II	III	IV	V	VI	Species	Number	Length	Range
											mm.	mm.
1	1-6	-	- 1	-	-	-	-	-	-	-	-	-
	7 8-21	H -	-	-	-	1	-	_	-	-	_	_
	23-39	-	-	-	-	-	-	-	-	-	-	-
	40	Н	1	-	-	-	-	-	-	-	-	-
	41	~	-	-	-	-	-	-	-	-	-	-
	43 - 52 53	-н	-	-	-	-	-	-	-	-	-	-
	54	Н	_	-		1	_	_	H H	1	4.5	-
	55	-	-	-	-	-	-	_	H	1	4.5	-
		-	-	-	-	-	-	-	С	1	4.5	-
	56	H	-	-	-	-	1	-	H	1	4.5	-
	57	H C	-	-	-	-	-	2	-	-	-	-
	58	H	_	_	-	_	1	-	_	_	_	_
	59	H	-	-	-	-	2	-	-	-	-	-
		C	-	-	-	-	1	-	-	-	-	-
	61	Н	-	-	-	-	2	-	-	~	-	-
	62 - 68 69	H	-	-		-	1	-	-	-	-	-
	70	-	-	_	-	-	-	-	_	_	_	-
	71	Н	-	-	-	-	1	-	-	-	-	-
	72-85	-	-	-	-	-	-	-	-	-	-	-
2	1-21	-	-	-	-	-	-	-	-	-	-	-
	22 23-34	Н	-	-	-	1	-	-	-	-	-	-
	25-54 36-56	-	-	-	-	-	-	-	-	-	-	-
	61-64	_	-	-		_	_	-	_		_	_
	65	Н	-	1	2	-	-	-	-	-	-	-
	66	Н	-	-	-	-	-	1	-	-	-	-
	67 68	H -	-	-	1	-	-	-	-	-	-	-
	69	н	-	-	2		_	-	-	-	-	-
	70	H	-	-	ĩ	-	-	-	_	_	_	_
	71	-	-	-	-	-	-	-	-	-	-	-
	72	Н	-	-	1	-	-	-	-	-	-	-
	73 - 74 75	-	-	-	-	-	-		- U	-	-	-
	76-86	-	_		-		-	_	-		-	-
					1							
3	1	-	-	-	-	-	-	-	-	-	-	-
	2	H	-	-	1	-	-	-	-	-	-	-
	3	- H	-	-	2	-	-	-	-	-	-	-
	5	H	-	_	-	1	-	-	-	-	-	-
	6-9	-	-	-	-	-	-	-	-	-	-	-
	10	H	-	-	3	-	-	-	-	-	-	-
	11 12-17	H	-	-	-	-	1	-	-	-	-	-
	18	н	<u>-</u>	-	1	-	-	-		-	-	-
	19-22	-	-	-	-	-	_	_	-	_	_	-
	23	Н	-	-	1 1	-	-	-	- 1	- 1	-	-

Table 13.--Stages and sizes of fish eggs and larvae taken with the Hardy Plankton Recorder on Albatross III cruise no. 72, March 21-31, 1956

Surface

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Table 13.--Stages and sizes of fish eggs and larvae taken with the naruyton Recorder on Albatross III cruise no. 72, March 21-31, 1956--Continued

Surface

loading	Gauze	Species			nber of Indicat	eggs ted sta	age			Larva	ae	
umber	sectio.		I	II	III	IV	V	VI	Species	Number	Length	Range
3											mm.	mm.
Cont.	24-27	-	-	-	-	-	-	-	- 1	-	-	-
	29-51	- 1	-	-	-	-	-	-	-	-	-	-
	52	Н	-	-	1	-	-	-	-	-	-	-
	53	Н		1	1	-	-	-	-	-	-	-
	54	Н	-	-	-	1	3	-	-	-	-	-
		С	-	-	1	-	1	-	-	-	-	-
	55	Н	-	-	-	1	1	-	-	-	-	-
	56	Н	-	2	2	-	-	-		-	-	_
	5.07	C H	-	-	2	1	1	_	-			_
	57	C	-	-	1 î	<u>-</u>	1 1	_				_
	58	H	_	1		1	2	-		-	_	-
	26	С			1	1	-		_	_	_	_
	59	Н		-	2	1	-	_	-	- 1	_	-
	27	C	_	1	-	-	_	-	-	-	-	-
	60	c	_	-	-	1	-	-	-	- 1	-	-
	61	H	_	-	-	ī	-	- 1	-	-	-	-
	01	Ċ	-	-	2	1	-	-	-	-	-	-
	62	Ċ	-	-	-	- '	1	-	-	-	-	-
	63	_	-	-	-	-	-	-	-	-	-	-
	64	С	-	-	1	-	- 1	-	-	- 1	-	-
	65	С	-	-	-	- 1	1	-	-	-	-	-
	66	-	-	-	-	-	-	-	-	- 1	-	-
	67	С	-	-	-	-	1	-	-	-	-	-
	68	-	-	-	-	-	-	-	H	1	8.0	-
	69	-	- 1	-	-	-	-	-	-	-	-	-
	70	С	- 1	-	-	1	-	-	-	-	- 1	-
	71	С	-	-	1	-	-	-	-	-	-	- 1
	72	С	-	-	-	1	-	-	-	-	-	-
	73-76	-	-	-	-	-	-	-	-	-	-	-
	77	С	-	-	1	-	-	-	-	-	-	-
	78	-	-	-	-	-	-	-	AM	1	11.0	
	79 80 - 89	-	-	-	-	-	-	_	Alvi	-		-
	90	н	1	1		-	1		-	-	-	-
	91	H	-	i	1	_	1	1 -	_	-	-	- 1
	92	-	-	-	<u> </u>	-	-	-	-	- 1	-	-
	~~											
4	1-2	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	- 1	Н	1	-	-
	4-9	-	-	-	-	-	-	-	-	-	-	-
	10	-	-	-	-	-	-	-	С	2	3.61	-
	11-15	-	-	-	-	-	-	-	-	-	-	-
	16	Н	-	-	-	1	3	1	-	-	-	-
		С	-	- 1	-	-	1	1	-	-	-	-
	17	Н	-	-	-	-	2	4	-	-	-	-
		С	-	-	-	-	3	-	-	-	-	-
	18	Н	1	1	-	-	3	3	-	-	-	-
	10	C	-	-	-	1	4	-	-	-	1	-
	19	H	-	-	-	1	3	-	-	1		
	20	C	1	1	-	1	-	-	-	-	-	-
	20	H C	-	2	-	1	-	-	-	-	_	1 -

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Loading	Gauze	Species			mber o indica					Larva	.e	
number	section	opecies	I	II	III	IV	V	VI	Species	Number	Length	Range
4 Cont.	21 23-31 32 33 34 35 36 37 38-39 40 41 42 43-52 53 54 55 56 57-59 61-76 77 78	H - H C H C H C H C H C H C H C H C H C			- - - - - - - - - - - - - - - - - - -				- - - - - - - - - - - - - - - - - - -		mm. 	mm.
5	73 74 75 76-77 78 79-84 85 86-87 88 89	- - - - - - - - - - - - - - - - - - -							HE U HE AM		35.0 - - 38.0 - 20.0 - -	
		1		1	د 	.0 Mete	ers		r			
l	1-2 3 4 5 6-12 15-24 26-35 36 37 38 39	- - - H H H C				- - - - - - - - - 2 1			AM AM HE - - - - -		5.5 4.6 - - - - -	

Loading	Gauze	Species			mber c indicat					Larv	rae	
number	section		I	II	III	IV	V	VI	Species	Number	Length	Range
l Cont.	40	H C H	-		- - 1	3 1 -			HE HE	1	mm. - -	mm. - -
	42 45 46 47	A H C H H C H			- - - 1 - 1	1 3 - - -	- 1 1 1 1		H - - -		- 4.8 - - - -	
	48 49 50 51 52-53	H C H C H C H C			1 - 2 - 1 3 1 -	1 6 4 - -				-	-	-
	54 55 - 61 62 63 - 72	н - н -			1 - 1 -							
2	4-21 22 23 24 25 26 27-34 36-44 45 46-55 62-67 68 69 70-86 87	н н н - - - н н н				- - - - 1 1	-	-	- - - - - - - - - - - - -			38.0
3	1-7 8 9 10 11-12 13 14-24 27-45 46 47 48 49	н н с н н н н н						-				

Loading	Gauze	Species			umber d indica					larv	/ae	
number	section		I	II	III	IV	V	VI	Species	Number	Length	Range
3 Cont.	50 51 52 53 54 55 56 57 58 59 62 63 64 65-66 67 68 69 70 71-76 77 78-81 82 83-84 85 86 87 88	H H H C H C H C H C H C H C H C H C H C		1 1 3 2 6 2 4 1 2 - - - - - - - - - - - - 1 1 1 1 -					- - - - - - - - - - - - - - - - - - -		rum.	mm. - - - - - - - - - - - - - - - - - -
4	1-4 5 6 7 8 9 10 11 12-14 15 16 17	- - - - - - - - - - - - - - - - - - -		- - - - 2 1 - 1	2				- - - - - - - - - - - - - - - - - - -		30.0 25.0 - - - - - -	

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Table 13.--Stages and sizes of fish eggs and larvae taken with the Hardy Plankton Recorder on Albatross III cruise no. 72, March 21-31, 1956--Continued

Loading	Gauze	Species			umber indica					Lar	vae	
number	section	-1	I	II	III	IV	V	VI	Species	Number	Length	Range
4 Cont.	21-23 24 26-29 30 31 32 33 34 35-36 59 60 61 62 63-70 71 72 73 74 75-76	- H - H H H H - H - H - H - H - H - H -							- - - - - - - - - - - - - - - - - - -		mm. - - - 3.7 4.9 - - - - -	mm.
5	77-78 79 80 81 82 83 84 85 86 87 88 89-90	H H H RO H H			-		- - - 2 - 2 -		HE - - - HE - - - - - - - - - - 		- - - - - - - - - - - - - - - - - - -	

oading	Gauze	Species			umber (indica					Larv	ae	
umber	section		I	II	III	IV	V	VI	Species	Number	Length	Range
											mm.	mm.
1	1	-	-	-	-	-	-	-	- 1	-	-	-
	2	Н	-	-	-	1	-	-	U	1	-	-
	3	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	AM	1	25	-
	5	-	-	-	-	-	-	- 1	AM	1	30	-
	6	Н	-	-	-	-	1	-	AM	3	-	-
	7	-	-	-	-	-	-	-	-	-	-	-
	8	-	-	-	-	-	-	-	W	1	35	-
	9	-	-	-	-	-	-	-	-	-	-	-
	10	-	-	-	-	-	-	-	AM	1	36	-
	11-15 16	- U	-	-	-	-	-	-	-	-	-	-
	17-21		4	1	-	-	-	-	-	-	-	-
	24-30	-	-	-	-	-	-	-	-	1	-	-
	31	н	_	-	-	-	1	1 -		_	_	-
	32-45	- -		_	-		<u> </u>		-	_	_	-
	47-53	-	-	_	-	-	_		_	_	-	_
	54	-	-	_	-	_	-	- 1	c	1	5.7	_
	55	_		1 -	1	_	-		-	-	5.1	_
	56	Н		_	-	_	_	1	c	1	5.3	_
	57	н			_	_	1	1	č	2	6.5	6.4-6.
	58-60	-	_	-	_	-	-	_	_	-		
	61	н	_	-	-	-	1	_	_	-	-	_
	62-63	-	-	-	-	-	-	-	-	-	-	_
	64	н	-	-	-	-	1	-	-	_	_	-
	65	-	-	-	-	-	-	-	HE	1	45	-
	66	-	-	-	-	-	-	-	-	-	_	-
	67	Н	-	-	1	-	-	1	-	-	-	- 1
	68	-	-	-	-	-	-	-	-	-	-	-
	70-77	-	-	-	-	-	-	-	-	-	-	-
	78	Н	- 1	-	1	-	-	-	-	-	-	-
	79-82	-	-	-	-	-	-	-	-	-	-	-
	83	Н		-	-	1	-	-	-	-	-	-
	84	Н	-	-	1	-	-	-	-	-	-	-
		C	-	-	1	-	-	-	-	-	-	-
	85	C	-	-	-	-	1	-	-	-	-	-
	86		-	-	-	-	-	-	-	-	-	-
	87	H C	-	-	-	1	-	-	-	-	-	-
	88	н	-	-	-	1	1	-	-	-	-	-
	00	C	-	1	-	-	1	-	-	-	-	-
	89	H	-		-	1	-	-	-	-	-	-
	07	C	1	-		-	-	-	-	-	-	-
	90	н	1 -	1	- 1	i	-	-	-	-	-	-
		C	1 -		1 1	1	-	-	-	-	-	-
		0			1	1	-	-	-	-	-	-
2	1-8	-	-	_	_	_	_	-	_	_		_
~	9	1	1 -	1 -	1 -	-	-	_	W	- 1	29	_
	10-15		1 -	1	-	-	_	-	-	-	- 29	-
	16	_	1 -	1		_	_	-	HE	1	35	-
	17	-		1 -	-	_	-	-	W	1	23	-
	18	- 1	-	-	-	-	_	_	-	-	-	-
	19	A	1	-	-	_	_	_	HE	1	40	_

Loading	Gauze section	Species				of egg ted st				Larv	ae	
number	Section		I	II	III	. IA	v	VI	Species	Number	Length	Range
2 Cont.	20 22-29 30 31 32 33 34 35 36 37-42 44 45-56 58-63 64 66-69 70 71 72 73 74 75 76 77 78 79 80	H H A A H H H A H A H A H H C H C H C H			- - - - - - - - - - - - - - - - - - -				- - - - - - - - - - - - - - - - - - -		mm. 	mm
2	81-82 83 84 85 86	H H C U H C	- - - 1 -	- - 1 1 1	- 1 - 1	- - - 1						
3	1 2 3-9 10 11 12-13 14 15 16-18 20	- H H H H H				- - - - - -	- - - - - -				-	-

Loading	Gauze	Species				of egg ted st				Larv	ae	
number	section		I	II	III	IV	v	VI	Species	Number	Length	Range
3 Cont.	21 22-38 40-42 43 44 45-46 47 48-49 50 51 52 53 54 55-56 57 58-59 62-63 64 65-75 76 77 78 79 80 81 82	H - H H - H H - H H - H H - H H - H - H							- - - - - - - - - - - - - - - - - - -		mm. - - - - - - - - - - - - - - - - - -	mm.
4	82 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15-17 18 19 20-22 23 24 25 26 28-37 38	- - - - - - - - - - - - - - - - - - -							AM AM - - - - - - - - - - - - - - - - -		41 39 20 - 25 25 - - - - - - - - - - - - - - - -	

Loading	Gauze	Species				of eggs ted sta				Larv	ae	
number	section		I	II	III	IV	V	VI	Species	Number	Length	Range
4 Cont.	39 40 41 42 52-62 63 64 65 66 67-71 74 75 76 77 78 79 80 81 82 83 83 84 85 86 87 88 89 90 91 92 92				- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -		AM H - - - - - - - - - - - - -		mm. 	mm.
5	7-14 15 16 17 18 19-20 21 22 23 25 26 27 26 27 28 29 30	- н н н н с с и с и н							-			

Surface Number of eggs Larvae

Loading	Gauze section	Species	in indicated stage						Larvae			
number			I	II	III	IV	v	VI	Species	Number	Length	Range
5 Cont.	$\begin{array}{c} 31\\ 32\\ 33\\ 34\\ 35\\ 36\\ 37\\ 38\\ 39\\ 40\\ 41\\ 42\\ 43\\ 44\\ 45\\ 46\\ 47\\ 48\\ 49\\ 50\\ 51\\ 52\\ 53\\ 54\\ 55\\ 56-57\\ 58\\ 59\\ 60\\ 62\\ 63\\ 64\\ 65\\ 66-67\\ 68\\ 69\\ 70\\ 71\\ 72\\ 73\\ 74\\ 75\\ 76-81\\ 83\\ 84\\ 85-86\\ 87\\ 88-89\\ \end{array}$	ннн - нннн - ннн - нн - нн 							- - - - - - - - - - - - - - - - - - -		mm.	mm.

Surface

Loading number	Gauze section	Species			Number indics			Larvae				
			I	II	III	IV	v	VI	Species	Number	Length	Range
5 Cont.	90 91 92-94 95 96-97 98 99-100	H H - - - -						1 - - - -	- - - - - - - - -	- - 1 - 2 -	mm. 	mm. - - 26-30
	10 Meters											
1	1 2-8 9 10-21 25-43 46-49 50	- - - - - H							HE - - - - -	1 - - - -	50 	
	50 51+52 53 64 65-66 69-76 77 78 79 80 81 82 83-84 85 86 87	н 							- - - - - - - - - - - - - - - - - - -		- 4.8 4.6 - 28 - - - - - - - 33 36.5 - - - - - - - - - - - - - - - - - - -	35-38
2	1-0 22-28 29 30 31-34 35 36 37 38 39-40 41	- - - - - - - - - - - - -	-	- - - - - - - - -				-				

66

Number of eggs Larvae in indicated stage Gauze Loading Species section number VI Ι II III IV V Species Number Length Range 2-mm. mm. 42-43 Cont. _ -_ -_ _ _ -45-65 ---_ ------_ 67 ----------68 Η 1 ---------69-70 _ _ --------_ Н 1 1 71 --_ ---_ -С 1 1 -_ ------72 Н 3 1 --_ _ ----С _ _ 3 _ ------CU 1 ----_ _ -_ 73 Н 3 -_ _ ----_ -С --2 -------_ -Н 74 1 ---_ ---_ _ С 1 -_ --_ _ ---75 Н -1 _ ----_ --_ _ С 1 -_ _ -----_ 76 Н 4 3 _ ------_ С 3 -_ 1 _ -_ ---77 _ -_ --------Н 78 1 _ _ -------79 _ ---_ _ _ _ ---Н 1 80 --_ _ --_ --81-83 -------------84 Н 3 1 -_ --_ ---С 2 -_ --_ --_ _ 85 н 1 --~ _ ---_ -Н 86 -1 -------_ _ _ 87-88 -_ _ _ _ _ --_ --3 1-6 --_ _ -_ -_ ... --7 Η 1 _ _ -----_ _ _ 8 --_ _ _ _ _ ----9 Н 1 --_ ----_ ---10 -_ ---_ -----11 Η 1 1 _ _ ---_ -_ 12 Η 1 1 --_ _ _ -_ -13-18 ---_ ------_ 20-39 _ ------_ -_ -41-46 -_ ------_ -47 Η 1 С 1 4.7 ----_ -48 U 1 18 --------49 --AM 1 12 -~ ---_ 50 ----------51 A 1 --5 AM 1 11 ---U -1 --_ _ ----52 Н --1 ------_ С --1 --_ ----53 Η 1 1 ---_ ----С 1 ---_ -----54 Η 1 --• --_ _ -Ç l --------55 _ -_ -------56 A 1 -. ----

Loading	Gauze	Species			umber (indica					Larv	ae	
number	section		I	II	III	IV	v	VI	Species	Number	Length	Range
3 Cont.	57	-	-	-	_	-	-	_	-	-	mm. -	mm. -
	58 59	H H C A			1	- 2 1 3	- - -					
	60 61 62	H H			1						-	
	65-66 67 68-76	- н -			- 1 -			-		-		
	77 78 79	н - н	- - -		1 - 1	- - -	-		-			-
	80-82 83 84-85					-	-		- -	- 1 -	7.3	
4	1-3 4 5-9	- н			-		- 1 -		-	-	-	
	10 11-20 21	н - Н	-	-	1		-				-	
	22-23 24 25 27-41	н н	-	- - 1	- 1 -	- 1 -	-		-		-	-
	42 43 44	H H				- 1 - 1		-	-			-
	45 46 48-50	- H -				-	- 1 -		sc	1	17	
	51 52-63					-			н С -	1 1 -	5.8 5.1 -	
	64 65-66 69-77 78	RO - - H			1 - - 1				-			
	79	C H C		-	2	1 4 1	-	-	-		-	-
	80 81	H C H	-	- - -	1 1 1	3 - 3	-		-	-	-	
	82	C H C			- 1 -	1 3 1			-			
	83 84 85	- н н			1	-			-	-		

Number of eggs Larvae Loading in indicated stage Gauze Species section number Range Ι II III IV v VT Species Number Length mm. mm. 4---Cont. 86 Η -1 1 _ _ -_ 1 CU ----_ --_ _ 87-88 _ _ _ -----_ -l Н -_ 89 _ -..... _ ---5 Η 1 _ 1 _ -------2-4 _ --_ _ _ -_ ---5 Н 1 _ _ ----_ ---_ -6-10 -_ _ ---_ _ -_ -Н l --11 _ ----_ -12-13 _ _ _ -_ -_ _ -----3 14 Н ---------15 Η 3 -.... ... -_ _ -_ _ 16 Η _ 1 _ -_ --_ -ı 17 Η 1 ---_ _ -_ -18 -_ _ ----_ _ _ -2 19 Н _ _ --... --l 20 Η -. 1 _ _ ---_ 22-28 ------. -_ _ -1 29 _ A --_ _ _ --_ l 30 Η _ _ _ _ -_ ---1 31 _ _ _ Η ------32-33 -. -_ _ ---_ --1 34 Η _ _ ------_ 35 _ --_ -_ ----36 Н 1 _ --------2 37 Η -_ _ _ ---_ -38 -_ -_ -_ -_ ---39 LA 1 42 -_ -~ -_ --1 32 40 LA -_ _ ... _ ---41-44 _ ----------1 45 Н -_ -----_ _ 46 ----------_ 47 Η ı _ -_ _ ----1 -4.4 48 _ _ -----Η l _ 49 Η ••• _ ---_ l 50 AM 34 -----------51 _ ---------_ 52 CU 1 AM 1 34 --_ _ _ _ l 53 Η _ -------54-55 -_ _ _ --_ _ ---56 Н l _ _ --_ --57 35-35 _ _ _ _ _ AM 4 35 -58 AM 1 35 --_ _ ----59 Н ۲<u>–</u> 1 -_ _ _ ----60 С 1 _ _ . -----Н l 4.4 61 Н l _ -_ -_ -64 Н 1 _ _ ----_ ----65 Η 1 _ _ ---••• -_ -1 -66 Η _ -----_ _ 67-69 -_ _ -_ -----1 AM _ 70 -_ ------71-72 _ _ --_ _ _

Loading	Gauze section	Species			Aumber indica					Larv	ae	
number	section		I	II	III	IV	v	VI	Species	Number	Length	Range
5 Cont.	73 74 75 76 77-78 79 80-82 84-89 90 91 92 93 94 95-96 97 98	H - - H - H H H - - - -				1			- - - - - - - - - - - - - - - - - - -		mm. 	mm. - - - - - - - - - - - - - - - - - -
	99-100	-	- 1	-	-	-	-	- 1	- 1	-	-	-

Loading	Gauze					of egg ted st				Lar	vae	
number	section	Species	I	II	III	IV	V	VI	Species	Number	Length	Range
1	1 2 3-4 5	Y Y -	- - -	- - -	- - -	- 1 -	2 1 -		- AM - P	- 1 - 1	mm. 30 24	mm.
	6-9 10 11-20 22 23 24 25	- - - RO M		- - - 1					HE - H - -	1 1 - -	- 50 - 3.6 - -	
	26-30 31 32 33-36 37 38 39-40	- A - -							- - - H RO	- - - 1 1 -	- 4.1 - 7.5 9.2 -	
	42-43 44 45-49 50 51 52 53-57 58	RO CU H -	1					- - 1 - - 1	- - - H WIF	- - - 1 - 1		
	59-61 65 66-77 78 79 80 81 `82	- - - - - - -		- - - - 1					- H - - -	1	4.8	
2	83 1-19 22-41 43-55 56 57 58	H - - -					1		- - - HE -		- - 50 - 50	
	59 60 61 62 63 64-76								HE SY HE HE HE	1 1 1 1 1	49 8.0 47 47 50 38	
	78 - 84 85 86-93 94 95	- - - -		- - 1		- - - 71			HE AM AM	1 - 1 1	- 50 - 9.2 14	

Surface

71

Table 15.--Stages and sizes of fish eggs and larvae taken with the Hardy Plankton Recorder on Albatross III cruise no. 75, May 16-29, 1956--Continued

Loading	Gauze	0 miles		Nu in i	mber o	of eggs ted sta	ge			Lar	vae	
number	section	Species	I	II	III	IV	v	VI	Species	Number	Length	Range
3	1-13 14 15-18 19	- H - RO		- - - 1		- 1 -		- - -			mm. - - -	mm. - - -
	22-30 31 32-37 38 39 40 42 43 44-57 58 59 62-79 80	- CU H CU H CU H - CU H H		- - - - - - - - - - - -		-			- - - - - - - - - - - - - - - - - - -		24	
4	$\begin{array}{c} 1\\ 1\\ 2-13\\ 14\\ 15-20\\ 23-29\\ 30\\ 31-38\\ 39\\ 40-43\\ 44\\ 45-55\\ 56\\ 57\\ 58\\ 59\\ 60\\ 61-62\\ 63\\ 65\\ 66\\ 67\\ 68\\ 69\\ 70\\ 71-72\\ 73\\ 74\\ 75\\ 76\\ 77\\ 78\\ 79-85\\ \end{array}$	H 							H - - - - - - - - - - - - - - - - - - -		- - - - - - - - - - - - - - - - - - -	

Surface

oading	Gauze	Species				of eggs ted sta				Lar	Vae	
umber	section		I	II	III	IV	v	VI	Species	Number	Length	Range
											mm.	mm.
5	1	-	-	-	-	-	-	-		-	-	-
	2 3	-	1	-		-	-	-	Н _	1	5.9	1
	4	_	-	_	_	_	_	-	U	1	-	-
	5-8	-	-	-	-	-	-	-	-	-	-	-
[9	-	-	-	-	-	-	-	AM	1	-	-
	10 11	RO	1	-	-	-	1	-	-	-	-	-
	12	-		_	-	-	-	-	U	1	-	_
	13-16	-		-	-	-	-	-	-	-	-	-
	17	Y	-	-	-	-	2	-	-	-	-	-
	18-21 23	-	-	-	-	-	-	-	-	-	-	1
	23	Ŷ	-	-	1	-	-		_	-	-	1 1
	25-35	-	-	-	-	-	-	-	-	-	-	-
	36	Y	-	-	1	-	-	-	-	-	-	-
	37-44 45-49	-	-	-	-	-	-	-	-	-	-	-
	49 - 49 50	-	-	-	-	-	1	-	н	- 1	11.4	-
	51	SH	-	- 1	-	-	1	-	-	-	-	-
	52-65	-	-	-	-	-	-	-	-	-	-	-
	66	Y SH	-	-	1	-	-	-	-	-	-	-
	68-78	- SH	-	-	-	1	1 -	-	-	-	-	
	79	-	-	-	-	-	_	-	Н	1	-	-
	80-84	-	-	-	-	-	-	-	-	-	-	-
	85	-	-	-	-	-	-	-	Y	1	6.7	-
	86 - 88 90 - 97	-	-	-	-	-	-	-	-	-	-	-
	98	SH		_	-	-	1	-	RO	1	5.0	_
	99	SH	-	-	-	-	5	-	-	-	-	-
	100 101	SH SH	1	1	2	-	8	1	Н	1	3.1	-
	101	ын -	-	-	2	-	21	1	-	-	1	1
	100						_	_	_	-		
6	100	-	-	-	-	-	-	-	-	-	-	-
	99 98	SH SH	-	-	-	-	2	-	RH	1	2.9	-
	98 97	SH	-		1	4	2 1	-	SH -	1	2.2	1 1
		Y	-]	-	1	-	- 1	-	_	-	-
	96	SH	-	-	-	3	1	-	RH	1	-	-
	05	WF	-	-	1	-	-	-	-	-	-	-
	95 94	SH SH	-	-	-	1 2	-	-	-	-	-]
	93	WF	-	-	-	ĩ	-	-	_	-	-	
	92	-	-	-	-	-	-	-	-	-	-	-
	91	SH	-	-	-	-	1	-	-	-	-	-
	90-88 87	- Sh	-	-	-	- 1	-	-	-	-	-	-
	0,	RO				i			-	-	1 -	1
	86	-	-	-	-	-	-	~	-	-	-	-
	85	SH	-	1	-	1	-	-	-	-	-	-

73

Loading	Gauze	Species				of egg ted st				Lar	vae	
number	section		I	II	III	IV	V	VI	Species	Number	Length	Range
6 Cont.	83 82 81-71 67-59 58 57 56 55-44 42-34 33 32-31 30 29-27 26	SH RO - SH Y SH RO RO - CN M - U - -			1				CN 		тл 12 - - - - 7.0	mm.
					10) Meter	rs.					
1	$\begin{array}{c} 1-3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8 \\ 9-17 \\ 18 \\ 19-20 \\ 22-30 \\ 31 \\ 32-33 \\ 34 \\ 35-40 \\ 42-46 \\ 47 \\ 48 \\ 49 \\ 50 \\ 51 \\ 52 \\ 53 \\ 54-55 \\ 56 \\ 57 \\ 58-59 \\ 60 \\ 62-63 \\ 64 \\ \end{array}$	- - - - - - - - - - - - - - - - - - -							- - - - - - - - - - - - - - - - - - -	- - - - - - - - - - - - - - - - - - -	20 23 22.5 24 3.3 5.1 4.0 3.7 4.9 5.0 4.2 4.7 4.9 4.8 - - 4.0 37 - - 4.5	- - - - - - - - - - - - - - - - - - -

Loading	Gauze	Species			umber indica					Lar	vae	
number	section	-	I	II	III	IV	V	VI	Species	Number	Length	Range
l Cont.	65-72 73 74 75 76 77 78 79 80-82	H CU H			- - - - -		-		- - - - - - - - - - - -		mm. 	mm. - - - - - -
2	$\begin{array}{c} 1-11\\ 12\\ 13-19\\ 22-29\\ 25\\ 26-28\\ 29\\ 30-41\\ 43-44\\ 45\\ 46\\ 47\\ 48\\ 49\\ 50-54\\ 55\\ 56\\ 57\\ 58-60\\ 61\\ 62\\ 63-73\\ 74\\ 75-76\\ 61\\ 62\\ 63-73\\ 74\\ 75-76\\ 87-91\\ 92\\ 93\\ 94\\ 95\\ 96\end{array}$	- - - - - - - - - - - - - - - - - - -							- W		28 	- - - - - - - - - - - - - - - - - - -
3	1-8 9 10-21 23-32 33 34-36 37	- - - H -			- - 1 1				HE - - - -	1 - - - -	- 50 - - -	

						NAC UCI						
Loading	Gauze	Species			umber indica					lar	vae	
number	section		I	II	III	IV	v	VI	Species	Number	Length	Range
3 Cont.	38 39 40 41 42 43-60 61 62 64-81	- H H H H		-	- 2 - 1 1 - 1 1 -				U - - - - -	1 1	mm. 5.0 - - 4.8 - -	mm. - - - - - - - - - - - -
4	$ \begin{array}{c} 1\\ 2\\ 3\\ 4\\ 5-20\\ 23-29\\ 30\\ 31-45\\ 46\\ 47-56\\ 57\\ 58-59\\ 60\\ 61\\ 64\\ 65\\ 66-74\\ 75\\ 76-82\\ \end{array} $								- - - H - H - - - - - - - - - - - - - -		- - - - - - - - - - - - - - - - - - -	4.0-6.1
5	1-11 12 13-17 18 19-21 23-24 25 26-35 36 37 38 39 40 41 42 44 45 46 47 45 46 47 48 49-53 54	- - - - - - - - - - - - - - - - - - -							HE - - - - - - - - - - - - - - - - - - -		35 	6.0-7.0 - - - - - - - - - - - - - - - - - - -

Loading	Gauze	Species				of eggs ted sta				Lar	vae	
number	section	specific	I	II	III	IV	V	VI	Species	Number	Length	Range
5											mm.	mm.
Cont.	55 - 56 57	-	-	-	-	-	-	-	- н	-	14	-
		-	-	~	-	-	-	-	HE	1	63	-
	58-62 63	-	-	-	-	-	-	-	- U	- 1	4.0	-
	64-65	-	-	-	-	-	-	_	-	-	-	_
	67	-	-	-	-	-	-	-	-	-	-	-
	68 69	-	-	-	-	-	-	-	H H	1	8.5 9.0	-
	70	-	-	-	-	-	-	_	H	i	6.3	-
	71	-	-	-	-	-	-	-	Y	2	3.8	2.9-4.8
	72 73	SH -	-	-	-	1 -	-	-	- U	- 1	-	-
	74-75	-	-	-	-	-	-	-	-	-	-	-
	76	-	-	-	-	-	-	-	H	1	5.2	-
	77	WF	_	-	-	-	1	-	U -	1	5.0	-
	78	-	-	-	-	-	-	-	SH	1	3.5	_
	79	-	-	-	-	-	-	-	SH	3	4.7	4.0-5.0
	80	-	-	-	-	-	-	-	SH Y	3	3.2	-
	81	-	-	-	-	-	-	-	Y	8	2.5	-
	82 83	-	-	-	-	-	-	-	Y	8	2.5	-
	84	-	-	-	-	-	-		Y Y	34 35	2.5 2.5	_
	85	-	-	-	-	-	-	-	Ŷ	7	2.5	-
	87-90 91	-	-	-	-	-	-	-	- SH	-	-	-
	91	-	-	_	-	-	-	-	M	1	5.7	-
	92	-	-	-	-	-	-	-	LP	1	51	-
	93 94	WF	-	-	1 -	-	-	-	Y Y	6 6	-	-
	95	-	-	_	-	-	-	-	M	2	4.8	-
		-	-	~	-	-	-	-	SY	1	8.8	-
	96	-	-	-	-	-	_	-	AM SY	1 10	25 8.8	-
	97	SH	-	-	-	2	5	-	SY	3	8.0	-
		-	-	-	-	-	-	-	Y	3	-	-
	98	SH	-	-	-	-	- 9	-	RO WF	1 2	-	-
		-	-		-	-	-	-	SY	8	-	-
	99	-	-	-	-	-	-	-	Y	7	-	-
	77	-	-	-	-	, -	-	-		-	-	-
6	1	SH	-	-	-	-	1	-	Y	13	3.0	-
	2	SH	-	-	-	-	1	-	Y	14	3.0	-
	3	_	-	-	-	-	-	-	SY Y	1 5	6.3 3.3	-
	4	-	-	-	-	-	-	-	Y	3	-	-
	5	-	-	-	-	-	-	-	Y Y	2	4.4	-
	7	SH	-	-	-	1	_	_	Y I	1 1	-	-
	8	SH	-	-	-	1	-	-	Ŷ	līl	_	-

I II III IIV V VI Species Number Length Range 6 Cont. 9 -	Loading number	Gauze section	Species			umber (indica					Lar	vae	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	number	Section		I	II	III	IV	v	VI	Species	Number	Length	Range
77		$10 \\ 11 \\ 12 \\ 13-15 \\ 16 \\ 17 \\ 18-21 \\ 23-26 \\ 29-41 \\ 42 \\ 43-57 \\ 59-63 \\ 64 \\ 65-71 \\ 72 \\ 73 \\ 74 \\ 75 \\ 76 \\ 76 \\ 100$								Y SH - SH Y - - - - - - Y - Y H H		- - - - - - - - - - - - - - - - - - -	

Surface

Loading	Gauze	Species				f eggs ted st	age			Larv	ae	
number	section		I	II	III	IV	v	VI	Species	Number	Length	Range
											mm.	mm.
1	1	RH	-	-	6	-	-	-	-	-		-
		SH	-	-	3	-	-	-	-	-	-	-
		CN	~	-	3	1	-	-	-	-	-	-
	23	RH U	-	-	-	1	-	-	-	-	-	-
	4	Ŭ	-	-	_	i	_	1 -		_	-	_
	5	-	-	-	-	-	-	-	-	-	-	-
	6	U	-	-	1	-	-	-	-	-	-	-
	7-9	-	-	-	-	-	-	-	-	-	-	-
	10	SH	-	-	2	1	1	-	-	-	-	-
	11	CN U	-	-	1	1 -	-	-	-	-	-	-
	12	RH	_	_	-	1		_	RH	1	2.3	_
		U	-	-	5	12	-	-	-	_	-	-
	13	SH	-	-	1	-	-	-	-	-	-	-
	14-16	-	-	-	-	-	-	-	-	-	- 1	-
	18-20	- U		7	- 58	27	17	-	-	-	-	-
	21 22	U	-	2	28	11	2	-	-	-	-	-
	23	Ŭ	-	-	3		ĩ	_	SH	1	-	-
	24	Ū	-	-	1	-	_	-	SH	4	4.7	4.4-5.0
	25	U	-	1	-	-	-	- 1	-	-	-	-
	26	SH	-	1	1	-	-	-	-	-	-	-
		RH	-	-	1	-	-	-	-	-	-	-
	27	U SH	-	-	1	1	- 1	-	-	-	-	-
	28-32	-	_	_	_	_	-		_	_	-	-
	33	RH	-	-	1	-	-	-	-	-	- 1	-
	34-35	-	-	-	-	-	-	-	-	-	-	-
	37-39	-	-	-	-	-	-	-	-	-	-	-
	40	RH	-	-	1	1	-	-	-	-	-	-
	41 42	- SH	-	-	-	2	-2	-	-	-	-	-
	42	SH	-	-	_	1	-	-	-	-	-	-
		RH	-	-	2	ĩ	-	-	-	_	-	-
		U	-	-	1	2	-	-	-	-	-	-
	44	SH	-	-	-	1	-	-	-	-	-	-
	45 46	SH SH	-	-	-	1	-	-	-	-	-	-
	46 47	SH	-	-	1 -		-	-	-	-	-	-
	77	WF	-	-	1	_	1		_	-	-	_
	48-56	-	-	-	-	-	-	-	-	-	-	-
	58-62	-	-	-	-	-	-	-	-	-	-	-
	63	H	-	-	1	-	-	-	-	-	-	-
	(1 777	RO	-	-	1	-	-	-	-	-	-	-
	64 - 77 79	- H	-	-	-1	-	-		-	-	-	-
	80-93	- -	-	-	-	-	-	-	-	-	-	-
	94	ŴF	-	-	1	_	_	_	-	-	-	
	95	-	-	-	-	-	-	-	-	-	-	-
2	1-2	-	-	-	-	-	-	-	-	-	-	-
	3	Н	-	1	-	-	-	-	-	-	-	- 1

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Loading	Gauze	Species			umber o indica					Lar	vae	
number	section		I	II	III	IV	V	VI	Species	Number	Length	Range
2											mm.	mm.
Cont.	4-20	-	-	-	-	-	-	-	-	-	-	- 1
	21-32	-	-	-	-	-	-	i -	-	-	-	-
	33	-	-	-	-	-	-	-	HE	1	48	-
	34-37	-	-	-	-	-	-	-	-	-	-	-
	38	H	-	1	-	-	-	-	-	-	-	-
	39	WF	-	1	-	-	-	-	HE	2	51	-
	41-43	_	_	_	_	-	-	-		-	51	
	44	_	-	-	_	_	-	_	HE	2	50	_
	45-51	-	_	_	-	-	_	_	-	-	-	-
	52	-	-	-	-	-	-	-	HE	2	47	44-50
	53-60	-	-	-	-	-	-	-	-	~	-	-
	61-64	-	-	-	-	-	-	-	-	-	-	-
	65	Н	-	-	1	-	-	-	-	-	-	-
	66	RO	-	-	-	1	-	-	-	-	-	-
	67-76	-	-	-	-	-	-	-	-	-	-	-
	78-89	-	-	-	-	-	-	-	-	-	-	-
	90 91	-	-	-	-	-	-	-	AM.	1	45	-
	91	RO	_	-	_	1	_	_	-	_	_	_
	93-95	-	_	-	_	<u> </u>	_	_	_	_	_	_
	12-12											
3	1-5	-	-	-	-	-	-	-	-	-	-	-
	6	WF	-	-	-	1	-	-	-	-	-	-
	7-8	-	-	-	-		-	-	-	-	-	-
	9	Н	-	-	1	-	-	-	-	-	-	-
	10	CN	-	1	-	-	-	-	-	-	-	-
	11 12	Н	-	-	1	-	-	-	-	-	-	-
	12	– H	_	-	1	_	-	-	-	-	-	-
	14-15	-	-	_	-	_	_	-	_	_	_	_
	16	WF	_	_	1	_	_		-	_	_	-
	17	-	_	-	-		-	-	-	-	-	-
	19-21	-	-	-	-	-	-	-	-	-	-	-
	22	CU	-	1	1	-	-	-	-	-	-	-
	23	CU	-	-	1	1	-	-	-	-	-	-
	24-26	-	-	-	-	-	-	-	-	-	-	-
	27	Н	-	-	1	-	-	-	-	-	-	-
	28 - 31 32	RO	-	-	-	-	_	-	-	-	-	-
	33	ко Н	-	-	1	-	_	ĩ	_	_	-	_
	35	Y	_	_	_	_	1	1	_	_	-	
	36-50	-	_	_	_	_	-		_		_	_
	51	-	-	-	-	-	-	-	Н	1	21	-
	52	-	-	-	-	-	-	-	-	-	-	-
	54-56	-	-	-	-	-	-	-	-		-	-
	57	Y	-	-	1	-	-	-	-	-	-	-
	58-67	-	-	-	-	-	-	-	-	-	-	-
	68	WF	-	-	1	-	-	-	-	-		-
	(0.70	RO	-	-	1	-	-	-	-	-	-	-
	69 - 72 74 - 79	-	-	-	-	-	-	-	-	-	-	-
			_		_			-			10	_
	80	-	-	-	-	-	-		RO	1	10	-

Loading Gauze number section Species						of egg ated st			Larvae			
Traine CT	500 01011		I	II	III	IV	v	VI	Species	Number	Length	Range
3 Cont.	81 82	-	-	-		-	-	-	SX RO	1	mm. 16 5.0	mm. -
	83 84 85 86	RH CU CU		- 2 -	- 1 - 1				RO RO	- 1 2 -	- 1.8 3.2 -	- 2.9-3.5 -
4	1 2 3 - 7 8	WF - -	- -		1 - -		- - -		- C -	- 1 -	12	
	9-19 21-27 28 29-31	- RO		- - 1			-		R - -	1 - - -	8.5 - - -	-
	32 33-37 39 - 41				-				- - -		28 -	
	42 43 44 45-55 57 - 69	Y RO RO	-	1 - -	- 1 1 -	- - -	-	- - -				
	70 71 72 73	- - RH	- - 1			- - -			Y - Y	1 - 1	- 5.0 -	
	76 77 78 79	- RH RH		-	-	- - -		- - -	SH Y Y Y	1 2 2	4.0 9.2 7.2 5.7	- 6.6-7.8 -
	80 81 82-85 86	RH SH - RH	-	- 1 -	1 - -	- - -		- - -	Y - U -	1 - 1 -	7.9 - 6.1 -	-
	87 88 89	RH - SH RH	- - - 1	- 4	2 - - 1		-	- - -		-	-	
	90 91 92	RH SH RH	1 - -	2 - -	- - 1		- - 1 -	- - -				
5	1 2-3 4 5	U - RH SH		- - 1 1		1 - -		-	- -			Ξ
	6	RH U RH U		1	- 1 4 4	1 - 1	1 - 3 1		- RH		2.1	-

Loading	Gauze	Species			humber indica					Lar	vae	
number	section		I	II	III	IV	v	VI	Species	Number	Length	Range
Loading number 5 Cont.	Gauze section 8 9-14 15 16 17 18 21 22 23-24 25 26 27 28 29 30 31 32 33 34 35 36 37	Species RH - RH U RH - U SH - RH U RH U RH U SH SH RH SH SH RH SH SH RH SH SH RH - U SH SH RH U SH SH RH U U SH U SH U SH		in	indica 	ted st	age	VI	Species - - - - - - - - - - - - - - - - - - -			Range mm. - - - - - - - - - - - - - - - - - -
	38 42-44 45 46 47-48 49 50 51 52 53 54 55 56-58 59 64	RH U RH U RH U RH RH RH RH U RH U SH U S							- - - - - - - - - - - - - - - - - - -		5.1	

Loading	Gauze	Species				of egg ited st				Larv	ae	
number	section		I	II	III	IV	v	Ϋ́Ι	Species	Number	Length	Range
Cont.	65	RH	-	-	_	_	1	_	М	1	mm. 9.0	mm.
cont.	66	RH	-	ī	2	_			141	-	9.0	
	67	RH	-	-	4		2	-	_			
	68	RH	-		i		-		_	_	1	1
	69	U	-		i				RH	1	2.9	
	70	RH	_		i	1	2	12	SH	1	3.3	
	70	RH	-	-	2		-	_	- Sn		-	-
	11	U				1	2			-		-
	70		-	-	-	-		-	-	-	-	-
	72 73	RH U	-	-	1	-	1	-	-	-	-	-
			-	-		-	-	-	-	-	-	-
	74	RH	-	1	-	1	-	-	-	-	-	-
		U	-	-	-	-	1	-	-	-	-	-
	75	RH	-	-	6	-	1	-	-	-	- 1	-
	76	RH	-	1	11	2	3	-	-	-	-	-
		SH	-	1	2	-	1	-	-	-	-	-
		U	-	-	-	1	-	-	-	-	-	-
	77-78	-	-	-	-	-	-	-	-	-	-	-
	79	RH	1	4	12	4	2	-	-	-	-	-
		SH	-	-	-	1	-	-	-	-	-	-
	80	RH	-	-	5	2	4	-	-	-	-	-
	81	RH	1	-	4	1	1	-	-	-	-	-
		SH	-	-	-	-	1.	-	-	-	-	-
		υ	-	-	-	1	-	-	-	-	-	-
	82	RH	-	1	1	-	3	1	-	-	-	-
6	1	RH	-	-	-	1	-	-	м	1	18	-
		ប	-	-	-	1	-	-	-	-	-	-
	2-3	-	-	-	-	-	-	-	-	-	-	-
	4	RH	-	-	-	1	-	- 1	-	- 1	-	-
	5	RH	-	-	1	1	1	-	-	-	-	-
	6	RH	-	-	1	5	2	- 1	-	-	-	-
		U	-	-	-	1	-	-	-	-	-	-
	7	RH	-	-	2	2	3	-	-	-	-	-
		υ	- 1	-	-	-	2	-	-	- 1	-	- 1
	8	-	-	-	-	-	-	-	м	1	6.4	-
	9-10	-	-	-	-	-	-	-	_		-	-
	11	-	-	-	-	-	-	-	RH	1	2.1	-
	12	RH	-	-	-	2	-	-	Y	i	11	-
	13	RH	-	-	_	ĩ	1	-	-	-	-	
		SH	_	-	1	-	1	_	_	-		
	14	-	_		1			-	Ŷ	1	1.9	_
	15	RH	_			-	2	-	SH	i	3.1	
	16	RH	-	-	2	Ĩ	2	-	RH	2		1.8-2.
	10	SH	-		-		-			-		1.0-2.
	17	RH		ī		2		-	RH	i	- 1 6	-
	18	RH	-	1	3	4	-	-	Y	1	1.6	-
	10						-	-				-
		U	-	-	-	3	-	-	RH	1	1.6	-
	10	-	-	-	-	-	-	-	U	1	2.4	-
	19	RH	-	9	2	8	5	-	RH	1	1.8	-
		SH	-	-	-	-	1	-	SH	1	2.9	-
		CN U	-	-	-	1	4	-	U	1	1.7	-
			-	3	3	8	1	- 1	-	- 1	-	-

Loading	Gauze	Species			umber indica					Larv	ae	
number	section		I	II	III	IV	V	VI	Species	Number	Length	Range
6 Cont.	20	RH SH CN U	2	5 - - 2	16 1 6 4	7 3 7 7	4 6 4 1		SH - - -	6 - -	mm. 3.0 - -	mm. - - -
					10) Mete:	rs					
1	1-2 3 4 5-11 12 13-15 17 18-19 20 21 22 23 24 25 26 27 28 29 30 31 32 33-36 38 39-42 43 44 45 46 45 46 49 50 51-67 68 69-76 77 79-81 82 83-91 92 93-97				- - - - - - - - - - - - - - - - - - -				-YSH SH -U U U U SH U SH U SH SH V SH SH SH SH SH -YYH SH - SH - SH - SH -	- 2 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	2.8 - - - - - - - - - - - - -	2.4-3.2

10 Meters

Loading	Gauze	Species				of eggs ted sta				Lar	vae	
number	section		I	II	III	IV	v	VI	Species	Number	Length	Range
2	4 5 6						- - -	- - -	M M M	2 1 1	mm. 6.0 6.8 6.3	.mm. 5.4-6.6 -
	7 8 9 10 11						- - - -		- M - M M	- 1 - 1 1	- 5.9 - - 7.2	
	12-21 23-24 25 26-32 33	- - - CU			- - - 1				- HE -		31	-
	34-38 39 40-60 62-64 65	RO 			2				- - - -	- - - 1	- - - 54	-
	66-69 70 71-76 77 78-80								- HE - HE	- - 4	23	- - 35-45
	81 82 83-92 93	- - - WF			- - - 2		-		HE HE -	1	- 44 42 -	-
3	94-100 1 2-11 12	- - - CU	-		-	- - 1	-	-	- M -	- 1 -	- 6.7 -	-
	13 14 15 16 17-27	- - RO			- - 1	- - -	- - -	-	cu -	- -		
	28 29 30-39 41-57	- H - -				- - -	- - - -		- M -	- - 1 -		-
	58 59 - 76 77 78 - 83								н Ү - RH	1 1 - 1	33 5.1 - 4.1	
	84 85 86-88 89							-	G G RH	- 1 2 - 1	- 2.3 - 2.8	- 2.0-2.5 -
	90-92 93	-	-	-	-	-	-	-	- RH	-	-	-

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Loading	Loading Gauze number section					of eggs ted sta				Larv	ae	
number	Section		I	II	III	IV	V	VI	Species	Number	Length	Range
3 Cont.	94	SH WF RO			- - -	2 1 -		- - 1	CU RH -	1 2 -	mm. 6.2 3.3 -	mm. - -
4	1 2-13 14 15 16 17 18				- - - - - 1			-	Y - M R R H	1 -2 -2 1 -	20 	- 9.0-10.0 9.0-10.0 -
	19 20 22-23 24 25 26 27-39 41-46	RO 	-						н - - - - - -		40 - 15 -	
	47 48-50 51 52 53 54 55 56	-				-			U - - - - - - - - - - - - - - - - - - -	1 - 2 - 3 1 3 1	- 5.6 - 4.4 5.5 4.3 5.5	- 4.0-4.8 3.3-5.5
	56 57 58 60 61 62-78 79 80-87 88 89 90-91 92 93-99 100	- - - - - - - - - - - - -		-	-				1 Y - Y - WF - U - U - U - - - - - - - - - - - - -		4.4 12 15 6.2 10 7.0 7.0 15	
5	1 2 3-4 5 6 7 8 9 10 11	CN 					-		- SH SH SH RO G U	- - 1 1 1 10 1 1 1 -	- 10.5 3.0 2.6 2.7 2.6 -	

Loading	Gauze	Species			umber o indicat					Larv	rae	
number	section	opecies	I	II	III	IV	v	VI	Species	Number	Length	Range
number 5 Cont.	section 12 13-15 16 17 18 19 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 40 41 42 43-51 52		I 	II	III	IV	V 	IV	Species Y SH SH SH SH SH SH SH SH SH SH U U U SH SH SH SH SH SH SH SH SH SH SH SH SH	Number 1 - 2 4 10 17 3 1 6 1 2 2 1 1 2 - 1 2 - 1 2 - 1 2 - 1 2 - 10 17 3 1 2 - 10 17 3 1 2 - - - - - - - - - - - - -	Length mm. - - 3.3 3.4 3.9 4.8 3.9 6.4 - - 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 7.0 4.0 5.5 4.0 3.0 5.0 - - - - - - - - - - - - -	Range mm. - 3.2-3.5 2.9-4.0 2.8-6.4 2.1-9.6 3.0-5.0 - - - - - - - - - - - - -
	53 54 55 56 57 58 59 60 61 62 63 64 62 63 64 65 66 67-69 70 71	- - - - - - - - - - - - - - - - - - -							UUUSHRO SHO SHUU SHUU SHUU SHUU SHUU SHUU SHUU		5.0 6.6 1.6 - - 2.6 2.6 3.0 1.9 - 3.6 2.9 - 3.7 1.9 2.3	3.5-3.7

Loading number	Gauze	Species		N in	umber indica	of egg ated st	s age		Larvae				
			I	II	III	IV	V	VI	Species	Number	Length	Range	
5 Cont.	72 73 74 75 76	- - - - - -		- - - - - -	- - - - - -	- - - 1 - -			- RH SH RH SH RH U	- 2 6 1 10 1 1 3 1	mm. 2.0 2.2 2.0 2.0 2.0	mm. 	
6	78 79 80 81 82 83-84 85 86 87 88 89 90 91-92 93 94 95 96 97 98								- G - U	- - - - - - - - - - - - - - - - - - -	10.5 	2.9-3.6	

Loading	Gauze	section	Number of sections	Distance	Section	Conversion factor for
number	Start	Finish	exposed	travelled	equivalent	no./5 mi.
			Su	rface		
1	1 37 67	36 66 82	36 30 16	Miles 187.0 160.0 110.0	5.19 5.33 6.88	0.96 0.94 0.73
2	1 25 45 64	24 44 63 84	24 20 19 21	153.0 119.5 122.0 128.5	6.38 5.98 6.42 6.12	0.78 0.84 0.78 0.82
3	2 34 47 59	30 45 57 63	29 12 11 5	171.0107.598.040.0	5.90 8.96 8.91 8.00	0.85 0.56 0.56 0.62
4	1 30	28 60	28 31	180.0 173.0	6.43 5.58	0.78 0.90
			10 N	Aeters		
1	2 27 50	26 49 63	25 23 14	187.0 160.0 110.0	7.48 6.96 7.86	0.67 0.72 0.64
2	1 27 52	26 51 77	26 25 26	119.5 122.0 128.5	$\begin{array}{r} 4.60 \\ 4.88 \\ 4.94 \end{array}$	1.09 1.02 1.01
3	1 39 60 81	35 58 79 87	35 20 20 7	171.0 107.5 98.0 40.0	4.89 5.38 4.90 5.71	1.02 0.93 1.02 0.88
4	1 34	32 66	32 33	180.0 173.0	5.63 5.24	0.89 0.95

Table 17. --Gauze section data on Hardy Plankton Recorders towed at surface and 10 meters, Albatross III cruise no. 71, February 20-March 2, 1956

t Conversion factor for no. /5 mi.
¹ no./5 mi.
0.97
0.96
0.87 0.82
0.86
0.83 0.84
1.01
0.85 0.92
0.88
0.88 0.89
0.86
0.56 0.51
0.87
0.92
0.79 0.79
0.79
0.90
0.78 0.88
0.76
0.86 0.91
0.72

 Table 18. --Gauze section data on Hardy Plankton Recorders towed at surface and 10 meters, Albatross III cruise no. 72, March 21-31, 1956

* Unexposed portion of gauze left from a short run

Loading	Gauze	section	Number of sections	Distance	Section	Conversion factor for
number	Start	Finish	exposed	travelled	equivalent	no. /5 mi.
			Sui	face		
				Miles		
1	$\frac{1}{24}$	21 45	21 22	127.0 112.0	6.05 5.09	0.83 0.98
	47 70	68 90	22 21	116.0 120.0	5.27 5.71	0.95 0.88
2	1	20	20	109.0	5.45	0.92
	22 44	42 64	21 21	120.0 117.0	5.71 5.57	0.88
	66	86	21	121.5	5,78	0.86
3	1 20	18 38	18 19	100.0 102.0	5.56 5.37	0.90 0.93
	40 62	59 82	20 21	114.0 118.0	5.70 5.62	0.88
4	1	26	26	145.0	5, 58	0.90
	28 52	45 71	18 20	117.0 114.0	6.50 5.70	0.77
	74	92	19	115.0	6.05	0.83
5	7 25	23 60	17 36	117.5 216.5	6.91 6.01	0.72 0.83
1	62 83	81 100	20 18	117.0 117.0	5.85	0.85
	0.5	100		Meters	0.00	0,11
1	1	21	21	127.0	6,05	0.83
-	25 46	43	19 21	112.0 116.0	5.89	0.85
	69	87	19	120.0	6.32	0.79
2	1 22	20 43	20 22	109.0	5.45 5.45	0.92
	45	65	21	120.0 117.0	5.57	0.90
	67	88	22	121.5	5.52	0.91
3	1 20	18 39	18 20	100.0 102.0	$5.56 \\ 5.10$	0.90 0.98
	41 65	62 85	22 21	114.0 118.0	$5.18 \\ 5.62$	0.97 0.89
4	1	25	25	145.0	5.85	0.85
	27 48	46 66	20 19	117.0 114.0	5.85	0.85 0.83
	69	89	21	115.0	5.48	0.91
5	1 22	20 61	20 40	117,5 216.5	5.88 5.41	0.85
	64 84	82 100	19 17	117.0 117.0	6.16 6.88	0.81

 Table 19. --Gauze section data on Hardy Plankton Recorders towed at surface and 10 meters, Albatross III cruise no. 73, April 17-28, 1956

Loading	Gauze	section	Number of sections	Distance	Section	Conversion factor for
number	Start	Finish	exposed	travelled	equivalent	no. /5 mi.
			Su	rface		
1	1 22 42 65	20 40 61 83	20 19 20 19	Miles 116.0 103.0 113.0 118.0	5.80 5.42 5.65 6.21	0.86 0.92 0.88 0.81
2	1 22 43 78	19 41 76 95	19 20 34 18	$112.0 \\ 111.0 \\ 234.0 \\ 117.5$	5.89 5.55 6.88 6.53	0.85 0.90 0.73 0.77
3	1 22 42 62	19 40 59 80	19 19 18 19	114.0115.0117.5123.5	6.00 6.05 6.53 6.50	0.83 0.83 0.76 0.77
4	1 23 65	20 63 85	20 41 21	112.0 222.0 116.5	5.60 5.41 5.55	0.89 0.92 0.90
5	1 23 45 68 90	21 44 66 88 102	21 22 22 21 12	$ 109.0 \\ 117.0 \\ 109.0 \\ 115.0 \\ 78.0 $	5.19 5.32 4.95 5.48 6.50	$\begin{array}{c} 0.96 \\ 0.94 \\ 1.01 \\ 0.91 \\ 0.77 \end{array}$
6	100* 67 42	71 44 26	30 24 16	151.0 145.5 95.5	5.03 6.06 5.97	0.99 0.83 0.84

Table 20. --Gauze section data on Hardy Plankton Recorders towed at surface and 10 meters, Albatross III cruise no. 75, May 16-29, 1956

Loading	Gauze	section	Number of sections	Distance	Section	Conversion factor for	
number	Start	Finish	exposed	travelled	equivalent	no./5 mi.	
10 Meters							
1	1 22 42 62	20 40 60 82	20 19 19 21	Miles 116.0 103.0 113.0 118.0	5.80 5.42 5.95 5.62	0.86 0.92 0.84 0.89	
2	1 22 43 79	19 41 78 96	19 20 36 18	$112.0 \\ 111.0 \\ 236.5 \\ 120.0$	5.89 5.55 6.57 6.67	0.85 0.90 0.76 0.75	
3	1 23 43 64	21 42 62 81	21 20 20 18	$114.0\\115.0\\117.5\\123.5$	5.43 5.75 5.88 6.86	0.92 0.87 0.85 0.73	
4	1 23 64	20 61 82	20 39 19	$112.0\\222.0\\116.5$	5.60 5.69 6.13	0.89 0.88 0.82	
5	1 23 44 67 87	21 42 65 85 99	21 20 22 19 13	109.0 117.0 109.0 115.0 7 8.0	5.19 5.85 4.95 6.05 6.00	0.96 0.85 1.01 0.83 0.83	
6	1 29 59	26 57 77	26 29 19	151.0 145.5 95.5	$5.81 \\ 5.02 \\ 5.03$	0.86 1.00 0.99	

Table 20. --Gauze section data on Hardy Plankton Recorders towed at surface and 10 meters, *Albatross III* cruise no. 75, May 16-29, 1956--Continued

* Gauze wound on spool backwards

Loading number	Gauze	section	Number of sections	Distance travelled	Section	Conversion factor for	
number	Start	Finish	exposed	travelled	equivalent	no./5 mi.	
Surface							
1	1 18 37 58	16 35 56 77	16 18 20 20	Miles 93.0 114.0 109.0 123.0	5.81 6.33 5.45 6.15	0.86 0.79 0.92 0.81	
2	79 1 21 41 61 78	95 20 39 60 76 95	17 20 19 20 16 18	121.5 109.5 116.5 111.0 101.5 113.5	$\begin{array}{c} 7.15\\ 5.48\\ 6.13\\ 5.55\\ 6.34\\ 6.31\end{array}$	0.70 0.91 0.82 0.90 0.79 0.79	
3	1 19 35 54 74	17 33 52 72 86	17 15 18 19 13	112.0 123.0 108.0 122.0 83.5	$\begin{array}{c} 6.59 \\ 8.20 \\ 6.00 \\ 6.42 \\ 6.42 \end{array}$	0.76 0.61 0.83 0.78 0.78	
4	1 21 39 57 76	19 37 55 73 92	19 17 17 17 17	117.0 121.0 120.0 116.0 114.0	$\begin{array}{c} 6.16 \\ 7.11 \\ 7.06 \\ 6.82 \\ 6.70 \end{array}$	0.81 0.70 0.71 0.73 0.75	
5	1 21 42 64	18 38 59 82	18 18 18 19	107.5 115.0 102.5 119.5	5.97 6.39 5.69 6.29	0.84 0.78 0.88 0.79	
6	1	20	20	129.5	6.48	0.77	

 Table 21. --Gauze section data on Hardy Plankton Recorders towed at surface and 10 meters, Albatross III cruise no. 76, June 11-24, 1956

Loading number	Gauze section		Number of sections	Distance	Section	Conversion factor for		
	Start	Finish	exposed	travelled	equivalent	no./5 mi.		
10 Meters								
1	1 17 38 58 79	15 36 57 77 97	15 20 20 20 20 19	Miles 93.0 114.0 109.0 123.0 121.5	6.20 5.70 5.45 6.15 6.39	0.81 0.88 0.92 0.81 0.78		
2	100* 80 60 41 21	81 62 42 23 4	20 19 19 19 19 18	109.5 116.5 111.0 107.5 113.5	$5.48 \\ 6.13 \\ 5.84 \\ 5.66 \\ 6.31$	0.91 0.82 0.86 0.88 0.79		
3	1 20 41 60 80	19 39 59 79 94	19 20 19 20 15	112.5123.0108.0122.083.5	5.92 6.15 5.68 6.10 5.57	0.84 0.81 0.88 0.82 0.90		
4	1 22 41 60 81	20 39 58 80 100	20 18 18 21 20	114.5 118.5 120.0 116.0 114.0	$5.73 \\ 6.58 \\ 6.67 \\ 5.52 \\ 5.70 \\ \end{array}$	0.87 0.76 0.75 0.91 0.88		
5	1 21 40 59	19 38 58 76	19 18 19 18	107.5 115.0 102.5 117.0	5.66 6.39 5.39 6.50	0,88 0.78 0.93 0.77		
6	78	98	20	127.0	6.35	0.79		

Table 21. --Gauze section data on Hardy Plankton Recorders towed at surface and 10 meters, Albatross III cruise no. 76, June 11-24, 1956--Continued

* Gauze wound on spool backwards.

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