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MIDWATER FISH DATA REPORT: COLD CORE RINGS TIME SERIES CRUISES --ETC(U)
MAR 80 R H BACKUS, J E CRADDOCK N00014-79-C-0071
WHOI-80-18 NL

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41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Station data and midwater-fish catch data are given for the cold-core ring time-series cruises KNORR 62, 65, and 71 and ENDEAVOR 11. Fish number, fish number per unit volume of water, and fish volume per unit volume of water are given for some principal fish categories, mostly myctophid species.		

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WHOI-80-18

MIDWATER FISH DATA REPORT:
COLD CORE RINGS TIME SERIES CRUISES
KNORR 62, 65, AND 71 AND ENDEAVOR 11

by

Richard H. Backus
and
James E. Craddock

WOODS HOLE OCEANOGRAPHIC INSTITUTION
Woods Hole, Massachusetts 02543

March 1980

TECHNICAL REPORT

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March 17, 1980

This data report is for midwater fishes taken on the time-series cruises in and around cold-core Gulf Stream rings in 1976 and 1977 - KNORR cruises 62, 65, and 71 and ENDEAVOR cruise 11.

The MOCNESS-10 system was used for sampling on the three KNORR cruises. Most often, five nets were fished at each station; one (Net 0) generally sampled down to near 1000 m where the second net (Net 1) was opened and retrieval of the gear begun; successive closure-openings were done at 250-m intervals on the way up. On ENDEAVOR cruise 11, for want of a suitable winch, a single net was fished down to and up from 1000 m.

The first tables describe the circumstances surrounding the making of the collections. These tables are self-explanatory except that the second depth shown for Net 0, the down-fishing net, is the maximum depth reached by the net, not the depth at which the net was closed. (That depth is the first one given for Net 1).

The data tables can be divided into two sorts because of the difference in gear used on the ENDEAVOR and KNORR cruises. One set allows intercomparison of data by 250-m depth strata for the three KNORR cruises. A second set allows comparison of the ENDEAVOR 11 data with the remainder by the pooling of collections for each station of the KNORR cruises.

Essentially three kinds of data are given - number of specimens, number of specimens per unit volume of water, and volume of fish per unit volume of water. Most of the tables are for individual species, mainly myctophids. A few at the outset are for pooled myctophids, pooled gonostomatids, photichthyids, and sternoptychids, and for pooled Cyclothone species. The various classes of tables are set off from one another by colored separators.

Designating numbers for and values from samples taken at night are underlined; ones for daytime samples are not.

Dashes in the "KNORR-cruises" tables indicate irregularities in net operation. The match of the values given with the depth scale at the left may be approximate. For the actual sampling depths see the station-data tables.

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The water-column (usually 1000 m) values given in the "all cruise" tables for specimens per unit volume of water and fish volume per unit volume of water were calculated for the KNORR stations by averaging the down rate (Net 0 rate) and the up rate; the up rate was calculated by averaging the rates of individual nets (in those few collections where the depth intervals were not equal, a weighted average was used for this 'up' rate). In these tables stations 32 and 33 are special. Because of a missed depth interval (250-0 for 32) and a lost sample-jar of myctophids (for 33, 4), numbers of specimens are minimum ones (except for non-myctophids from 33) and are enclosed in parentheses. Station averages for specimens per unit volume of water and fish volume per unit volume of water are based on Net 0 only and are enclosed in parentheses.

These data are relatively few when they are apportioned according to season, location with respect to the ring center, time of day and depth, and, of course, the variance is large. Remember, also, that a midwater trawl catches some unknown fraction of what is actually there. This work was done under Contract N00014-79-C-0071 NR083-004 and its predecessors with the Office of Naval Research.

Richard H. Backus

James E. Craddock

RHB,JEC:md

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STATION DATA

KNORR 62

MOC 10	Location	Position N W	Date Dec. '76	Time	Depth Net (m)	Depth 15°(m)	Bearing to (approx.)	Distance to (n.mi.)	Center of
20.0	Center "Al"	36°12', 65°36'	5-6	2245 0010	0	1050	315°	10-12	Al
1			6	0010 0037	1000	750			
2			6	0037 0057	750	500			
3			6	0057 0116	500	250			
4		36°06', 65°39'	6	0116 0144	250	0	322		
22.0	Flank "Al"	36°22', 65°07'	10-11	2350 0121	0	760	225°	±25	Al
2			11	0121 0210	500	250			
3		36°25', 65°03'	11	0210 0300	250	0	340		
23.0	Fringe "Al-Art"	37°18', 63°22'	15	0008 0103	0	780	315°	±55	Art
1			15	0103 0140	750	500			
2			15	0140 0231	500	250			
3		37°15', 63°15'	15	0231 0343	250	0	600		
24.0	Slope Water	38°47', 68°56'	19	1942 2030	0	775	-	-	-
1			19	2030 2107	775	500			
2			19	2107 2201	500	250			
3		38°42', 68°56'	19	2201 2300	250	0	100		

KNORR 65

MOC	Location	Position N W	Date April '77	Time	Depth Net (m)	Depth 15° (m)	Bearing to (approx.)	Distance to (n.mi.)	Center to
25,0	N. Sargasso Sea	34°27', 71°19'	13	0037	0131	0	1050	845	-
1			13	0131	0209	1000	750		
2			13	0209	0249	750	500		
3			13	0249	0336	500	250		
4		34°21', 71°23'	13	0336	0410	250	0	860	
26,0	N. Sargasso Sea	34°13', 71°25'	13	1410	1523	0	1200	860	-
1			13	1523	1558	1000	750		
2			13	1558	1624	750	500		
3			13	1624	1652	500	250		
4		34°10', 71°31'	13	1652	1725	250	0	860	
27,0	Center "Bob"	36°47', 69°30'	17	1352	1449	0	1075	40	±5 Bob
1			17	1449	1534	1000	750		
2			17	1534	1619	750	500		
3			17	1619	1702	500	250		
4		36°39', 69°26'	17	1702	1744	250	0	40	
28,0	Center "Bob"	36°41', 69°30'	17	2055	2150	0	1000	40	±5 Bob
1			17	2150	2231	1000	750		
2			17	2231	2311	750	500		
3			17	2311	2352	500	250		
4		36°49', 69°27'	17-18	2352	0030	250	0	42	
29,0	Fringe "Bob" ("wake")	36°33', 70°26'	18	2150	2320	0	1000		±65 Bob
1			18	2320	2350	1000	750		
2			18-19	2350	0016	750	500	±650	
3			19	0016	0046	500	250		
4		36°35', 70°31'	19	0046	0125	250	0		
32,0	Center "Bob"	36°40', 68°27'	21	2220	2352	0	1020	<100	±15 Bob
1			21-22	2352	0028	1000	750		
3			22	0028	0053	750	500		
4		36°44', 68°33'	22	0056	0133	500	250	±80	

-continued-

KNORR 65, continued

MOC 10	Location	Position N W	Date April '77	Time	Depth Net (m)	Depth 15 (m)	Bearing to (approx.)	Distance to (n.mi.)	Center to
33.0	Flank "Bob"	36°30', 67°57'	23	0042 0207	0 1020	±300	315°	±35	"Bob"
1			23	0207 0237	1000 750				
2			23	0237 0312	750 500				
3			23	0312 0340	500 250				
4		36°29', 67°58'	23	0340 0405	250 0	±275			
35.0	Center "Al"	36°36', 66°37'	24	1303 1409	0 1000	375	±165°?	±20?	"Al"
1			24	1409 1450	1000 750				
2			24	1450 1530	750 500				
3			24	1530 1610	500 250				
4		36°31', 66°34'	24	1610 1650	250 0	450			
36.0	Slope Water	38°21', 67°38'	28	1248 1400	0 1020	40	-	-	-
1			28	1400 1439	1000 750				
2			28	1439 1520	750 500				
3			28	1520 1600	500 250				
4		38°12', 67°37'	28	1600 1639	250 0	65			
38.0	Slope Water	59°25', 69°31'	29-30	2345 0101	0 780	30	-	-	-
1			30	0101 0155	750 500				
2			30	0155 0253	500 250				
3		39°21', 69°43'	30	0253 0345	250 0	30			
39.0	Slope Water	39°30', 69°42'	30	1234 1635		30	-	-	-
1			30	1635 1721					
2		39°37', 69°52'	30	1721 1805		5			

ENDEAVOR 11

MOC 10	Location	Position N W	Date July-Aug 77	Time	Maximum net depth (m)	Depth 15° (m)	Bearing to (approx.)	Distance to (n.mi.)	Center to
40	"Dave"	29°51', 75°20' 29°48', 75°18'	28	0510 0835	<400	305	-	-	-
42	"Bob" center	34°30', 71°33' 34°18', 71°23'	1	1145 1600	850	>120?	315°	±10	"Bob"
43	N. Sargasso Sea	33°30', 73°11' 33°41', 73°07'	2	1450 1915	1000+	700	075°	±100	"Bob"
44	N. Sargasso Sea	33°33', 73°06' 33°49', 73°04'	3	0255 0700	860	±700	075°	±100	"Bob"
45	N. Sargasso Sea ("Wake")	34°26', 70°37' 34°20', 70°38'	5-6	2310 0305	1000+	± 625	280°	±60	"Bob"
46	"Bob" fringe	34°38', 71°01' 34°33', 71°01'	6	1210 1555	1000+	550	260°	±45	"Bob"
47	"Bob" center	34°29', 71°47' 34°28', 72°00'	6-7	2330 0320	880	112	315°	±4	"Bob"
48	"Bob" center	34°29', 71°55' 34°25', 72°08'	7	1040 1430	1000+	150	010°	±5	"Bob"
49	"Bob" center	34°30', 71°55' 34°31', 72°10'	9	1125 1515	980	107	300°	±4	"Bob"
50	"Bob" center	34°28', 72°03' 34°31', 71°50'	10-11	2325 0320	845	118	290°	±13	"Bob"
51	"Bob" flank	34°31', 71°43' 34°25', 71°45'	13	0230 0640	980	±410	280°	±31	"Bob"

-continued-

ENDEAVOR 11, continued

MOC 10	Location	Position N W	Date July-Aug 77	Time	Maximum net depth (m)	Depth 15 (m)	Bearing to (approx.)	Distance to (n.mi.)	Center to
52	N. Sargasso Sea	36°53', 70°31' 37°04', 70°19'	14-15	2105 0100	900	670	-	-	-
53	Slope Water	38°19', 69°08' 38°20', 68°54'	15-16	2320 0320	870	70	-	-	-
54	Slope Water	38°29', 69°06' 38°40', 69°04'	16	1305 1715	950	50	-	-	-

KNORR 71

MOC	Location	Position N W	Date Oct-Nov 77	Time	Depth Net (m)	Depth 15° (m)	Bearing to (approx.)	Distance to (n.mi.)	Center to
10									
56.0	Slope Water	38°31', 71°59'	23	1628	0	830	-	-	-
1			23	1628	600	400			
2		38°37', 71°56'	23	1650	400	0		<0	
57.0	Slope Water	38°39', 71°54'	24	0052	0	1020	-	-	-
1			24	0217	1000	750			
2			24	0300	750	500			
3			24	0340	500	250		<0?	
4		38°47', 71°51'	24	0420	250	0			
58.0	Center "Em"	34°51', 70°22'	29	0201	0	1010	020°	13-14	"Em"
1			29	0322	1000	750			
2			29	0350	750	500			
3			29	0412	500	250			
4		34°52', 70°16'	29	0436	250	0			
59.0	Center "Em"	34°53', 70°28'	29	1412	0	1030	360°	15	"Em"
1			29	1550	1000	750			
2			29	1615	750	500			
3			29	1640	500	250			
4		34°48', 70°36'	29	1707	250	0		320	
61.0	Center "Frank"	36°43', 65°47'	3	1345	0	1030	290°	12-13	"Frank"
1			3	1502	1000	667			
2			3	1537	667	475			
3			3	1601	475	250			
4		36°46', 65°40'	3	1628	250	0			

-continued-

KNORR 71, continued

MOC 10	Location	Position N W	Date Oct-Nov 77	Time	Depth Net (m)	Depth 15° (m)	Bearing to (approx.)	Distance to (n.mi.)	Center to
62.0	Center "Frank"	36°42', 65°49'	4	0123 0208	0 1020	180	290°	±15	"Frank"
1			4	0208 0325	1000 750				
2			4	0325 0339	750 500				
3			4	0339 0419	500 250				
4		36°48', 65°40'	4	0419 0502	250 0	210			
63.0	N. Sargasso Sea	36°46', 64°32'	4	2153 2317	0 1020	720	270°	70-75	"Frank"
1			4	2317 2358	1000 750				
2			4-5	2358 0043	750 500				
3			5	0043 0122	500 250				
4		36°49', 64°24'	5	0122 0201	250 0	720			
64.0	Flank "Frank"	36°39', 65°15'	5	2104 2221	0 1020	510	290°	42-43	"Frank"
1			5	2221 2257	1000 750				
2			5	2257 2341	750 500				
3			5-6	2341 0014	500 250				
4		36°38', 65°10'	6	0014 0101	250 0	540			
65.0	Center "Frank"	36°49', 65°58'	6	1232 1354	0 1040	180	290°	8-9	"Frank"
1			6	1354 1438	1000 750				
2			6	1438 1528	750 500				
3			6	1528 1614	500 250				
4		36°52', 65°46'	6	1614 1646	250 0	220			
66.0	Center "Frank"	36°56', 65°59'	6	2140 2316	0 1020	170	-	±1	"Frank"
1			6-7	2316 0002	1000 750				
2			7	0002 0045	750 500				
3			7	0045 0132	500 250				
4		37°04', 66°10'	7	0132 0213	250 0	190			

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		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71								
Slope Water	Depth	Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>				
		0	<u>24</u>	1	<u>23</u>	1	17	<u>13</u>	7	<u>13</u>				
		250	<u>4</u>	17	<u>5</u>	17	12	<u>4</u>	11	<u>6</u>				
		500	<u>5</u>	10	<u>5</u>	-	-	<u>5</u>	7	<u>4</u>				
		750	-	5	-	-	-	<u>1</u>	3	<u>1</u>				
		1000	-	5	-	-	-	<u>1</u>	3	<u>1</u>				
Ring Center	Depth	Net 0	<u>14</u>	8	<u>10</u>	12	15	<u>9</u>	8	<u>9</u>				
		Collection	<u>20</u>	35	<u>27</u>	<u>28</u>	<u>32</u>	<u>58</u>	59	61	<u>62</u>	65	<u>66</u>	
		0	<u>Al</u>	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank	
		250	<u>14</u>	0	0	<u>17</u>	-	<u>5</u>	2	4	<u>11</u>	2	<u>17</u>	
		500	<u>4</u>	7	10	<u>2</u>	<u>2</u>	<u>4</u>	5	14	<u>11</u>	16	<u>5</u>	
		750	<u>1</u>	14	5	<u>2</u>	<u>2</u>	<u>6</u>	11	11	<u>9</u>	15	<u>5</u>	
Ring Flank	Depth	1000	<u>4</u>	4	2	<u>3</u>	<u>1</u>	<u>7</u>	8	7	-	9	<u>3</u>	
		Net 0	<u>14</u>	7	2	<u>12</u>	<u>5</u>	<u>9</u>	16	16	<u>18</u>	14	<u>17</u>	
		Collection	<u>22</u>	33										
		0	<u>Al</u>	Bob										
		250	<u>17</u>	-										
		500	<u>5</u>	6										
Ring Fringe	Depth	750	-	<u>1</u>										
		1000	-	<u>2</u>										
		Net 0	<u>14</u>	<u>18</u>										
		Collection	<u>23</u>	29										
		0	<u>Al-Art</u>	Bob										
		250	<u>21</u>	<u>28</u>										
N. Sargasso Sea	Depth	500	<u>2</u>	<u>2</u>										
		750	<u>6</u>	<u>4</u>										
		1000	-	<u>6</u>										
		Net 0	<u>9</u>	<u>22</u>										
		Collection	<u>23</u>	26										
		0	<u>11</u>	1										
N. Sargasso Sea	Depth	250	<u>4</u>	4										
		500	<u>1</u>	8										
		750	<u>4</u>	11										
		1000	<u>4</u>	11										
		Net 0	<u>4</u>	8										
		Collection	<u>23</u>	26										
N. Sargasso Sea	Depth	0	<u>11</u>	1										
		250	<u>4</u>	4										
		500	<u>1</u>	8										
		750	<u>4</u>	11										
		1000	<u>4</u>	11										
		Net 0	<u>4</u>	8										
Collection	<u>23</u>	26												
N. Sargasso Sea	Depth	0	<u>11</u>	1										
		250	<u>4</u>	4										
		500	<u>1</u>	8										
		750	<u>4</u>	11										
		1000	<u>4</u>	11										
		Net 0	<u>4</u>	8										
Collection	<u>23</u>	26												

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71			
Slope Water	Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>
	0	<u>138</u>	1	<u>106</u>	1	321	<u>56</u>	42	<u>83</u>
	250	<u>30</u>	117	<u>9</u>	125	69	<u>16</u>	174	<u>31</u>
	500	<u>41</u>	28	<u>10</u>	-	-	<u>49</u>	27	<u>47</u>
	750	-	8	-	-	-	<u>13</u>	7	<u>6</u>
	1000	-	-	-	-	-	-	-	-
Ring Center	Net 0	<u>81</u>	21	<u>27</u>	48	199	<u>93</u>	52	<u>167</u>
	Collection	<u>20</u>	35	27	<u>28</u>	<u>32</u>	<u>58</u>	<u>59</u>	61
	0	<u>Al</u>	Al	Bob	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	Frank
	250	<u>27</u>	0	0	<u>308</u>	-	<u>13</u>	3	4
	500	<u>4</u>	10	57	<u>2</u>	<u>6</u>	<u>8</u>	19	142
	750	<u>2</u>	32	12	<u>2</u>	<u>3</u>	<u>23</u>	44	172
Ring Flank	1000	<u>27</u>	5	2	<u>3</u>	<u>1</u>	<u>42</u>	32	43
	Net 0	<u>66</u>	11	8	<u>80</u>	<u>120</u>	<u>14</u>	43	97
	Collection	<u>22</u>	<u>33</u>				<u>64</u>		
	0	<u>Al</u>	<u>Bob</u>				<u>Frank</u>		
	250	<u>120</u>	-				<u>49</u>		
	500	<u>7</u>	<u>7</u>				<u>1</u>		
Ring Fringe	750	-	<u>4</u>				<u>8</u>		
	1000	-	<u>4</u>				<u>31</u>		
	Net 0	<u>84</u>	<u>73</u>				<u>39</u>		
	Collection	<u>23</u>	<u>29</u>						
	0	<u>Al-Art</u>	<u>Bob</u>						
	250	<u>231</u>	<u>129</u>						
N. Sargasso Sea	500	<u>2</u>	<u>2</u>						
	750	<u>10</u>	<u>50</u>						
	1000	-	<u>24</u>						
	Net 0	<u>31</u>	<u>44</u>						
	Collection	<u>25</u>	26				<u>63</u>		
	0	<u>33</u>	1				<u>43</u>		
N. Sargasso Sea	250	<u>4</u>	22				<u>0</u>		
	500	<u>1</u>	24				<u>5</u>		
	750	<u>14</u>	43				<u>108</u>		
	1000	<u>7</u>	21				<u>21</u>		
	Net 0								

Myctophidae,
number of specimens

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0	35.4	0.4	27.2	0.4	91.7	24.3	21.0	27.7			
	250	10.0	41.8	2.1	50.0	40.6	6.4	64.4	9.4				
	500	17.8	11.2	2.3	-	-	22.3	10.0	15.2				
	750	-	2.9	-	-	-	5.9	2.8	2.1				
	1000	-	-	-	-	-	-	-	-				
	Net 0	50.6	8.1	7.9	4.3	33.2	38.8	20.0	38.8				
Ring Center	Depth	Collection	20	35	27	28	32	58	59	61	62	65	66
	0	Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank	Frank
	250	5.4	0	0	146.7	-	8.1	2.0	3.1	32.7	1.5	39.6	
	500	3.3	3.3	21.1	0.8	4.3	5.3	10.6	78.9	22.2	35.6	15.2	
	750	1.5	11.0	4.6	0.9	1.9	17.7	25.9	122.8	73.1	187.1	96.0	
	1000	15.9	1.9	0.9	1.4	0.6	26.3	17.8	18.7	-	13.8	5.8	
Ring Flank	Depth	Collection	22	33			64						
	0	Al	Bob			Frank							
	250	41.4	-			14.4							
	500	2.3	7.8			0.4							
	750	-	5.0			3.0							
	1000	-	5.0			17.2							
Ring Fringe	Depth	Collection	23	29									
	0	Al-Art	Bob										
	250	57.8	67.9										
	500	0.6	1.1										
	750	4.3	41.7										
	1000	-	17.1										
N. Sargasso Sea	Depth	Collection	25	26			63						
	0	14.3	0.5			17.2							
	250	1.4	12.9			0							
	500	0.5	16.0			2.2							
	750	8.8	22.6			47.0							
	1000	4.4	10.5			9.5							

Myctophidae,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
Slope Water	Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>			
	0	<u>11.3</u>	<0.1	<u>11.3</u>	<0.1	10.2	<u>7.1</u>	7.2	<u>12.3</u>			
	250	<u>6.5</u>	15.1	<u>2.6</u>	23.0	10.1	<u>2.4</u>	12.5	<u>11.1</u>			
	500	<u>5.5</u>	11.0	<u>15.5</u>	-	-	<u>8.8</u>	13.0	<u>9.2</u>			
	750	-	0.6	-	-	-	<u>1.1</u>	4.2	<u>5.2</u>			
	1000	-	-	-	-	-	-	-	-			
	Net 0	<u>15.4</u>	2.7	<u>17.5</u>	12.6	20.8	<u>11.3</u>	7.4	<u>14.7</u>			
Ring Center	Collection	<u>20</u>	35	27	<u>28</u>	<u>32</u>	<u>58</u>	<u>59</u>	61	<u>62</u>	65	<u>66</u>
		<u>Al</u>	<u>Al</u>	<u>Bob</u>	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>
	0	<u>1.4</u>	0	0	<u>54.9</u>	-	<u>1.6</u>	0.7	0.3	<u>9.3</u>	0.1	<u>6.7</u>
	250	<u>3.5</u>	1.7	23.9	<u>1.3</u>	<u>10.0</u>	<u>0.8</u>	1.5	28.6	<u>2.7</u>	5.1	<u>11.0</u>
	500	<u>0.9</u>	3.2	5.8	<u>1.2</u>	<u>2.4</u>	<u>8.2</u>	5.4	27.1	<u>5.5</u>	12.8	<u>6.2</u>
	750	<u>1.4</u>	1.5	1.8	<u>1.6</u>	<0.1	<u>4.9</u>	3.4	5.0	-	11.1	<u>1.5</u>
	Net 0	<u>7.6</u>	1.0	1.4	<u>26.5</u>	<u>10.4</u>	<u>1.0</u>	5.2	10.6	<u>20.5</u>	9.4	<u>10.4</u>
Ring Flank	Collection	<u>22</u>	<u>33</u>			<u>64</u>						
		<u>Al</u>	<u>Bob</u>			<u>Frank</u>						
	0	<u>6.4</u>	-			<u>2.4</u>						
	250	<u>6.0</u>	<u>1.6</u>			<u>2.4</u>						
	500	-	<u>4.6</u>			<u>4.1</u>						
	750	-	<u>0.5</u>			<u>3.5</u>						
	Net 0	<u>2.5</u>	<u>2.4</u>			<u>4.7</u>						
Ring Fringe	Collection	<u>23</u>	<u>29</u>									
		<u>Al-Art</u>	<u>Bob</u>									
	0	<u>10.3</u>	<u>11.4</u>									
	250	<u>1.9</u>	<u>1.0</u>									
	500	<u>1.2</u>	<u>1.5</u>									
	750	-	<u>2.1</u>									
	Net 0	<u>39.6</u>	<u>13.3</u>									
N. Sargasso Sea	Collection		<u>25</u>	26			<u>63</u>					
	0		<u>1.7</u>	<0.1			<u>1.7</u>					
	250		<u>0.6</u>	1.2			<u>0</u>					
	500		<0.1	6.3			<u>0.2</u>					
	750		<u>0.7</u>	4.2			<u>4.0</u>					
	1000		<u>0.4</u>	1.3			<u>4.6</u>					
	Net 0											

Myctophidae,
ml/10,000 m³

Collection	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	Myctophidae, number of species
Slope Water					
	36	38	53	56	
	24	39	54	57	67
				68	
	29	25	16	27	20
	20	30	25	20	22
Ring Center	35	27	40	58	59
	Al	Bob	Dave	Em	Em
	32	28	42	61	62
	Bob	Bob	Bob	Frank	Frank
	50	47	49	65	66
	Bob	Bob	Bob	Frank	Frank
	24	14	12	16	23
	25	15	17	26	27
	(8)	15	10	31	27
Ring Flank	33	51	64		
	Bob	Bob	Frank		
	21	24	30		
	(22)				
Ring Fringe	29	30	46		
	Bob	Bob	Bob		
	22	(25)	19		
Sargasso Sea	25	26	43	63	
	16	21	21	21	
	14	15	10		
	45	52			

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24 <u>290</u>	36 38 39 175 <u>152</u> 174	53 54 <u>152</u> 237	56 57 67 68 <u>589</u> <u>227</u> 302 <u>334</u>	
Ring Center	Collection 20 Al <u>126</u>	35 27 28 32 Al Bob Bob Bob 58 79 395 <u>(130)</u>	40 42 47 48 49 50 Dave Bob Bob Bob Bob 70 261 <u>137</u> 113 71 <u>154</u>	58 59 61 62 65 66 Jim Em Frank Frank Frank <u>100</u> 141 458 <u>429</u> 847 <u>484</u>	
Ring Flank	Collection 22 Al 211	33 Bob (88)	51 Bob <u>132</u>	64 Frank <u>128</u>	
Ring Fringe	Collection 23 Al-Art <u>274</u>	29 30 Bob Bob 249 <u>113</u>	46 Bob 63		Myctophidae, number of specimens
Sargasso Sea	Collection	25 26 <u>59</u> 111	43 44 45 52 153 <u>55</u> <u>86</u> <u>27</u>	63 <u>177</u>	

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Ring Fringe	Collection 24	36 38 39	53 54	56 57 67 68	
Ring Fringe	35.9	11.1 9.2 14.7	12.8 20.1	49.7 26.8 22.3 26.2	
Ring Fringe	Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank	
Ring Fringe	17.6	4.6 5.3 55.1 (66.7)	6.9 19.6 12.1 10.5 6.7 13.3	10.4 12.3 45.3 40.4 41.2 31.1	
Ring Fringe	Collection 22 Al	33 Bob	51 Bob	64 Frank	
Ring Fringe	20.5	(60.8)	11.3	12.9	
Ring Fringe	Collection 23 Al-Art	29 30 Bob Bob	46 Bob		
Ring Fringe	18.6	34.4 12.6	5.8		
Sargasso Sea	Collection	25 26	43 44 45 52	63	
Sargasso Sea		5.4 11.8	11.7 4.6 7.4 2.3	13.1	

Myctophidae,
specimens/10,000 m³

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71
Slope Water	Collection <u>24</u>	36 <u>38</u> 39	53 <u>54</u>	56 <u>57</u> 67 <u>68</u>
	12.9	4.7 <u>13.7</u> 12.3	3.0 <u>3.1</u>	16.8 <u>8.1</u> 8.3 <u>12.1</u>
Ring Center	Collection <u>20</u> Al	35 27 28 <u>32</u> Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob Bob	58 59 61 62 65 66 Em Em Frank Frank Frank Frank
Ring Flank	4.7	1.3 4.7 <u>20.7</u> (10.4)	.3 1.9 1.5 2.2 .7 1.9	2.5 4.0 12.9 12.4 8.4 8.4
Ring Fringe	Collection <u>22</u> Al	33 <u>33</u> Bob	51 <u>51</u> Bob	64 <u>64</u> Frank
	4.4	(2.4)	1.6	3.9
Sargasso Sea	Collection <u>23</u> Al-Art	29 30 <u>30</u> Bob Bob Bob	43 44 45 52	63
	22.1	8.7 2.1	1.0 .5 .8 .4	3.1
				Myctophidae, ml/10,000 m ³

STERNOPTYCHIDAE, GONOSTOMATIDAE, AND PHOTICHTHYIDAE
(EXCLUDING CYCLOTHONE SPP.)

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
Slope Water	Collection	24	36	38	39	56	57	67	68			
	0	2	3	4	3	2	2	1	0			
	250	0	1	2	1	0	3	2	3			
	500	1	1	1	-	-	1	1	2			
	750	-	1	-	-	-	1	1	0			
	1000 Net 0	3	2	2	2	3	3	1	1			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		A1	A1	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0	2	1	1	2	-	1	0	0	1	1	4
	250	3	3	1	0	2	3	3	3	3	3	3
	500	1	2	2	1	1	2	2	2	0	1	1
	750	0	1	0	0	0	1	2	1	-	0	0
Ring Flank	Collection	22	33									
		A1	Bob									
	0	3	1									
	250	5	2									
	500	-	1									
	750	-	0									
Ring Fringe	Collection	23	29									
		A1-Art	Bob									
	0	7	5									
	250	4	5									
	500	1	1									
	750	-	1									
N. Sargasso Sea	Collection	25	26									
	0	2	1									
	250	4	3									
	500	0	0									
	750	1	1									
	1000 Net 0	5	2									

Sternoptychidae,
Gonostomatidae, &
Photichthyidae
(excluding Cyclothone spp.),

Number of species

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
Slope Water	Depth	Collection	24	36	38	39	56	57	67	68			
		0	<u>12</u>	6	<u>8</u>	5	3	<u>2</u>	1	<u>0</u>			
		250	<u>0</u>	2	<u>4</u>	1	0	<u>6</u>	4	<u>4</u>			
		500	<u>5</u>	3	<u>9</u>	-	-	<u>5</u>	2	<u>10</u>			
		750	-	5	-	-	-	<u>2</u>	1	<u>0</u>			
		1000 Net 0	<u>4</u>	8	<u>2</u>	19	8	<u>11</u>	1	<u>1</u>			
Ring Center	Depth	Collection	20	35	27	28	32	58	59	61	62	65	66
		0	<u>A1</u>	A1	Bob	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	Em	Frank	<u>Frank</u>	Frank	<u>Frank</u>
		0	<u>4</u>	1	1	<u>3</u>	-	<u>1</u>	0	0	<u>1</u>	1	<u>6</u>
		250	<u>16</u>	19	1	<u>0</u>	<u>2</u>	<u>9</u>	3	6	<u>11</u>	9	<u>14</u>
		500	<u>2</u>	3	5	<u>3</u>	<u>1</u>	<u>15</u>	40	4	<u>0</u>	1	<u>1</u>
		750	<u>0</u>	3	0	<u>0</u>	<u>0</u>	<u>2</u>	3	1	-	0	<u>0</u>
Ring Flank	Depth	Collection	22	33									
		0	<u>A1</u>	<u>Bob</u>									
		0	<u>21</u>	<u>1</u>									
		250	<u>86</u>	<u>5</u>									
		500	-	<u>1</u>									
		750	-	<u>0</u>									
Ring Fringe	Depth	Collection	23	29									
		0	<u>A1-Art</u>	<u>Bob</u>									
		0	<u>20</u>	<u>41</u>									
		250	<u>10</u>	<u>15</u>									
		500	<u>2</u>	<u>5</u>									
		750	-	<u>2</u>									
N. Sargasso Sea	Depth	Collection	25	26									
		0	<u>5</u>	<u>2</u>									
		250	<u>29</u>	<u>3</u>									
		500	<u>0</u>	<u>0</u>									
		750	<u>2</u>	<u>3</u>									
		1000 Net 0	<u>9</u>	<u>5</u>									

Sternoptychidae,
Gonostomatidae, &
Photichthyidae
(excluding Cyclothone spp.),

number of specimens

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
Slope Water	Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>			
	0	<u>3.1</u>	2.2	<u>2.1</u>	2.1	0.9	<u>0.9</u>	0.5	<u>0</u>			
	250	<u>0</u>	0.7	<u>0.9</u>	0.4	0	<u>2.4</u>	1.5	<u>1.2</u>			
	500	<u>2.2</u>	1.2	<u>2.1</u>	-	-	<u>2.3</u>	0.7	<u>3.2</u>			
	750	-	1.8	-	-	-	<u>2.2</u>	0.4	<u>0</u>			
	1000	<u>2.5</u>	3.1	<u>0.6</u>	1.7	1.3	<u>4.6</u>	0.4	<u>0.2</u>			
Net 0												
Ring Center	Collection	<u>20</u>	35	27	<u>28</u>	<u>32</u>	<u>58</u>	59	61	<u>62</u>	65	<u>66</u>
	0	<u>A1</u>	A1	Bob	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	Em	Frank	<u>Frank</u>	Frank	<u>Frank</u>
	0	<u>0.8</u>	0.4	0.6	<u>1.4</u>	-	<u>0.6</u>	0	0	<u>0.5</u>	0.5	<u>2.3</u>
	250	<u>13.3</u>	6.3	0.4	<u>0</u>	<u>1.4</u>	<u>6.0</u>	1.7	3.3	<u>3.4</u>	3.3	<u>5.2</u>
	500	<u>1.5</u>	1.0	1.9	<u>1.3</u>	<u>0.6</u>	<u>11.5</u>	23.5	2.9	<u>0</u>	0.3	<u>0.4</u>
	750	<u>0</u>	1.1	0	<u>0</u>	<u>0</u>	<u>1.3</u>	1.7	0.4	-	<u>0</u>	<u>0</u>
1000	<u>6.5</u>	8.2	0.5	<u>5.5</u>	<u>1.1</u>	<u>7.3</u>	4.9	1.8	<u>2.5</u>	0.4	<u>0.5</u>	
Net 0												
Ring Flank	Collection	<u>22</u>	<u>33</u>			<u>64</u>						
	0	<u>A1</u>	<u>Bob</u>			<u>Frank</u>						
	0	<u>7.2</u>	<u>1.7</u>			<u>3.8</u>						
	250	<u>27.7</u>	<u>5.6</u>			<u>20.9</u>						
	500	-	<u>1.3</u>			<u>3.7</u>						
	750	-	<u>0</u>			<u>4.4</u>						
1000	<u>2.5</u>	<u>7.5</u>			<u>2.6</u>							
Net 0												
Ring Fringe	Collection	<u>23</u>	<u>29</u>									
	0	<u>A1-Art</u>	<u>Bob</u>									
	0	<u>5.0</u>	<u>21.6</u>									
	250	<u>3.2</u>	<u>7.9</u>									
	500	<u>0.9</u>	<u>4.2</u>									
	750	-	<u>1.4</u>									
1000	<u>3.7</u>	<u>43.3</u>										
Net 0												
N. Sargasso Sea	Collection		<u>25</u>	26			<u>63</u>					
	0		<u>2.2</u>	1.1			<u>6.4</u>					
	250		<u>10.4</u>	1.8			<u>9.6</u>					
	500		<u>0</u>	0			<u>2.2</u>					
	750		<u>1.3</u>	1.6			<u>1.7</u>					
	1000		<u>5.6</u>	2.5			<u>5.9</u>					
Net 0												

Sternoptychidae,
Gonostomatidae, &
Photichthyidae
(excluding *Cyclothone* spp.),
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
Slope Water	Depth	Collection	24	36	38	39	56	57	67	68			
		0	<u>0.1</u>	0.1	<u>0.7</u>	0.1	0.1	<u>0.8</u>	0.1	<u>0</u>			
		250	<u>0</u>	0.1	<u><0.1</u>	<0.1	0	<u>0.3</u>	0.1	<u>0.1</u>			
		500	<u>1.9</u>	1.0	<u>2.3</u>	-	-	<u>1.4</u>	0.3	<u>1.6</u>			
		750	-	1.1	-	-	-	<u>1.1</u>	0.7	<u>0</u>			
		1000	-	-	-	-	-	-	-	-			
Net 0		<u>1.0</u>	1.9	<u><0.1</u>	1.0	0.6	<u>0.8</u>	0.2	<u>0.3</u>				
Ring Center	Depth	Collection	20	35	27	28	32	58	59	61	62	65	66
			<u>Al</u>	<u>Al</u>	<u>Bob</u>	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>
		0	<u><0.1</u>	0.1	0.1	<u>1.3</u>	-	<u>0.1</u>	0	0	<u>0.1</u>	0.8	<u>0.7</u>
		250	<u>4.2</u>	0.8	0	<u>0</u>	<u>2.1</u>	<u>0.9</u>	0.8	6.3	<u>0.4</u>	3.4	<u>0.1</u>
		500	<u>0.6</u>	0.5	0.4	<u>1.8</u>	<u>0.1</u>	<u>0.2</u>	1.5	0.1	<u>0</u>	0	<u>0.1</u>
		750	<u>0</u>	0.6	0	<u>0</u>	<u>0</u>	<u>0.4</u>	0.8	0.1	-	0	<u>0</u>
1000			-	-	-	-	-	-	-	-	-	-	
Net 0		<u>0.3</u>	1.8	0	<u>1.1</u>	<u>0.6</u>	<u>1.5</u>	0.5	2.4	<u>0.5</u>	<0.1	<u><0.1</u>	
Ring Flank	Depth	Collection	22	33									
			<u>Al</u>	<u>Bob</u>									
		0	<u>0.1</u>	<u><0.1</u>									
		250	<u>3.1</u>	<u>1.8</u>									
		500	-	<u>0.1</u>									
		750	-	<u>0</u>									
1000			-	-									
Net 0		<u>0.8</u>	<u>2.4</u>										
Ring Fringe	Depth	Collection	23	29									
			<u>Al-Art</u>	<u>Bob</u>									
		0	<u>0.6</u>	<u>0.5</u>									
		250	<u>0.8</u>	<u>1.6</u>									
		500	<u>0.2</u>	<u>0.6</u>									
		750	-	<u>1.3</u>									
1000			-	-									
Net 0		<u>0.7</u>	<u>17.6</u>										
N. Sargasso Sea	Depth	Collection	25	26									
			<u>63</u>										
		0	<u>0.2</u>	0.1									
		250	<u>3.8</u>	0.4									
		500	<u>0</u>	0									
		750	<u>1.2</u>	0.4									
1000			-	-									
Net 0		<u>1.2</u>	1.3										

Sternoptychidae,
Gonostomatidae, &
Photichthyidae
(excluding Gonostoma elongatur
& Cyclothone spp.),
ml/10,000 m³

Sternoptychidae,
Gonostomatidae, &
Photichthyidae
(excluding Gonostoma elongatur
& Cyclothone spp.),
ml/10,000 m³

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68	
	4	4 6 5	3 3	5 5 3 5	
Ring Center	Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 Dave Bob Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank	
Ring Flank	Collection 22 Al	5 3 5 (3)	4 5 6 6 2 5	6 6 7 6 4 7	
Ring Fringe	Collection 23 Al-Art	33 22 30 Bob Bob Bob	51 54 Bob Frank	64 Frank	
Sargasso Sea	Collection	29 30 7 25 26	46 43 44 45 52	8 63	
	9	9 7 6 6	5 4 7 7 6	8 9	
					Sternoptychidae, Gonostomatidae, & Photichthyidae (ex- cepting Cyclothone spp.), number of species

Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71
Collection 24	36 38 39	53 54	56 57 67 68
21	24 23 25	9 7	11 26 9 15
Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank
37	44 8 12 (5)	37 8 12 9 2 20	43 66 16 17 12 23
Collection 22 Al	33 Bob	51 Bob	64 Frank
118	16	39	85
Collection 23 Al-Art	29 30 Bob	46 Bob	Sternoptychidae, Gonostomatidae, & Photichthyidae (ex- cepting Cyclothone spp.), number of specimens
39	115 56	11	
Collection	25 26	43 44 45 52	63
Sargasso Sea	45 13	19 24 17 16	61

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68	
	2.1	2.3 1.2 1.6	.8 .6	1.1 3.3 1.0 .7	
Ring Center	Collection 20 Al	35 27 28 32 Al Bob BOB Bob	40 42 47 48 49 50 Dave Bob BOB Bob Bob BOB	58 59 61 62 65 66 Em Frank Frank Frank Frank Frank	
Ring Flank	5.2	5.2 .6 3.1 (1.1)	3.6 .6 1.1 .8 .2 1.7	6.1 5.8 1.8 1.3 1.3	
Ring Fringe	Collection 22 Al	33 Bob	51 Bob	64 Frank	
	7.5	4.9	3.1	5.4	
Sargasso Sea	Collection 23 Al-Art	29 30 Bob BOB	46 Bob		
	3.4	26.0 6.2	1.0		
					Sternoptychidae, Gonostomatidae, & Photichthyidae (ex- cepting Cyclothone spp.), specimens/10,000 m ³
	Collection	25 26	43 44 45 52	63	
		4.6 1.8	1.5 2.0 1.5 1.4	5.5	

Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71
Collection 24	36	53	56
	38	54	57
	39		67
			68
Slope Water			
	1.3	2.1	.4
	.5	<.1	.9
	.8		.3
			.4
Collection 20	35	40	58
AI	27	Dave	Em
	28	Bob	Em
	32	Bob	Em
	33	Bob	Em
	34	Bob	Em
	35	Bob	Em
	36	Bob	Em
	37	Bob	Em
	38	Bob	Em
	39	Bob	Em
	40	Bob	Em
	41	Bob	Em
	42	Bob	Em
	43	Bob	Em
	44	Bob	Em
	45	Bob	Em
	46	Bob	Em
	47	Bob	Em
	48	Bob	Em
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	255	Bob	Em
	256	Bob	Em
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	266	Bob	Em
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	268	Bob	Em
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	271	Bob	Em
	272	Bob	Em
	273	Bob	Em
	274	Bob	Em
	275	Bob	Em
	276	Bob	Em
	277	Bob	Em
	278	Bob	Em
	279	Bob	Em
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	281	Bob	Em
	282	Bob	Em
	283	Bob	Em
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	421	Bob	Em
	422	Bob	Em
	423	Bob	Em
	424	Bob	Em
	425	Bob	Em
	426	Bob	Em
	427	Bob	Em
	428	Bob	Em
	429	Bob	Em
	430	Bob	Em
	431	Bob	

CYCLOTHONE SPP.

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	<0.1	0.2	0.1	0.2	0.3	0.1	0.1	<0.1	
		250	1.3	1.8	4.7	6.4	5.3	1.6	2.2	3.0	
		500	9.5	10.8	11.9	-	-	14.5	8.9	12.6	
		750	-	7.5	-	-	-	12.3	8.4	10.0	
		1000	-	-	-	-	-	-	-	-	
	Net 0		6.3	9.6	11.2	8.1	5.2	6.3	6.5	2.6	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	Depth	0	<0.1	0.2	0	<0.1	0.1	0.1	0.4	<0.1	0.2
		250	2.1	6.0		3.1	0.7	0.1	0.2	0.5	0.4
		500	0.6	9.7	18.0	7.3	15.4	7.1	5.0	7.7	5.4
	Net 0		6.9	8.6	18.3	21.1	2.7	4.4	5.7	8.5	9.6
Ring Flank	Collection	22	33				64				
		Al	Bob				Frank				
	Depth	0	<0.1	-			<0.1				
		250	2.9	0			0.9				
		500	-	16.3			4.8				
	Net 0		2.5	21.7			3.9				
Ring Fringe	Collection	23	29								
		Al-Art	Bob								
	Depth	0	<0.1	0							
		250	0.1	1.7							
		500	6.7	8.6							
	Net 0		3.0	5.1							
N. Sargasso Sea	Collection	25	26				63				
		0	0.1	0.1			<0.1				
	Depth	250	0.8	0.1			0.8				
		500	1.3	2.1			9.1				
		750	3.9	5.4			6.1				
	Net 0		2.9	10.0			5.5				

Cyclothone spp.,
ml/10,000 m³

Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71
Collection 24	36 38 39	53 54	56 57 67 68
Slope Water	7.4 8.4 6.9	2.0 5.5	4.0 6.7 5.7 4.5
Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank Frank
Ring Center	4.9 7.7 13.0 11.8 (21.1)	.6 2.1 2.8 3.0 1.9 3.6	4.5 4.3 5.4 5.5 7.0 7.7
Collection 22 Al	33 Bob	51 Bob	64 Frank
Ring Flank	15.4 2.2	2.1	3.9
Collection 23 Al-Art	29 30 Bob Bob	46 Bob	
Ring Fringe	2.7 .9 3.6	2.0	
Collection	25 26	43 44 45 52	63
Sargasso Sea	2.2 6.0	2.6 1.0 2.2 .8	4.8

Cyclothone spp.,
ml/10,000 m³

SPECIES

NUMBER OF SPECIMENS BY DEPTH INTERVAL WITHIN STATIONS, KNORR CRUISES

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71					
Slope Water	Collection	<u>24</u>	36	<u>38</u>	39		56	<u>57</u>	67	<u>68</u>		
	0	<u>31</u>	0	<u>15</u>	1		257	<u>8</u>	9	<u>35</u>		
	250	<u>26</u>	28	<u>5</u>	37		38	<u>10</u>	21	<u>19</u>		
	500	<u>31</u>	0	<u>3</u>	-		-	<u>27</u>	13	<u>18</u>		
	750	-	0	-	-		-	<u>13</u>	2	<u>6</u>		
	1000	-	-	-	-		-	-	-	-		
	Net 0	<u>25</u>	4	<u>7</u>	25		156	<u>70</u>	35	<u>97</u>		
Ring Center	Collection	<u>20</u>	35	27	<u>28</u>	<u>32</u>	<u>58</u>	<u>59</u>	61	<u>62</u>	65	<u>66</u>
	0	<u>Al</u>	<u>Al</u>	Bob	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	Frank	<u>Frank</u>	Frank	<u>Fran</u>
	250	<u>0</u>	0	0	<u>195</u>	-	<u>0</u>	0	1	<u>0</u>	2	<u>0</u>
	500	<u>0</u>	0	35	<u>1</u>	<u>5</u>	<u>0</u>	0	40	<u>24</u>	20	<u>31</u>
	750	<u>2</u>	1	8	<u>0</u>	<u>2</u>	<u>0</u>	0	34	<u>47</u>	58	<u>108</u>
	1000	<u>1</u>	0	0	<u>1</u>	<u>0</u>	<u>6</u>	2	17	-	12	<u>11</u>
	Net 0	<u>5</u>	0	6	<u>24</u>	<u>91</u>	<u>2</u>	4	53	<u>19</u>	21	<u>30</u>
Ring Flank	Collection	<u>22</u>	<u>33</u>				<u>64</u>					
	0	<u>Al</u>	<u>Bob</u>				<u>Frank</u>					
	250	<u>0</u>	-				<u>0</u>					
	500	<u>0</u>	<u>1</u>				<u>0</u>					
	750	-	<u>4</u>				<u>0</u>					
	1000	-	<u>0</u>				<u>3</u>					
	Net 0	<u>4</u>	<u>16</u>				<u>1</u>					
Ring Fringe	Collection	<u>23</u>	<u>29</u>									
	0	<u>Al-Art</u>	<u>Bob</u>									
	250	<u>0</u>	<u>0</u>									
	500	<u>0</u>	<u>0</u>									
	750	<u>0</u>	<u>0</u>									
	1000	-	<u>0</u>									
	Net 0	<u>0</u>	<u>0</u>									
N. Sargasso Sea	Collection		<u>25</u>	26			<u>63</u>					
	0		<u>0</u>	0			<u>0</u>					
	250		<u>0</u>	0			<u>0</u>					
	500		<u>0</u>	0			<u>0</u>					
	750		<u>0</u>	0			<u>0</u>					
	1000		<u>0</u>	0			<u>0</u>					
	Net 0		<u>0</u>	0			<u>0</u>					

Benthosema glaciale,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0	5	0	8	0	1	5	0	0			
	250		0	5	0	0	0	0	1	0			
	500		0	0	0	-	-	0	0	0			
	750		-	1	-	-	-	0	0	0			
	1000												
	Net 0		6	1	0	1	0	0	0	0			
	Collection	20	35	27	28	32	58	59	61	62	65	66	
Ring Center	Depth	0	Al	Al	Bob	Bob	Em	Em	Frank	Frank	Frank	Fra	
	250		1	0	0	6	-	0	0	0	0	2	
	500		0	1	4	0	0	0	0	7	0	0	
	750		0	0	0	0	0	1	0	0	1	0	
	1000		0	0	0	0	0	0	0	-	0	0	
	Net 0		0	0	0	3	0	0	0	0	1	2	
	Collection	22	33										
Ring Flank	Depth	0	Al	Bob									
	250		6	-									
	500		0	0									
	750		-	0									
	1000		-	0									
	Net 0		0	1									
	Collection	23	29										
Ring Fringe	Depth	0	Al-Art	Bob									
	250		1	7									
	500		0	0									
	750		0	1									
	1000		-	0									
	Net 0		1	1									
	N. Sargasso Sea	Collection	25	26									
Depth		0	0										
250			0	0									
500			0	0									
750			0	0									
1000			0	0									
Net 0			0	0									

Benthosema suborbitale,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71								
Slope Water	Depth	Collection	24	36	38	39	56	57	67	68				
		0	<u>2</u>	0	<u>0</u>	0	1	<u>11</u>	0	1				
		250	<u>0</u>	2	<u>0</u>	0	0	<u>0</u>	2	<u>0</u>				
		500	<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>				
		750	-	0	-	-	-	<u>0</u>	0	<u>0</u>				
		1000	-	0	-	-	-	<u>0</u>	0	<u>0</u>				
		Net 0	<u>2</u>	0	<u>1</u>	1	2	<u>0</u>	0	<u>0</u>				
Ring Center	Depth	Collection	20	35	27	28	32	58	59	61	62	65	66	
		0	<u>AI</u>	<u>AI</u>	<u>Bob</u>	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>	<u>Fra</u>	
		250	<u>4</u>	0	0	<u>2</u>	-	<u>3</u>	1	0	<u>14</u>	0	2	
		500	<u>0</u>	0	1	<u>0</u>	0	<u>0</u>	12	5	<u>0</u>	10	<u>0</u>	
		750	<u>0</u>	7	0	<u>0</u>	0	<u>0</u>	5	0	<u>0</u>	5	<u>0</u>	
		1000	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>	0	0	-	0	<u>0</u>	
		Net 0	<u>4</u>	1	0	<u>1</u>	0	<u>0</u>	3	0	<u>3</u>	2	<u>0</u>	
Ring Flank	Depth	Collection	22	33										
		0	<u>AI</u>	<u>Bob</u>										
		250	<u>42</u>	-										
		500	<u>1</u>	<u>0</u>										
		750	-	<u>0</u>										
		1000	-	<u>0</u>										
		Net 0	<u>12</u>	<u>1</u>										
Ring Fringe	Depth	Collection	23	29										
		0	<u>AI-Art</u>	<u>Bob</u>										
		250	<u>40</u>	<u>10</u>										
		500	<u>0</u>	<u>0</u>										
		750	<u>1</u>	<u>0</u>										
		1000	-	<u>0</u>										
		Net 0	<u>0</u>	<u>2</u>										
N. Sargasso Sea	Depth	Collection	25	26	63									
		0	<u>0</u>	0	<u>5</u>									
		250	<u>0</u>	0	<u>0</u>									
		500	<u>0</u>	7	<u>0</u>									
		750	<u>0</u>	1	<u>3</u>									
		1000	<u>0</u>	2	<u>3</u>									
		Net 0	<u>0</u>											

Bolinichthys indicus,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
Slope Water	Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>			
	0	<u>24</u>	0	<u>2</u>	0	5	<u>3</u>	2	<u>26</u>			
	250	<u>0</u>	0	<u>0</u>	0	9	<u>0</u>	139	<u>7</u>			
	500	<u>0</u>	0	<u>0</u>	-	-	<u>17</u>	0	<u>21</u>			
	750	-	0	-	-	-	<u>0</u>	0	<u>0</u>			
	1000	-	0	-	-	-	<u>0</u>	0	<u>0</u>			
	Net 0	<u>3</u>	0	<u>0</u>	0	5	<u>0</u>	6	<u>35</u>			
Ring Center	Collection	<u>20</u>	35	<u>27</u>	<u>28</u>	<u>32</u>	<u>58</u>	<u>59</u>	61	<u>62</u>	65	<u>66</u>
	0	<u>Al</u>	<u>Al</u>	<u>Bob</u>	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	Frank	<u>Frank</u>	Frank	<u>Fra</u>
	250	<u>1</u>	0	0	<u>0</u>	-	<u>0</u>	0	1	<u>12</u>	0	<u>42</u>
	500	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	53	<u>21</u>	23	<u>3</u>
	750	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	104	<u>123</u>	523	<u>111</u>
	1000	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	15	-	1	<u>0</u>
	Net 0	<u>14</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	7	<u>3</u>	17	<u>18</u>
Ring Flank	Collection	<u>22</u>	<u>33</u>									
	0	<u>Al</u>	<u>Bob</u>									
	250	<u>4</u>	-									
	500	<u>0</u>	<u>0</u>									
	750	-	<u>0</u>									
	1000	-	<u>0</u>									
	Net 0	<u>8</u>	<u>0</u>									
Ring Fringe	Collection	<u>23</u>	<u>29</u>									
	0	<u>Al-Art</u>	<u>Bob</u>									
	250	<u>9</u>	<u>0</u>									
	500	<u>0</u>	<u>0</u>									
	750	<u>0</u>	<u>0</u>									
	1000	<u>0</u>	<u>0</u>									
	Net 0	<u>1</u>	<u>0</u>									
N. Sargasso Sea	Collection		<u>25</u>	26	<u>63</u>							
	0		<u>0</u>	0	<u>11</u>							
	250		<u>0</u>	0	<u>0</u>							
	500		<u>0</u>	0	<u>4</u>							
	750		<u>0</u>	0	<u>71</u>							
	1000		<u>0</u>	0	<u>1</u>							
	Net 0		<u>0</u>	0	<u>1</u>							

Ceratoscopelus maderensis,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
Slope Water	Depth	Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>			
		0	<u>1</u>	0	<u>6</u>	0	0	<u>3</u>	0	<u>2</u>			
		250	<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>			
		500	<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	1	<u>0</u>			
		750	-	1	-	-	-	<u>0</u>	2	<u>0</u>			
		1000	<u>1</u>	2	<u>0</u>	1	1	<u>2</u>	0	<u>2</u>			
Ring Center	Depth	Collection	<u>20</u>	35	27	<u>28</u>	<u>32</u>	<u>58</u>	59	61	<u>62</u>	65	<u>66</u>
		0	<u>Al</u>	Al	Bob	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	Frank	<u>Frank</u>	Frank	<u>Fra</u>
		250	<u>3</u>	0	0	<u>1</u>	-	<u>2</u>	0	0	<u>4</u>	1	<u>8</u>
		500	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
		750	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>4</u>	2	0	<u>2</u>	0	<u>0</u>
		1000	<u>0</u>	0	1	<u>0</u>	<u>0</u>	<u>8</u>	7	6	-	2	<u>0</u>
Ring Flank	Depth	Collection	<u>22</u>	33									
		0	<u>Al</u>	<u>Bob</u>									
		250	<u>17</u>	-									
		500	<u>1</u>	<u>0</u>									
		750	-	<u>0</u>									
		1000	-	<u>0</u>									
Ring Fringe	Depth	Collection	<u>23</u>	<u>29</u>									
		0	<u>Al-Art</u>	<u>Bob</u>									
		250	<u>82</u>	<u>16</u>									
		500	<u>0</u>	<u>0</u>									
		750	<u>3</u>	<u>0</u>									
		1000	-	<u>11</u>									
N. Sargasso Sea	Depth	Collection	<u>25</u>	26									
		0	<u>0</u>	0									
		250	<u>0</u>	0									
		500	<u>0</u>	0									
		750	<u>0</u>	1									
		1000	<u>0</u>	0									

Ceratoscopelus warmingii,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
Slope Water	Depth	Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>			
		0	<u>1</u>	0	<u>6</u>	0	0	<u>0</u>	1	<u>0</u>			
		250	<u>0</u>	5	<u>0</u>	10	0	<u>0</u>	0	<u>0</u>			
		500	<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>			
		750	<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>			
		1000	<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>			
		Net 0	<u>5</u>	0	<u>1</u>	0	0	<u>0</u>	0	<u>0</u>			
Ring Center	Depth	Collection	<u>20</u>	35	27	<u>28</u>	32	<u>58</u>	59	61	<u>62</u>	65	<u>66</u>
		0	<u>Al</u>	Al	Bob	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	Em	Frank	<u>Frank</u>	Frank	<u>Frank</u>
		250	<u>0</u>	0	0	<u>1</u>	-	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
		500	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
		750	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
		1000	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
		Net 0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
Ring Flank	Depth	Collection	<u>22</u>	33									
		0	<u>Al</u>	<u>Bob</u>									
		250	<u>0</u>	-									
		500	<u>0</u>	0									
		750	<u>0</u>	0									
		1000	<u>0</u>	0									
		Net 0	<u>0</u>	0									
Ring Fringe	Depth	Collection	<u>23</u>	29									
		0	<u>Al-Art</u>	<u>Bob</u>									
		250	<u>1</u>	<u>2</u>									
		500	<u>0</u>	0									
		750	<u>0</u>	0									
		1000	<u>0</u>	0									
		Net 0	<u>0</u>	0									
N. Sargasso Sea	Depth	Collection	<u>25</u>	26									
		0	<u>0</u>	0									
		250	<u>0</u>	0									
		500	<u>0</u>	0									
		750	<u>0</u>	0									
		1000	<u>0</u>	0									
		Net 0	<u>0</u>	0									

Diaphus dumerilii,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	0	0	0	0	0	0	0	0	
	250	0	0	0	0	0	0	0	0	0	
	500	0	0	0	-	-	-	0	0	0	
	750	-	0	-	-	-	-	0	0	0	
	1000	-	0	-	-	-	-	0	0	0	
	Net 0	0	0	0	0	0	0	0	0	0	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	0	0	0	0	-	0	0	0	1	0
	250	0	0	1	0	0	0	1	5	0	2
	500	0	0	0	0	0	0	0	0	0	0
	750	0	0	0	0	0	0	0	0	-	0
	1000	0	0	0	0	0	0	0	0	0	0
Ring Flank	Net 0	0	0	0	0	0	0	0	0	0	0
	Collection	22	33				64				
		Al	Bob				Frank				
	0	0	-				1				
	250	0	0				0				
	500	0	0				0				
Ring Fringe	750	-	0				0				
	1000	-	0				0				
	Net 0	1	1				0				
	Collection	23	29								
		Al-Art	Bob								
	0	2	1								
N. Sargasso Sea	250	0	0								
	500	0	0								
	750	-	0								
	1000	-	0								
	Net 0	2	2								
	Collection		25	26			63				
	0		0	0			0				
	250		0	0			0				
	500		0	1			0				
	750		0	0			0				
	1000		0	0			0				
	Net 0		0	0			0				

Diaphus effulgens,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	1	0	0	0	0	1	0	0	
	250		0	0	0	0	0	0	0	0	
	500		0	0	0	-	-	0	0	0	
	750		-	0	-	-	-	0	0	0	
	1000										
	Net 0	1	0	0	2		0	0	0	0	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	1	0	0	1	-	4	2	0	1	0
	250		0	0	0	0	0	0	0	0	0
	500		0	0	0	0	0	0	0	0	0
	750		0	0	0	0	0	0	0	0	0
	Net 0	0	0	0	0	0	0	0	1	0	0
Ring Flank	Collection	22	33				64				
		Al	Bob				Frank				
	0		-				2				
	250	5					0				
	500	0	0				0				
	750	-	0				0				
	Net 0	2	0				0				
Ring Fringe	Collection	23	29								
		Al-Art	Bob								
	0	5	5								
	250	0	0								
	500	0	0								
	750	-	0								
	Net 0	0	0								
N. Sargasso Sea	Collection		25	26			63				
	0		0	0			0				
	250		0	1			0				
	500		0	1			0				
	750		0	0			0				
	1000		1	0			0				
	Net 0		1	0			0				

Diaphus mollis.
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
Slope Water	Collection	24	36	38	39	56	57	67	68			
	0	0										
	250	0	1	5	0	0	0	0	0			
	500	0	2	0	5	0	0	1	0			
	750	0	0	0	-	-	0	0	0			
	1000	-	0	-	-	-	0	0	0			
	Net 0	0	0	2	0	0	0	1	0			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
	0	Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	250	3	0	0	0	-	0	0	0	0	0	0
	500	0	1	1	0	1	0	0	2	0	0	2
	750	0	0	0	0	0	0	0	0	0	0	0
	1000	0	0	0	0	0	0	0	0	-	0	0
	Net 0	0	2	0	0	0	0	0	0	0	1	0
Ring Flank	Collection	22	33									
	0	Al	Bob									
	250	8	-									
	500	3	0									
	750	-	0									
	1000	-	0									
	Net 0	1	7									
Ring Fringe	Collection	23	29									
	0	Al-Art	Bob									
	250	3	0									
	500	1	0									
	750	0	0									
	1000	-	0									
	Net 0	0	0									
N. Sargasso Sea	Collection	25	26									
	0											
	250	2	0									
	500	0	0									
	750	0	0									
	1000	0	0									
	Net 0	0	0									
<u>Diaphus rafinesquii</u> , number												

Diaphus rafinesquii,
number

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	Oct-Nov 77 KNORR 71
Slope Water	Collection <u>24</u>	36	56
0	<u>0</u>	0	1
250	<u>0</u>	3	1
500	<u>4</u>	0	-
750	-	0	-
1000	-	-	-
Net 0	<u>2</u>	0	0
Ring Center	Collection <u>20</u>	35	58
0	<u>Al</u>	Al	Em
250	<u>0</u>	0	0
500	<u>0</u>	0	1
750	<u>0</u>	3	0
1000	<u>1</u>	0	1
Net 0	<u>0</u>	1	0
Ring Flank	Collection <u>22</u>	33	64
0	<u>Al</u>	Bob	Frank
250	<u>4</u>	-	1
500	<u>0</u>	0	0
750	-	0	0
1000	-	0	0
Net 0	0	0	1
Ring Fringe	Collection <u>23</u>	29	
0	<u>Al-Art</u>	Bob	
250	<u>6</u>	3	
500	<u>0</u>	0	
750	<u>1</u>	0	
1000	-	0	
Net 0	<u>0</u>	2	
N. Sargasso Sea	Collection <u>25</u>	26	63
0	<u>2</u>	1	0
250	<u>0</u>	0	0
500	<u>0</u>	0	0
750	<u>0</u>	0	0
1000	<u>0</u>	0	0
Net 0	0	1	0

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
		Collection	24	36	38	39	56	57	67	68		
Slope Water	Depth	0	0	0	2	0	15	3	2	1		
	250	0	0	6	0	1	0	0	0	0		
	500	1	1	5	0	-	-	0	0	0		
	750	-	-	0	-	-	-	0	0	0		
	1000	0	0	0	0	0	0	0	1	1		
	Net 0	0	0	0	0	0	0	0	1	1		
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0	2	0	0	0	-	0	0	0	0	0	0
	250	0	1	0	0	0	2	0	1	0	0	0
	500	0	1	0	0	0	0	11	6	9	3	16
	750	24	0	0	0	1	0	0	0	-	0	0
Ring Flank	1000	25	0	0	2	0	0	4	7	1	1	8
	Net 0	25	0	0	2	0	0	4	7	1	1	8
	Collection	22	33				64					
		Al	Bob				Frank					
	0	2	-				0					
	250	1	0				0					
Ring Fringe	Depth	500	0				1					
	750	-	0				7					
	1000	13	0				0					
	Net 0	13	0				0					
	Collection	23	29									
		Al-Art	Bob									
N. Sargasso Sea	0	0	0									
	250	0	0									
	500	0	0									
	750	-	4									
	1000	0	0									
	Net 0	0	0									
		Collection	25	26			63					
		0	0	0			0					
		250	0	0			0					
		500	0	0			1					
		750	0	0			2					
		1000	0	0			2					
		Net 0	0	0			2					

Hygophum benoiti,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	0	0	22	0	4	0	0	0	
	250	0	0	15	0	49	0	0	0	0	
	500	0	0	0	0	-	-	0	0	0	
	750	-	0	0	-	-	-	0	0	0	
	1000	-	0	0	-	-	-	0	0	0	
	Net 0	0	0	9	9	7	4	0	0	0	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	0	0	0	46	-	0	0	0	0	0
	250	0	2	3	0	0	0	0	0	0	0
	500	0	7	0	0	0	0	0	0	0	2
	750	0	0	0	0	0	0	0	0	-	0
Ring Flank	1000	0	0	0	0	0	0	0	0	-	0
	Net 0	0	0	2	39	26	0	2	0	3	0
	Collection	22	33				64				
		Al	Bob				Frank				
	0	0	-				0				
	250	0	0				0				
Ring Fringe	500	0	0				0				
	750	-	0				0				
	1000	-	0				0				
	Net 0	0	16				0				
	Collection	23	29								
		Al-Art	Bob								
N. Sargasso Sea	0	1	6								
	250	0	0								
	500	0	42								
	750	-	0								
	1000	0	4								
	Net 0	0	4								
	Collection		25	26			63				
	0		11	0			0				
	250		1	0			0				
	500		0	8			0				
	750		9	2			0				
	1000		3	6			0				

Hygophum hygomii,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0									
			6	0	7	0	2	0	0	0	
	250		0	5	1	1	3	1	0	1	
	500		0	9	0	-	-	0	2	0	
	750		-	0	-	-	-	0	0	0	
	1000		-	0	-	-	-	0	0	0	
		Net 0	3	0	1	0	2	0	0	0	
Ring Center	Depth	Collection	20	35	27	28	32	58	59	61	62
			Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank
	0										
			0	0	0	44	-	0	0	0	0
	250		0	0	4	0	0	0	0	0	1
	500		0	0	0	0	0	0	1	2	0
Ring Flank	Depth	Collection	22	33				64			
			Al	Bob				Frank			
	0		0	-				1			
	250		0	0				0			
	500		0	0				0			
	750		-	0				0			
Ring Fringe	Depth	Collection	23	29							
			Al-Art	Bob							
	0		1	5							
	250		0	0							
	500		0	0							
	750		-	0							
N. Sargasso Sea	Depth	Collection	25	26			63				
	0		1	0			0				
	250		0	0			0				
	500		0	0			0				
	750		0	0			0				
		Net 0	0	1			0				

Lampanyctus alatus,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71						
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0	<u>1</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>1</u>			
	250		<u>0</u>	0	<u>0</u>	0	3	<u>0</u>	0	<u>1</u>			
	500		<u>0</u>	1	<u>0</u>	-	-	<u>0</u>	9	<u>0</u>			
	750		-	0	-	-	-	<u>0</u>	0	<u>0</u>			
	1000		-	-	-	-	-	<u>0</u>	0	<u>0</u>			
	Net 0		<u>0</u>	0	<u>0</u>	0	5	<u>9</u>	1	<u>0</u>			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66	
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank	
	0	<u>0</u>	0	<u>0</u>	0	-	0	<u>0</u>	0	0	<u>0</u>	1	
	250	<u>0</u>	0	<u>0</u>	0	0	0	<u>0</u>	0	7	<u>0</u>	0	
	500	<u>0</u>	0	<u>0</u>	0	0	1	<u>0</u>	6	2	<u>1</u>	0	
	750	<u>1</u>	0	<u>0</u>	0	0	3	<u>5</u>	1	-	<u>9</u>	0	
Ring Flank	1000		-	-	-	-	-	-	-	-	-	-	
	Net 0		<u>0</u>	0	<u>0</u>	0	2	<u>4</u>	1	9	<u>4</u>	5	
	Collection	22	33					64					
		Al	Bob					Frank					
	0	<u>0</u>	-					<u>0</u>					
	250	<u>0</u>	<u>2</u>					<u>0</u>					
Ring Fringe	500	<u>0</u>	<u>0</u>					<u>0</u>					
	750	<u>1</u>	<u>0</u>					<u>2</u>					
	1000		-					<u>0</u>					
	Net 0		<u>1</u>					<u>0</u>					
	Collection	23	29										
		Al-Art	Bob										
N. Sargasso Sea	0	<u>0</u>	<u>1</u>										
	250	<u>0</u>	<u>0</u>										
	500	<u>0</u>	<u>0</u>										
	750	<u>0</u>	<u>0</u>										
	1000		-										
	Net 0		<u>2</u>										
N. Sargasso Sea	Collection	25	26					63					
	0	<u>7</u>	0					<u>0</u>					
	250	<u>1</u>	0					<u>0</u>					
	500	<u>0</u>	0					<u>0</u>					
	750	<u>0</u>	15					<u>2</u>					
	1000		-					<u>0</u>					
N. Sargasso Sea	Net 0		<u>1</u>	4									
	Collection	25	26					63					
N. Sargasso Sea	0	<u>7</u>	0					<u>0</u>					
	250	<u>1</u>	0					<u>0</u>					
	500	<u>0</u>	0					<u>0</u>					
	750	<u>0</u>	15					<u>2</u>					
	1000		-					<u>0</u>					
	Net 0		<u>1</u>	4									

Lampanyctus crocodilus,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0									
			<u>6</u>	0	<u>1</u>	0	0	<u>0</u>	0	<u>0</u>	
	250		<u>0</u>	0	<u>1</u>	0	0	<u>1</u>	0	<u>1</u>	
	500		<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	1	<u>7</u>	
	750		-	0	-	-	-	<u>0</u>	0	<u>0</u>	
	1000		-	0	-	-	-	<u>0</u>	0	<u>0</u>	
Net 0		0		1	<u>2</u>	0	2	<u>2</u>	1	<u>0</u>	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	<u>0</u>	0	0	<u>0</u>	-	<u>0</u>	0	0	<u>0</u>	0
	250	<u>1</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>4</u>	0
	500	<u>0</u>	3	0	<u>1</u>	<u>1</u>	<u>1</u>	0	0	<u>4</u>	0
	750	<u>0</u>	2	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	-	0
1000		<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0
Net 0		0	0	0	<u>0</u>	<u>0</u>	0	1	0	<u>0</u>	0
Ring Flank	Collection	22	33				64				
		Al	Bob				Frank				
	0	<u>0</u>	-				<u>4</u>				
	250	<u>0</u>	<u>0</u>				<u>0</u>				
	500	<u>0</u>	<u>0</u>				<u>0</u>				
	750	<u>0</u>	<u>0</u>				<u>1</u>				
1000		<u>0</u>	<u>0</u>				<u>3</u>				
Net 0		0	0								
Ring Fringe	Collection	23	29								
		Al-Art	Bob								
	0	<u>16</u>	<u>3</u>								
	250	<u>1</u>	<u>1</u>								
	500	<u>0</u>	<u>0</u>								
	750	<u>0</u>	<u>0</u>								
1000		<u>0</u>	<u>0</u>								
Net 0		0	6								
N. Sargasso Sea	Collection		25	26			63				
	0		<u>1</u>	0			<u>1</u>				
	250		<u>0</u>	0			<u>0</u>				
	500		<u>0</u>	3			<u>0</u>				
	750		<u>0</u>	1			<u>4</u>				
	1000		<u>0</u>	0			<u>6</u>				
Net 0			0	0							

Lampanyctus cuprarius,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0									
			3	0	0	0	0	0	0	1	
	250		0	0	0	0	1	0	0	0	
	500		0	1	0	-	-	0	1	0	
	750		-	0	-	-	-	0	0	0	
	1000		-								
	Net 0		0	0	0	1	0	0	0	0	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0		0	0	0	-	0	0	0	2	0
	250		0	0	0	0	2	0	0	3	0
	500		0	0	0	0	1	2	7	1	6
	750		0	0	0	0	6	0	0	-	0
	Net 0		2	0	0	0	1	4	0	11	0
Ring Flank	Collection	22	33				64				
		Al	Bob				Frank				
	0		1	-			3				
	250		0	0			0				
	500		-	0			0				
	750		-	0			1				
	Net 0		2	1			5				
Ring Fringe	Collection	23	29								
		Al-Art	Bob								
	0		10	1							
	250		0	0							
	500		0	0							
	750		-	0							
	Net 0		1	0							
N. Sargasso Sea	Collection		25	26			63				
	0		0	0			1				
	250		0	0			0				
	500		0	0			0				
	750		0	1			1				
	1000		0	0			1				
	Net 0		0	0			1				

Lampanyctus photonotus,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71						
		Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>			
Slope Water	Depth	0	<u>0</u>	0	<u>1</u>	0	3	<u>1</u>	0	<u>4</u>			
	250		<u>0</u>	0	<u>0</u>	0	1	<u>0</u>	0	<u>0</u>			
	500		<u>0</u>	1	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>			
	750		<u>0</u>	0	-	-	-	<u>0</u>	0	<u>0</u>			
	1000		<u>0</u>										
	Net 0		<u>0</u>	0	<u>0</u>	0	1	<u>0</u>	0	<u>0</u>			
Ring Center	Collection	<u>20</u>	<u>Al</u>	35	27	<u>28</u>	<u>32</u>	<u>58</u>	59	61	<u>62</u>	65	<u>66</u>
				Al	Bob	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	Em	Frank	<u>Frank</u>	Frank	<u>Frank</u>
	0		<u>2</u>	0	0	<u>0</u>	-	<u>0</u>	0	0	<u>25</u>	0	<u>11</u>
	250		<u>1</u>	0	1	<u>0</u>	<u>0</u>	<u>0</u>	0	6	<u>1</u>	4	<u>0</u>
	500		<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>15</u>	17	1	<u>0</u>	28	<u>0</u>
	750		<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>15</u>	<u>13</u>	0	-	0	<u>0</u>
	Net 0		<u>7</u>	2	0	<u>0</u>	<u>1</u>	<u>1</u>	<u>9</u>	4	<u>25</u>	7	<u>4</u>
Ring Flank	Collection	<u>22</u>	<u>Al</u>	<u>33</u>									
				<u>Bob</u>									
	0		<u>16</u>	-									
	250		<u>0</u>	<u>1</u>									
	500		<u>0</u>	<u>0</u>									
	750		<u>0</u>	<u>0</u>									
	Net 0		<u>4</u>	<u>2</u>									
Ring Fringe	Collection	<u>23</u>	<u>Al-Art</u>	<u>29</u>									
				<u>Bob</u>									
	0		<u>14</u>	<u>2</u>									
	250		<u>0</u>	<u>0</u>									
	500		<u>1</u>	<u>0</u>									
	750		<u>0</u>	<u>1</u>									
	Net 0		<u>1</u>	<u>2</u>									
N. Sargasso Sea	Collection			<u>25</u>	26								
				<u>2</u>	0								
	250			<u>0</u>	0								
	500			<u>0</u>	1								
	750			<u>3</u>	0								
	1000			<u>0</u>	0								
	Net 0			<u>0</u>	0								

Lampanyctus pusillus,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	0	0	0	0	0	0	0	0	
	250		0	0	0	0	0	0	0	0	
	500		0	0	0	-	-	0	0	0	
	750		-	0	-	-	-	0	0	0	
	1000										
	Net 0	0	0	0	0	0	0	0	0	0	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	1	0	0	0	-	0	0	0	0	0
	250	0	0	0	0	0	0	0	0	0	1
	500	0	0	0	0	0	0	1	1	0	0
	750	0	0	0	0	0	0	0	0	-	0
Ring Flank	1000	0	0	0	0	0	0	0	0	0	0
	Net 0	0	0	0	0	0	1	2	0	0	0
	Collection	22	33				64				
		Al	Bob				Frank				
	0	4	-					0			
	250	0	0					0			
Ring Fringe	500	0	0					0			
	750	0	0					0			
	1000	0	0					0			
	Net 0	0	0					0			
	Collection	23	29								
		Al-Art	Bob								
N. Sargasso Sea	0	8	0								
	250	0	0								
	500	0	0								
	750	0	0								
	1000	0	0								
	Net 0	1	2								
	Collection		25	26			63				
	0		0	0			2				
	250		0	0			0				
	500		0	2			0				
	750		0	0			1				
	1000		0	0			0				

Lepidophanes gaussi,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
		Collection	24	36	38	39	56	57	67	68		
Slope Water	Depth	0	1	0	4	0	2	1	0	1		
	250	0	20	0	3		7	0	0	0		
	500	0	3	0	-		-	0	0	0		
	750	-	0	-	-		-	0	0	0		
	1000											
	Net 0	2	1	0	0		10	0	1	0		
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	Depth	0	4	0	0	2	0	0	0	7	0	5
	250	0	0	2	0	0	0	0	3	0	0	0
	500	0	0	0	0	0	0	0	8	0	15	0
	750	0	0	0	0	0	0	0	0	-	0	0
Ring Flank	Collection	22	33				64					
		Al	Bob				Frank					
	Depth	0	0				3					
	250	0	0				0					
	500	-	0				0					
	750	-	0				0					
Ring Fringe	Collection	23	29									
		Al-Art	Bob									
	Depth	0	1	8								
	250	0	0	0								
	500	0	0	0								
	750	0	0	0								
N. Sargasso Sea	Collection	25	26				63					
		0	0	0			1					
	Depth	250	0	0			0					
	500	0	0	0			0					
	750	0	0	0			0					
	1000	0	0	0			0					
Net 0		0	0	0			0					

Lepidophanes guentheri,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0											
			30	0	3	0	13	12	26	7			
	250		0	0	0	3	0	4	0	0			
	500		0	0	0	-	-	2	0	0			
	750		0	0	-	-	-	0	0	0			
	1000		-	0	-	-	-	0	0	0			
		Net 0	24	0	0	2	0	5	6	27			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66	
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank	
	0												
		1	0	0	0	-	2	0	0	4	0	1	
	250		2	0	0	0	0	4	3	0	8	0	
	500		0	0	0	0	0	0	0	0	0	0	
Ring Flank	Depth	0											
			0	0	0	0	0	0	0	-	0	0	
	250		0	0	0	0	0	0	0	0	0	0	
	500		0	0	0	0	0	0	0	0	0	0	
	750		0	0	0	0	0	0	0	0	0	0	
	1000		0	0	0	0	0	0	0	0	0	0	
		Net 0	1	2	0	0	2	1	7	3	1	2	
Ring Fringe	Collection	22	33				64						
		Al	Bob				Frank						
	0												
		0	-				4						
	250		0				0						
	500		0				0						
N. Sargasso Sea	Depth	0											
			0										
	250		0										
	500		0										
	750		0										
	1000		0										
		Net 0	0	2			2						
N. Sargasso Sea	Collection	23	29										
		Al-Art	Bob										
	0												
		0	6										
	250		0										
	500		0										
N. Sargasso Sea	Depth	0											
			0										
	250		0										
	500		0										
	750		0										
	1000		0										
		Net 0	0	2			2						
N. Sargasso Sea	Collection	25	26				63						
	0												
		2	0				0						
	250		0				0						
	500		0				0						
N. Sargasso Sea	Depth	0											
			0										
	250		0										
	500		0										
	750		0										
	1000		0										
		Net 0	0	0			0						

Lobianchia dofleini,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0											
		250	<u>1</u>	0	<u>0</u>	0	<u>7</u>	<u>0</u>	0	<u>1</u>			
		500	<u>0</u>	8	<u>0</u>	4	0	<u>0</u>	1	<u>0</u>			
		750	<u>0</u>	0	<u>3</u>	-	-	<u>0</u>	0	<u>0</u>			
		1000	-	2	-	-	-	<u>0</u>	0	<u>0</u>			
	Net 0	<u>0</u>	2	<u>1</u>	2		2	<u>2</u>	0	<u>0</u>			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66	
		<u>Al</u>	<u>Al</u>	<u>Bob</u>	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>	
	0	<u>0</u>	0	0	<u>1</u>	-	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>	
	250	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>	
	500	<u>0</u>	2	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>	
	750	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	-	0	<u>0</u>	
	1000	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	-	0	<u>0</u>	
	Net 0	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	1	<u>0</u>	0	<u>0</u>	
Ring Flank	Collection	22	33										
		<u>Al</u>	<u>Bob</u>										
	0	<u>0</u>	-										
	250	<u>0</u>	<u>0</u>										
	500	<u>0</u>	<u>0</u>										
	750	-	<u>0</u>										
	1000	-	<u>0</u>										
	Net 0	<u>0</u>	<u>2</u>										
Ring Fringe	Collection	23	29										
		<u>Al-Art</u>	<u>Bob</u>										
	0	<u>0</u>	<u>1</u>										
	250	<u>0</u>	<u>0</u>										
	500	<u>0</u>	<u>0</u>										
	750	<u>0</u>	<u>0</u>										
	1000	-	<u>0</u>										
	Net 0	<u>0</u>	<u>0</u>										
N. Sargasso Sea	Collection		25	26			63						
	0		<u>0</u>	0			<u>0</u>						
	250		<u>0</u>	0			<u>0</u>						
	500		<u>0</u>	0			<u>0</u>						
	750		<u>0</u>	0			<u>0</u>						
	1000		<u>0</u>	0			<u>0</u>						
	Net 0		<u>0</u>	0			<u>0</u>						

Myctophum affine,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0											
			7	0	2	0	4	1	1	2			
	250		2	6	1	2	0	0	0	0			
	500		0	0	0	-	-	0	0	0			
	750		-	0	-	-	-	0	0	0			
	1000		-	0	-	-	-	0	0	0			
	Net 0		5	0	0	0	0	0	0	0			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66	
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank	
	0		0	0	2	-	0	0	1	0	0	10	
	250		1	2	5	0	1	1	12	4	11	0	
	500		0	1	1	0	0	0	0	0	0	0	
	750		0	0	0	0	0	0	0	-	0	0	
	Net 0		0	0	2	0	0	0	0	1	0	0	
Ring Flank	Collection	22	33				64						
		Al	Bob				Frank						
	0		6				3						
	250		0				0						
	500		-				0						
	750		-				0						
	Net 0		8				1						
Ring Fringe	Collection	23	29										
		Al-Art	Bob										
	0		15										
	250		0										
	500		0										
	750		-										
	Net 0		0										
N. Sargasso Sea	Collection		25	26			63						
			3	0			4						
	0		1	14			0						
	250		0	0			0						
	500		0	0			0						
	750		0	0			0						
	Net 0		0	2			0						

Notolychnus valdiviae,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71					
		Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>		
Slope Water	Depth	0	<u>0</u>	0	<u>4</u>	0	0	<u>5</u>	0	<u>1</u>		
	250		<u>0</u>	0	<u>0</u>	0	3	<u>0</u>	0	<u>0</u>		
	500		<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	1	<u>0</u>		
	750		<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	3	<u>0</u>		
	1000		<u>0</u>	3	-	-	-	<u>0</u>	3	<u>0</u>		
	Net 0		<u>0</u>	1	<u>0</u>	3	6	<u>1</u>	0	<u>1</u>		
	Collection	<u>20</u>	35	27	<u>28</u>	<u>32</u>	<u>58</u>	59	61	<u>62</u>	65	<u>66</u>
	Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank	
Ring Center	Depth	0	<u>0</u>	0	<u>2</u>	-	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
	250		<u>0</u>	0	<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
	500		<u>0</u>	0	<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
	750		<u>0</u>	0	<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
	1000		<u>0</u>	1	0	<u>0</u>	0	0	1	-	0	<u>0</u>
	Net 0		<u>0</u>	0	0	<u>0</u>	0	0	0	<u>1</u>	0	<u>0</u>
	Collection	<u>22</u>	<u>33</u>				<u>64</u>					
	Al	Bob				Frank						
Ring Flank	Depth	0	<u>0</u>	-			<u>1</u>					
	250		<u>0</u>	<u>0</u>			<u>0</u>					
	500		<u>0</u>	<u>0</u>			<u>0</u>					
	750		<u>0</u>	<u>0</u>			<u>0</u>					
	1000		<u>0</u>	<u>1</u>			<u>0</u>					
	Net 0		<u>0</u>	<u>1</u>			<u>0</u>					
	Collection	<u>23</u>	<u>29</u>									
	Al-Art	Bob										
Ring Fringe	Depth	0	<u>0</u>	<u>0</u>								
	250		<u>0</u>	<u>0</u>								
	500		<u>0</u>	<u>1</u>								
	750		<u>0</u>	<u>0</u>								
	1000		<u>0</u>	<u>2</u>								
	Net 0		<u>0</u>	<u>2</u>								
	Collection		<u>25</u>	26			<u>63</u>					
N. Sargasso Sea	Depth	0	<u>0</u>	0			<u>0</u>					
	250		<u>0</u>	0			<u>0</u>					
	500		<u>1</u>	0			<u>0</u>					
	750		<u>0</u>	17			<u>0</u>					
	1000		<u>0</u>	4			<u>0</u>					
	Net 0		<u>0</u>	4			<u>0</u>					

Notoscopelus resplendens,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71					
		Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>		
Slope Water	Depth	0	<u>0</u>	3	<u>1</u>	0	0	<u>0</u>	0	<u>0</u>		
	250		<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>1</u>		
	500		<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>		
	750		<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>		
	1000		<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>		
	Net 0		<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>		
Ring Center	Collection	<u>20</u>	35	27	<u>28</u>	<u>32</u>	<u>58</u>	59	61	<u>62</u>	65	<u>66</u>
		<u>Al</u>	Al	Bob	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	Em	Frank	<u>Frank</u>	Frank	<u>Frank</u>
	0		<u>0</u>	0	<u>0</u>	-	<u>0</u>	0	0	<u>1</u>	1	<u>2</u>
	250		<u>0</u>	0	<u>0</u>	1	<u>0</u>	1	3	<u>0</u>	5	<u>0</u>
	500		<u>4</u>	0	<u>0</u>	<u>1</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
	750		<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
Ring Flank	1000		<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	-	0	<u>0</u>
	Net 0		<u>2</u>	4	0	<u>0</u>	<u>0</u>	2	1	<u>1</u>	0	<u>0</u>
	Collection	<u>22</u>	<u>33</u>				<u>64</u>					
		<u>Al</u>	<u>Bob</u>				<u>Frank</u>					
	0		<u>0</u>				<u>0</u>					
	250		<u>0</u>				<u>0</u>					
Ring Fringe	Depth	500	<u>6</u>	<u>4</u>			<u>2</u>					
	750		<u>-</u>	<u>0</u>			<u>0</u>					
	1000		<u>-</u>	<u>0</u>			<u>0</u>					
	Net 0		<u>2</u>	<u>3</u>			<u>0</u>					
	Collection	<u>23</u>	<u>29</u>									
		<u>Al-Art</u>	<u>Bob</u>									
N. Sargasso Sea	0		<u>1</u>	<u>0</u>								
	250		<u>0</u>	<u>4</u>								
	Depth	500	<u>0</u>	<u>0</u>								
	750		<u>0</u>	<u>0</u>								
	1000		<u>-</u>	<u>0</u>								
	Net 0		<u>0</u>	<u>8</u>								
N. Sargasso Sea	Collection	<u>25</u>	26				<u>63</u>					
	0		<u>0</u>	0			<u>0</u>					
	250		<u>3</u>	0			<u>1</u>					
	Depth	500	<u>0</u>	0			<u>0</u>					
	750		<u>0</u>	0			<u>0</u>					
	1000		<u>0</u>	0			<u>0</u>					
Net 0		<u>1</u>	0			<u>4</u>						

Argyropelecus aculeatus,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68		
Slope Water	Depth	0	0	0	1	3	0	0	0	0		
	250	0	0	0	3	0	0	0	1	2		
	500	0	0	0	0	-	-	0	0	0		
	750	-	0	-	-	-	-	0	0	0		
	1000	0	0	0	0	0	2	5	1	1		
	Net 0	0	0	0	0	0	2	5	1	1		
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0	0	1	0	0	-	1	0	0	0	0	0
	250	5	14	0	0	0	7	0	1	4	5	10
	500	2	0	0	0	0	14	39	0	0	0	0
	750	0	0	0	0	0	0	0	0	-	0	0
Ring Flank	1000	8	12	0	2	0	9	16	2	1	0	0
	Net 0	8	12	0	2	0	9	16	2	1	0	0
	Collection	22	33				64					
		Al	Bob				Frank					
	0	0	0				1					
	250	71	0				38					
Ring Fringe	Depth	500	0				7					
	750	-	0				0					
	1000	4	0				3					
	Net 0	4	0				3					
	Collection	23	29									
		Al-Art	Bob									
N. Sargasso Sea	0	1	0									
	250	5	2									
	500	2	5									
	750	-	0									
	1000	2	19									
	Net 0	2	19									
N. Sargasso Sea	Collection	25	26				63					
	0	0	0				0					
	250	13	1				13					
	500	0	0				3					
	750	0	0				0					
	1000	0	0				0					
N. Sargasso Sea	Net 0	2	0				3					
	Collection	25	26				63					
N. Sargasso Sea	0	0	0				0					
	250	13	1				13					
N. Sargasso Sea	500	0	0				3					
	750	0	0				0					
N. Sargasso Sea	1000	0	0				0					
	Net 0	2	0				3					

Argyropelecus hemigymnus,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71					
Slope Water	Collection	24	36	38	39		56	57	67	68		
	0	0	1	0	0		0	1	0	0		
	250	0	0	0	0		0	1	0	0		
	500	5	3	9	-		-	5	2	9		
	750	-	5	-	-		-	2	1	0		
	1000	-	-	-	-		-	-	-	-		
Ring Center	Net 0	2	6	0	11		4	3	0	0		
	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0	0	0	0	0	-	0	0	0	0	0	0
	250	0	0	0	0	0	0	0	0	0	0	0
	500	0	1	2	3	1	1	0	0	0	0	1
Ring Flank	750	0	3	0	0	0	2	2	1	-	0	0
	1000	1	1	0	2	1	5	1	0	1	0	0
	Net 0	1	1	0	2	1	5	1	0	1	0	0
	Collection	22	33									
		Al	Bob									
	0	0	0									
Ring Fringe	250	0	0									
	500	0	1									
	750	-	0									
	1000	2	1									
	Net 0	2	1									
	Collection	23	29									
N. Sargasso Sea		Al-Art	Bob									
	0	0	0									
	250	0	0									
	500	0	0									
	750	-	2									
	1000	0	3									
N. Sargasso Sea	Net 0	0	3									
	Collection	25	26									
	0	0	0									
	250	0	0									
	500	0	0									
	750	2	3									
N. Sargasso Sea	1000	3	4									
	Net 0	3	4									
	Collection	63										
	0	0										
	250	0										
	500	1										
N. Sargasso Sea	750	4										
	1000	5										
	Net 0	5										
	Collection	63										
	0	0										
	250	0										
N. Sargasso Sea	500	1										
	750	4										
	1000	5										
	Net 0	5										
	Collection	63										
	0	0										
N. Sargasso Sea	250	0										
	500	1										
	750	4										
	1000	5										
	Net 0	5										
	Collection	63										

Sternoptyx diaphana,
number

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0									
			7	0	0	0	0	0	0	0	
	250		0	0	1	0	0	0	0	0	
	500		0	0	0	-	-	0	0	1	
	750		-	0	-	-	-	0	0	0	
	1000		-	0	-	-	-	0	0	0	
Net 0		1	2	1	8		2	3	0	0	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0										
		2	0	0	0	-	0	0	0	1	0
	250		0	1	0	1	0	0	0	1	1
	500		0	2	3	0	0	1	3	0	1
Ring Flank	Depth	0									
			12	0			1				
	250		0	0			1				
	500		0	0			0				
	750		-	0			0				
	1000		-	0			0				
Net 0		1	5				0				
Ring Fringe	Collection	22	33				64				
		Al	Bob				Frank				
	0										
		8	26								
	250		0								
	500		0								
N. Sargasso Sea	Depth	0									
			25	26			63				
	250		0	0			3				
	500		0	0			0				
	750		0	0			0				
	1000		0	1			0				
Net 0											

Gonostoma elongatum,
number

SPECIES

NUMBER OF SPECIMENS PER UNIT VOLUME OF WATER BY DEPTH INTERVAL,
WITHIN STATIONS, KNORR CRUISES

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71			
Slope Water	Collection	24	36	38	39	56	57	67	68
	0	7.9	0	3.8	0.4	73.4	3.5	4.5	10.6
	250	8.7	10.0	1.2	14.8	22.3	4.0	7.8	5.8
	500	13.5	0	0.7	-	-	12.3	4.8	5.8
	750	-	0	-	-	-	5.9	0.8	2.2
	1000	-	0	-	-	-	-	-	-
Ring Center	Net 0	15.6	1.5	2.1	2.3	26.0	29.2	13.5	22.6
	Collection	20	35	27	28	58	59	61	62
	0	AI	AI	Bob	Bob	Em	Em	Frank	Frank
	250	0	0	0	92.9	0	0	0.8	0
	500	0	0	15.0	0.4	0	0	22.2	7.5
	750	1.5	0.3	5.1	0	0	0	24.3	18.1
Ring Flank	1000	0.6	0	0	0.5	0	0	16.6	43.2
	Net 0	2.2	0	2.9	21.8	3.8	1.1	7.4	5.7
	Collection	22	33			64			
	0	AI	Bob			Frank			
	250	0	-			0			
	500	0	1.1			0			
Ring Fringe	750	-	5.0			0			
	1000	-	0			1.7			
	Net 0	0.9	13.3			0.4			
	Collection	23	29						
	0	AI-Art	Bob						
	250	0	0						
N. Sargasso Sea	500	0	0						
	750	0	0						
	1000	0	0						
	Net 0	0	0						
	Collection	25	26			63			
	0	0	0			0			

Benthosema glaciale,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71			
Slope Water	Collection	24	36	38	39	56	57	67	68
	0	1.3	0	2.1	0	0.3	2.2	0	0
	250	0	1.8	0	0.4	0	0	0.4	0
	500	0	0	0	-	-	0	0	0
	750	-	0.4	-	-	-	0	0	0
	1000	-	-	-	-	-	0	0	0
Ring Center	Net 0	3.8	0.4	0	0	0	0	0	0
	Collection	20	35	27	28	32	58	59	61
	0	Al	Al	Bob	Bob	Bob	Em	Em	Frank
	250	0.2	0	0	2.9	-	0	0	0
	500	0	0.3	1.5	0	0	0	0	3.9
	750	0	0	0	0	0	0	0.6	0
Ring Flank	1000	0	0	0	0	0	0	0	-
	Net 0	0	0	0	2.7	0	0	0	0
	Collection	22	33			64			
	0	Al	Bob			Frank			
	250	2.1	-			0			
	500	0	0			0			
Ring Fringe	750	-	0			0			
	1000	-	0			0			
	Net 0	0	0.8			0			
	Collection	23	29						
	0	Al-Art	Bob						
	250	0.3	3.7						
N. Sargasso Sea	500	0	0						
	750	0	0.8						
	1000	-	0						
	Net 0	0.5	0.8						
	Collection	25	26			63			
	0	0	0			0.4			

Benthosema suborbitale,
specimens/10,000 m²

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
Slope Water	Collection	24	36	38	39	56	57	67	68			
	0	0.5	0	0	0	0.3	4.8	0	0.3			
	250	0	0.4	0	0.4	0	0	0.8	0			
	500	0	0	0	-	-	0	0	0			
	750	-	0	-	-	-	0	0	0			
	1000	-	0	-	-	-	0	0	0			
Net 0		1.3	0	0.3	0	0.3	0	0	0			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0	0.8	0	0	1.0	-	1.9	0.7	0	6.4	0	0.8
	250	0	0	0.4	0	0	0	6.7	2.8	0	3.7	0
	500	0	2.4	0	0	0	0	2.9	0	0	1.4	0
	750	0	0	0	0	0	0	0	0	-	0	0
1000		0	0	0	0	0	0	0	0	-	0	0
Net 0		1.7	0.5	0	0.9	0	0	0.7	0	1.5	0.7	0
Ring Flank	Collection	22	33									
		Al	Bob									
	0	14.5	-									
	250	0.3	0									
	500	-	0									
	750	-	0									
1000		0	0									
Net 0		2.7	0.8									
Ring Fringe	Collection	23	29									
		Al-Art	Bob									
	0	10.0	5.3									
	250	0	0									
	500	0.4	0									
	750	-	0									
1000		0	0									
Net 0		0	1.7									
N. Sargasso Sea	Collection	25	26									
	0	0	0									
	250	0	0									
	500	0	4.7									
	750	0	0.5									
	1000	0	1.0									
Net 0		0	1.4									

Bolinichthys indicus,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection 24	36	38	39	56	57	67	68		
Slope Water	Depth	0									
		<u>6.2</u>	0	<u>0.5</u>	0	1.4	<u>1.3</u>	1.0	<u>7.9</u>		
	250	<u>0</u>	0	<u>0</u>	0	5.3	<u>0</u>	51.5	<u>2.1</u>		
	500	<u>0</u>	0	<u>0</u>	-	-	<u>7.7</u>	0	<u>6.8</u>		
	750	-	0	-	-	-	<u>0</u>	0	<u>0</u>		
	1000	-	0	-	-	-	<u>0</u>	0	<u>0</u>		
Net 0		<u>1.9</u>	0	<u>0</u>	0	0.8	<u>0</u>	2.3	<u>8.1</u>		
		Collection 20	35	27	28	58	59	61	62	65	66
Ring Center	Depth	<u>A1</u>	<u>A1</u>	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>
	0	<u>0.2</u>	0	0	0	<u>0</u>	0	0.8	<u>5.5</u>	0	<u>16.2</u>
	250	<u>0</u>	0	0	0	<u>0</u>	0	29.4	<u>6.6</u>	8.5	<u>1.1</u>
	500	<u>0</u>	0	0	0	<u>0</u>	0	74.3	<u>47.3</u>	149.4	<u>44.4</u>
	750	<u>0</u>	0	0	0	<u>0</u>	0	6.5	-	0.5	<u>0</u>
	1000	<u>0</u>	0	0	0	<u>0</u>	0	2.5	<u>1.5</u>	6.1	<u>4.9</u>
Net 0		<u>6.1</u>	0	0	<u>0</u>	<u>0</u>	0	2.5	<u>1.5</u>	6.1	<u>4.9</u>
		Collection 22	33								
Ring Flank	Depth	<u>A1</u>	<u>Bob</u>								
	0	<u>1.4</u>	-								
	250	<u>0</u>	<u>0</u>								
	500	-	<u>0</u>								
	750	-	<u>0</u>								
	1000	-	<u>0</u>								
Net 0		<u>1.8</u>	<u>0</u>								
		Collection 23	29								
Ring Fringe	Depth	<u>A1-Art</u>	<u>Bob</u>								
	0	<u>2.3</u>	<u>0</u>								
	250	<u>0</u>	<u>0</u>								
	500	<u>0</u>	<u>0</u>								
	750	-	<u>0</u>								
	1000	-	<u>0</u>								
Net 0		<u>0.5</u>	<u>0</u>								
		Collection	25	26							
N. Sargasso Sea	Depth	0	<u>0</u>	0							
	250	<u>0</u>	<u>0</u>	0							
	500	<u>0</u>	<u>0</u>	0							
	750	<u>0</u>	<u>0</u>	0							
	1000	<u>0</u>	<u>0</u>	0							
	Net 0	<u>0</u>	<u>0</u>	0							

Ceratoscopelus maderensis ,
specimens/10,000 m³

63
4.4
0
1.7
30.9
0.5

Ceratoscopelus maderensis,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
Slope Water	Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>			
	0	<u>0.3</u>	0	<u>1.5</u>	0	0	<u>1.3</u>	0	<u>0.7</u>			
	250	<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>			
	500	<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0.4	<u>0</u>			
	750	-	0.4	-	-	-	<u>0</u>	0.8	<u>0</u>			
	1000	-	-	-	-	-	-	-	-			
Net 0		<u>0.6</u>	0.8	<u>0</u>	0.1	0.2	<u>0.8</u>	0	<u>0.5</u>			
Ring Center	Collection	<u>20</u>	35	27	<u>28</u>	<u>32</u>	<u>58</u>	<u>59</u>	61	<u>62</u>	65	<u>66</u>
	0	<u>Al</u>	<u>Al</u>	<u>Bob</u>	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>
	0	<u>0.6</u>	0	0	<u>0.5</u>	-	<u>1.3</u>	0	0	<u>1.8</u>	0.5	<u>3.1</u>
	250	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
	500	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>3.1</u>	1.2	0	<u>0.8</u>	0	<u>0</u>
	750	<u>0</u>	0	0.4	<u>0</u>	<u>0</u>	<u>5.0</u>	3.9	2.6	-	1.0	<u>0</u>
1000		<u>0</u>	0	0	<u>0.9</u>	<u>0</u>	<u>1.4</u>	1.0	1.1	<u>1.0</u>	0.7	<u>0.3</u>
Net 0		<u>0.9</u>	0	0	<u>0.9</u>	<u>0</u>	<u>1.4</u>	1.0	1.1	<u>1.0</u>	0.7	<u>0.3</u>
Ring Flank	Collection	<u>22</u>	<u>33</u>									
	0	<u>Al</u>	<u>Bob</u>									
	0	<u>5.9</u>	-									
	250	<u>0.3</u>	<u>0</u>									
	500	-	<u>0</u>									
	750	-	<u>0</u>									
1000		<u>0</u>	<u>0</u>									
Net 0		<u>5.2</u>	<u>0</u>									
Ring Fringe	Collection	<u>23</u>	<u>29</u>									
	0	<u>Al-Art</u>	<u>Bob</u>									
	0	<u>20.5</u>	<u>8.4</u>									
	250	<u>0</u>	<u>0</u>									
	500	<u>1.3</u>	<u>0</u>									
	750	-	<u>7.9</u>									
1000		<u>0</u>	<u>0</u>									
Net 0		<u>10.5</u>	<u>1.7</u>									
N. Sargasso Sea	Collection	<u>25</u>	26									
	0	<u>0</u>	0									
	250	<u>0</u>	0									
	500	<u>0</u>	0									
	750	<u>0</u>	0.5									
	1000	<u>0</u>	0									
Net 0		<u>1.8</u>	0									

Ceratoscopelus warmingii,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
		Collection	24	36	38	39	56	57	67	68		
Slope Water	Depth	0	0.3	0	1.5	0	0	0	0.5	0		
	250	0		1.8	0	4.0	0	0	0	0		
	500	0		0	0	-	-	0	0	0		
	750	0		0	-	-	-	0	0	0		
	1000	-		0	-	-	-	0	0	0		
	Net 0	3.1		0	0.3	0	0	0	0	0		
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0	0	0	0	0.5	-	0	0	0	0	0	0
	250	0	0	0	0	0	0	0	0	0	0	0
	500	0	0	0	0	0	0	0	0	0	0	0
	750	0	0	0	0	0	0	0	0	-	0	0
Ring Flank	1000	0	0	0	0	0	0	0	0	0	0	0
	Net 0	0	0	0	0	0	0	0	0	0	0	0
	Collection	22	33									
		Al	Bob									
	0	0	-									
	250	0	0									
Ring Fringe	Depth	500	0									
	750	-	0									
	1000	-	0									
	Net 0	0	0									
	Collection	23	29									
		Al-Art	Bob									
N. Sargasso Sea	0	0.3	1.1									
	250	0	0									
	500	0	0									
	750	0	0									
	1000	-	0									
	Net 0	0	0									
	Collection	25	26									
	0	0	0									
	250	0	0									
	500	0	0									
	750	0	0									
	Net 0	0	0									

Diaphus dumerilii,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71						
Slope Water	Depth	Collection	24	36	38	39	56	57	67	68			
		0	0	0	0	0	0	0	0	0			
		250	0	0	0	0	0	0	0	0			
		500	0	0	0	0	-	-	0	0			
		750	-	0	-	-	-	0	0	0			
		1000	-	0	-	-	-	0	0	0			
Ring Center	Depth	Collection	20	35	27	28	32	58	59	61	62	65	66
		0	Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
		250	0	0	0	0	-	0	0	0	0.5	0	0
		500	0	0	0.4	0	0	0	0.6	2.5	0	0.7	0
		750	0	0	0	0	0	0	0	0	0	0	0
		1000	0	0	0	0	0	0	0	0	-	0	0
Ring Flank	Depth	Collection	22	33			64						
		0	Al	Bob			Frank						
		250	0	-			0.3						
		500	0	0			0						
		750	-	0			0						
		1000	-	0			0						
Ring Fringe	Depth	Collection	23	29									
		0	Al-Art	Bob									
		250	0.5	0.5									
		500	0	0									
		750	0	0									
		1000	-	0									
N. Sargasso Sea	Depth	Collection	25	26			63						
		0	0	0			0						
		250	0	0			0						
		500	0	0.7			0						
		750	0	0			0						
		1000	0	0			0						
		Net 0	1.1	1.7			0						

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0									
			0.3	0	0	0	0	0.4	0	0	
	250		0	0	0	0	0	0	0	0	
	500		0	0	0	-	-	0	0	0	
	750		-	0	-	-	-	0	0	0	
	1000		-	0	-	-	-	0	0	0	
		Net 0	0.6	0	0	0.2	0	0	0	0	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		A1	A1	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0										
			0.2	0	0	0.5	2.5	1.3	0	0.5	0
	250		0	0	0	0	0	0	0	0	0
	500		0	0	0	0	0	0	0	0	0
Ring Flank	Depth	0									
			0	0	0	0	0	0	0	0	0
	250		0	0	0	0	0	0	0	0	0
	500		0	0	0	0	0	0	0	0	0
	750		0	0	0	0	0	0	0	0	0
	1000		0	0	0	0	0	0	0	0	0
		Net 0	0	0	0	0	0	0	0.4	0	0
Ring Fringe	Collection	22	33								
		A1	Bob								
	0										
			1.7								
	250		0								
	500		0								
N. Sargasso Sea	Depth	0									
			0	0	0	0	0	0	0	0	0
	250		0	0	0	0	0	0	0	0	0
	500		0	0	0	0	0	0	0	0	0
	750		0	0	0	0	0	0	0	0	0
	1000		0	0	0	0	0	0	0	0	0
		Net 0	0	0	0	0	0	0	0	0	0
N. Sargasso Sea	Collection	23	29								
		A1-Art	Bob								
	0										
			1.3								
	250		0								
	500		0								
N. Sargasso Sea	Depth	0									
			0	0	0	0	0	0	0	0	0
	250		0	0	0	0	0	0	0	0	0
	500		0	0	0	0	0	0	0	0	0
	750		0	0	0	0	0	0	0	0	0
	1000		0	0	0	0	0	0	0	0	0
		Net 0	0	0	0	0	0	0	0	0	0
N. Sargasso Sea	Collection	25	26								
	0										
			0								
	250		0								
	500		0								
N. Sargasso Sea	Depth	0									
			0	0.6	0	0	0	0	0	0	0
	250		0	0.6	0	0	0	0	0	0	0
	500		0	0.7	0	0	0	0	0	0	0
	750		0	0	0	0	0	0	0	0	0
	1000		0	0	0	0	0	0	0	0	0
		Net 0	0.6	0	0	0	0	0	0	0	0

Diaphus mollis,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
Slope Water	Collection	24	36	38	39	56	57	67	68			
	0	0	0.4	1.3	0	0	0	0	0			
	250	0	0.7	0	2.0	0	0	0.4	0			
	500	0	0	0	-	-	0	0	0			
	750	-	0	-	-	-	0	0	0			
	1000	-	0	-	-	-	0	0	0			
Net 0	0	0	0.6	0	0	0	0	0.4	0			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
	0	Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	250	0.6	0	0	0	-	0	0	0	0	0	0
	500	0	0.3	0	0	0.7	0	0	1.1	0	0	0.7
	750	0	0	0	0	0	0	0	0	-	0	0
	1000	0	0	0	0	0	0	0	0	0	0	0
Net 0	0											
Ring Flank	Collection	22	33									
	0	Al	Bob	64 Frank								
	250	2.8	-	0								
	500	1.0	0	0.4								
	750	-	0	0								
	1000	-	0	0								
Net 0	0.2	5.8	0.4									
Ring Fringe	Collection	23	29									
	0	Al-Art	Bob									
	250	0.8	0									
	500	0.3	0	Diaphus rafinesquii,								
	750	0	0	specimens/10,000 m ³								
	1000	-	0									
Net 0	0	0										
N. Sargasso Sea	Collection	25	26	63								
	0	0.9	0	0								
	250	0	0	0								
	500	0	0	0								
	750	0	0	0								
	1000	0	0	0								
Net 0	0	0	0									

Diaphus rafinesquii,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0	0	0	1.5	0	0.3	0.9	0	0			
	250	0	1.1	0	0	0.4	0.6	0	1.5	0			
	500	1.7	0	0	-	-	-	0.5	0	0.3			
	750	-	0	-	-	-	-	0	0	0			
	1000	-	0	-	-	-	-	0	0	0			
	Net 0	1.3	0	0	0	0	0	0	0	0			
		Collection	20	35	27	28	32	58	59	61	62	65	66
			Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
Ring Center	Depth	0	0	0	0	0.5	-	1.3	0	0	0	0	0
	250	0	0	0	0	0	0	0	0.6	1.1	0	1.5	0
	500	0	1.0	0	0	0	0	0	0.6	0	0	0	0
	750	0.6	0	0	0	0	0	1.9	1.1	0.4	-	0.5	0
	1000	0	0.5	0	0	0	0	0.5	0.2	0	0	0	0
	Net 0	0	0.5	0	0	0	0	0.5	0.2	0	0	0	0
		Collection	22	33									
			Al	Bob									
Ring Flank	Depth	0	1.4	-									
	250	0	0	0									
	500	-	0	0									
	750	-	0	0									
	1000	-	0	0									
	Net 0	0	0	0									
		Collection	23	29									
			Al-Art	Bob									
Ring Fringe	Depth	0	1.5	1.6									
	250	0	0	0									
	500	0.4	0	0									
	750	-	0	0									
	1000	-	0	0									
	Net 0	0	1.7	0									
		Collection	25	26									
			0.9	0.5									
N. Sargasso Sea	Depth	0	0	0									
	250	0	0	0									
	500	0	0	0									
	750	0	0	0									
	1000	0	0	0									
	Net 0	0	0.5	0									

Diogenichthys atlanticus,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	0	0	0.5	0	4.3	1.3	1.0	0.3	
	250	0	2.1	0	0.4		0	0	0	0	
	500	0.4	2.0	0	-		-	0	0	0	
	750	-	0	-	-		-	0	0	0	
	1000	-	0	-	-		-	0	0	0	
	Net 0	0	0	0	0		0	0	0.4	0.2	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		A1	A1	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	0.4	0	0	0	-	0	0	0	0	0
	250	0	0.3	0	0	0	1.3	0	0.6	0	0
	500	0	0.3	0	0	0	0	6.5	4.3	3.5	0.9
	750	14.1	0	0	0	0.6	0	0	0	-	0
	Net 0	10.1	0	0	1.8	0	0	1.0	2.5	0.5	0.4
Ring Flank	Collection	22	33				64				
		A1	Bob				Frank				
	0	0.7	-				0				
	250	0.3	0				0				
	500	-	0				0.4				
	750	-	0				3.9				
	Net 0	3.0	0				0				
Ring Fringe	Collection	23	29								
		AI-Art	Bob								
	0	0	0								
	250	0	0								
	500	0	0								
	750	-	2.9								
	Net 0	0	0								
N. Sargasso Sea	Collection		25	26			63				
	0		0	0			0				
	250		0	0			0				
	500		0	0			0.4				
	750		0	0			0.9				
	1000		0	0			0.9				
	Net 0		0	0			0.9				

Hygophum benoiti,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0	0	0	5.6	-	1.1	0	0	0			
	250	0	0	5.4	0	19.6	0	0	0	0			
	500	0	0	0	0	-	-	0	0	0			
	750	-	0	-	-	-	-	0	0	0			
	1000	-	0	-	-	-	-	0	0	0			
	Net 0	0	0	3.5	2.6	0.6	0.7	0	0	0			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66	
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank	
	0	0	0	0	21.9	-	0	0	0	0	0	0	
	250	0	0.7	1.1	0	0	0	0	0	0	0	0	
	500	0	2.4	0	0	0	0	0	0	0	0.6	0	
	750	0	0	0	0	0	0	0	0	-	0	0	
Ring Flank	1000	0	0	1.0	35.5	14.4	0	0.5	0	1.5	0	0	
	Net 0	0	0	1.0	35.5	14.4	0	0.5	0	1.5	0	0	
	Collection	22	33										
		Al	Bob										
	0	0	-										
	250	0	0										
Ring Fringe	Depth	500	0	0									
	750	-	0										
	1000	-	0										
	Net 0	0	13.3										
	Collection	23	29										
		Al-Art	Bob										
N. Sargasso Sea	0	0.3	3.2										
	250	0	0										
	500	0	35.0										
	750	-	0										
	1000	-	0										
	Net 0	0	3.3										
N. Sargasso Sea	Collection	25	26										
	0	4.8	0										
	250	0.4	0										
	500	0	5.3										
	750	5.6	1.1										
	1000	1.9	3.0										
N. Sargasso Sea	Net 0	0	0										
	Collection	63											
	0	0											
	250	0											
	500	0											
	750	0											
N. Sargasso Sea	1000	0											
	Net 0	0											
	Collection	63											
	0	0											
	250	0											
	500	0											
N. Sargasso Sea	750	0											
	1000	0											
	Net 0	0											
	Collection	63											
	0	0											
	250	0											
N. Sargasso Sea	500	0											
	750	0											
	1000	0											
	Net 0	0											
	Collection	63											
	0	0											
N. Sargasso Sea	250	0											
	500	0											
	750	0											
	1000	0											
	Net 0	0											
	Collection	63											

Hygophum hygomii
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0	<u>1.5</u>	0	<u>1.8</u>	0	0.6	<u>0</u>	0	<u>0</u>			
	250		<u>0</u>	1.8	<u>0.2</u>	0.4	1.8	<u>0.4</u>	0	<u>0.3</u>			
	500		<u>0</u>	3.6	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>			
	750		-	0	-	-	-	<u>0</u>	0	<u>0</u>			
	1000		-	0	-	-	-	<u>0</u>	0	<u>0</u>			
	Net 0		<u>1.9</u>	0	<u>0.3</u>	0	0.3	<u>0</u>	0	<u>0</u>			
		Collection	20	35	27	28	32	58	59	61	62	65	66
			Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
Ring Center	Depth	0	<u>0</u>	0	0	<u>21.0</u>	-	<u>0</u>	0	0	<u>0</u>	0	<u>0.4</u>
	250		<u>0</u>	0	1.5	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0.3</u>	0.4	<u>0</u>
	500		<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0.6	1.4	<u>0</u>	2.3	<u>0</u>
	750		<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	-	0	<u>0</u>
	1000		<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0.7	<u>2.0</u>	0.7	<u>0.3</u>
	Net 0		<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	<u>0.7</u>	<u>2.0</u>	0.7	<u>0.3</u>
		Collection	22	33									
			Al	Bob									
Ring Flank	Depth	0	<u>0</u>	-									
	250		<u>0</u>	<u>0</u>									
	500		<u>0</u>	<u>0</u>									
	750		<u>0</u>	<u>0</u>									
	1000		<u>0</u>	<u>0</u>									
	Net 0		<u>0</u>	<u>0</u>									
		Collection	23	29									
			Al-Art	Bob									
Ring Fringe	Depth	0	<u>0.3</u>	<u>2.6</u>									
	250		<u>0</u>	<u>0</u>									
	500		<u>0</u>	<u>0</u>									
	750		<u>0</u>	<u>0</u>									
	1000		<u>0</u>	<u>0</u>									
	Net 0		<u>0</u>	<u>0.8</u>									
		Collection	25	26									
N. Sargasso Sea	Depth	0	<u>0.4</u>	0									
	250		<u>0</u>	0									
	500		<u>0</u>	0									
	750		<u>0</u>	0									
	1000		<u>0</u>	0									
	Net 0		<u>0</u>	0									

Lampanyctus alatus,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68		
Slope Water	Depth	0	0.3	0	0	0	0	0	0	0.3		
	250	0	0	0	0	0	1.8	0	0	0.3		
	500	0	0.4	0	-	-	-	0	3.3	0		
	750	-	0	-	-	-	-	0	0	0		
	1000	-	0	-	-	-	-	0	0	0		
	Net 0	0	0	0	0	0	0.8	3.8	0.4	0		
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0	0	0	0	0	-	0	0	0	0	0	0.4
	250	0	0	0	0	0	0	0	0	2.2	0	0
	500	0	0	0	0	0	0.8	0	4.3	0.8	0.3	0
	750	0.6	0	0	0	0	1.9	2.8	0.4	-	4.3	0
Ring Flank	1000											
	Net 0	0	0	0	0	0	0.9	1.0	0.4	4.5	1.4	1.4
	Collection	22	33				64					
		Al	Bob				Frank					
	0	0	-				0					
	250	0	1.1				0					
Ring Fringe	500	0	0				0					
	750	-	0				0					
	1000	-	0				1.1					
	Net 0	0	0.8				0					
	Collection	23	29									
		Al-Art	Bob									
N. Sargasso Sea	0	0	0.5									
	250	0	0									
	500	0	0									
	750	-	0									
	1000											
	Net 0	0	1.7									
	Collection	25	26				63					
	0	3.0	0				0					
	250	0.4	0				0					
	500	0	0				0					
	750	0	7.9				0.9					
	1000						0					
	Net 0	0.6	2.0				0					

Lampanyctus crocodilus,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71						
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0	1.5	0	0.3	0	0	0	0	0			
	250		0	0	0.2	0	0	0.4	0	0.3			
	500		0	0	0	-	-	0	0.4	2.3			
	750		-	0	-	-	-	0	0	0			
	1000		-	0	-	-	-	0	0	0			
	Net 0		0	0.4	0.6	0	0.3	0.8	0.4	0			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66	
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank	
	0	0	0	0	0	-	0	0	0	0	0	0.4	
	250	0.8	0	0	0	0	0	0	0	1.3	0	0	
	500	0	1.0	0	0.4	0.6	0.8	0	0	1.5	0	1.6	
	750	0	0.7	0	0	0	0	0	0	-	0	0	
Ring Flank	1000	0	0	0	0	0	0	0.2	0	0	0	0.8	
	Net 0	0	0	0	0	0	0	0	0	0	0	0.8	
	Collection	22	33										
		Al	Bob										
	0	0	-										
	250	0	0										
Ring Fringe	Depth	500	0										
	750	-	0										
	1000	-	0										
	Net 0	0	0										
	Collection	23	29										
		Al-Art	Bob										
N. Sargasso Sea	0	4.0	1.6										
	250	0.3	0.5										
	500	0	0										
	750	-	0										
	1000	0	5.0										
	Net 0	0	5.0										
N. Sargasso Sea	Collection	25	26										
	0	0.4	0										
	250	0	0										
	500	0	2.0										
	750	0	0.5										
	1000	0	0										
N. Sargasso Sea	Net 0	0	0										
	Collection	63											
	0	0.4											
	250	0											
	500	0											
	750	1.7											
N. Sargasso Sea	1000	2.7											
	Net 0	2.7											

Lampanyctus cuprarius,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
		Collection	24	36	38	39	56	57	67	68		
Slope Water	Depth	0	<u>0.8</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0.3</u>		
	250		<u>0</u>	0	<u>0</u>	0	0.6	<u>0</u>	0	<u>0</u>		
	500		<u>0</u>	0.4	<u>0</u>	-	-	<u>0</u>	0.4	<u>0</u>		
	750		-	0	-	-	-	0	0	0		
	1000							-		-		
	Net 0	0	<u>0</u>	0	<u>0</u>	0.1	0	<u>0</u>	0	<u>0</u>		
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0	<u>0.4</u>	0	0	<u>0</u>	-	<u>0</u>	0	0	<u>0.9</u>	0	<u>3.9</u>
	250		0	0	<u>0</u>	<u>0</u>	<u>1.3</u>	0	0	<u>0.9</u>	0	<u>0</u>
	500		0	0	<u>0</u>	<u>0</u>	<u>0.8</u>	1.2	5.0	<u>0.4</u>	1.7	<u>0.4</u>
	750		0	0	<u>0</u>	<u>0</u>	<u>3.8</u>	0	0	-	0	<u>0</u>
Ring Flank	1000		0	0	<u>0</u>	<u>0</u>	<u>3.8</u>	0	0	-	0	<u>0</u>
	Net 0	<u>0.9</u>	0	0	<u>0</u>	<u>0</u>	<u>0.5</u>	1.0	0	<u>5.5</u>	0	<u>0.8</u>
	Collection	22	33				64					
		Al	Bob				Frank					
	0	<u>0.3</u>	-				<u>0.9</u>					
	250		<u>0</u>				<u>0</u>					
Ring Fringe	500		<u>0</u>				<u>0</u>					
	750		-				<u>0</u>					
	1000		<u>0</u>				<u>0.6</u>					
	Net 0	<u>0.5</u>	<u>0.8</u>				<u>2.2</u>					
	Collection	23	29									
		Al-Art	Bob									
N. Sargasso Sea	0	<u>2.5</u>	<u>0.5</u>									
	250		<u>0</u>									
	500		<u>0</u>									
	750		<u>0</u>									
	1000		<u>0</u>									
	Net 0	<u>0.5</u>	<u>0</u>									
N. Sargasso Sea	Collection	25	26				63					
	0	<u>0</u>	0				<u>0.4</u>					
	250		<u>0</u>				<u>0</u>					
	500		<u>0</u>				<u>0</u>					
	750		<u>0</u>	0.5			<u>0.4</u>					
	1000		<u>0</u>	0			<u>0.5</u>					
N. Sargasso Sea	Net 0		<u>0</u>	0			<u>0.5</u>					
	Collection	25	26				63					
	0	<u>0</u>	<u>0</u>				<u>0.4</u>					
	250		<u>0</u>				<u>0</u>					
	500		<u>0</u>				<u>0</u>					
	750		<u>0</u>	0.5			<u>0.4</u>					
N. Sargasso Sea	1000		<u>0</u>	0			<u>0.5</u>					
	Net 0		<u>0</u>	0			<u>0.5</u>					
	Collection	25	26				63					
	0	<u>0</u>	<u>0</u>				<u>0.4</u>					
	250		<u>0</u>				<u>0</u>					
	500		<u>0</u>				<u>0</u>					
N. Sargasso Sea	750		<u>0</u>	0.5			<u>0.4</u>					
	1000		<u>0</u>	0			<u>0.5</u>					
	Net 0		<u>0</u>	0			<u>0.5</u>					
	Collection	25	26				63					
	0	<u>0</u>	<u>0</u>				<u>0.4</u>					
	250		<u>0</u>				<u>0</u>					
N. Sargasso Sea	500		<u>0</u>				<u>0</u>					
	750		<u>0</u>	0.5			<u>0.4</u>					
	1000		<u>0</u>	0			<u>0.5</u>					
	Net 0		<u>0</u>	0			<u>0.5</u>					
	Collection	25	26				63					
	0	<u>0</u>	<u>0</u>				<u>0.4</u>					
N. Sargasso Sea	250		<u>0</u>				<u>0</u>					
	500		<u>0</u>				<u>0</u>					
	750		<u>0</u>	0.5			<u>0.4</u>					
	1000		<u>0</u>	0			<u>0.5</u>					
	Net 0		<u>0</u>	0			<u>0.5</u>					
	Collection	25	26				63					
N. Sargasso Sea	0	<u>0</u>	<u>0</u>				<u>0.4</u>					
	250		<u>0</u>				<u>0</u>					
	500		<u>0</u>				<u>0</u>					
	750		<u>0</u>	0.5			<u>0.4</u>					
	1000		<u>0</u>	0			<u>0.5</u>					
	Net 0		<u>0</u>	0			<u>0.5</u>					

Lampanyctus photonotus,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0	0	0	0.3	0	0.9	0.4	0	1.3			
	250	0	0	0	0	0	0.6	0	0	0			
	500	0	0.4	0	-	-	-	0	0	0			
	750	-	0	-	-	-	-	0	0	0			
	1000	-	-	-	-	-	-	-	-	-			
	Net 0	0	0	0	0	0	0.2	0	0	0			
		Collection	20	35	27	28	32	58	59	61	62	65	66
Ring Center	Depth	0	Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	250	0.4	0	0	0	0	0	0	0	0	11.4	0	4.2
	500	0.8	0	0.4	0	0	0	0	0	3.3	0.3	1.5	0
	750	0	0	0	0	0	0	11.5	10.0	0.7	0	8.0	0
	1000	0	0	0	0	0	0	9.4	7.2	0	-	0	0
	Net 0	3.0	0.9	0	0	0	0.6	0.5	2.2	1.4	12.5	2.5	1.1
		Collection	22	33									
Ring Flank	Depth	0	Al	Bob									
	250	5.5	-	-									
	500	0	1.1	-									
	750	-	0	-									
	1000	-	0	-									
	Net 0	0.9	1.7	-									
		Collection	23	29									
Ring Fringe	Depth	0	Al-Art	Bob									
	250	3.5	1.1	-									
	500	0	0	-									
	750	0.4	0	-									
	1000	-	0.7	-									
	Net 0	0.5	1.7	-									
		Collection	25	26									
N. Sargasso Sea	Depth	0	0.9	0									
	250	0	0	-									
	500	0	0.7	-									
	750	1.9	0	-									
	1000	0	0	-									
	Net 0	0	0	-									

Lampanyctus pusillus
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0											
			0	0	0	0	0	0	0	0			
	250		0	0	0	0	0	0	0	0			
	500		0	0	0	0	0	0	0	0			
	750		0	0	0	-	-	0	0	0			
	1000		-	0	-	-	-	0	0	0			
Net 0			0	0	0	0	0	0	0	0			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66	
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank	
	0												
		0.2	0	0	0	-	0	0	0	0	0	0	
	250		0	0	0	0	0	0	0	0	0.4	0	
	500		0	0	0	0	0	0	0	0	0	0	
Ring Flank	Depth	0											
			0	0	0	0	0	0	0	0	0	0	
	250		0	0	0	0	0	0	0	0	0	0	
	500		0	0	0	0	0	0.6	0.7	0	0	0	
	750		0	0	0	0	0	0	-	0	0	0	
	1000		0	0	0	0	0	0	-	0	0	0	
Net 0			0	0	0	0	0.5	0.5	0	0	0	0.5	
Ring Fringe	Collection	22	33				64						
		Al	Bob				Frank						
	0												
		1.4	-				0						
	250		0				0						
	500		0				0						
N. Sargasso Sea	Depth	0											
			0	0									
	250		0	0									
	500		0	1.3									
	750		0	0									
	1000		0	0									
Net 0			0	0									

Lepidophanes gaussi,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71												
		Collection	24	36	38	39	56	57	67	68								
Slope Water	Depth	0	0.3	0	1.0	0	0.6	0.4	0	0.3								
	250	0	7.1	0	1.2	4.1	0	0	0									
	500	0	1.2	0	-	-	0	0	0									
	750	-	0	-	-	-	0	0	0									
	1000	-	0	-	-	-	0	0	0									
	Net 0	1.3	0.4	0	0	1.7	0	0.4	0									
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66						
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank						
	0	0.8	0	0	1.0	-	0	0	0	3.2	0	1.9						
	250	0	0	0.7	0	0	0	0	1.7	0	0	0						
	500	0	0	0	0	0	0	0	5.7	0	4.3	0						
	750	0	0	0	0	0	0	0	0	-	0	0						
Ring Flank	1000	0	0	0	0	0	0	0	0	-	0	0						
	Net 0	0.4	0	0	0	0	0	0	2.1	0	1.1	0						
	Collection	22	33					64										
		Al	Bob					Frank										
	0	0	-					0.9										
	250	0	0					0										
Ring Fringe	Depth	500	-	0					0	<u>Lepidophanes guentheri</u> , specimens/10,000 m ³								
	750	-	0					0										
	1000	-	0					0										
	Net 0	0	0					0										
	Collection	23	29															
		Al-Art	Bob															
N. Sargasso Sea	0	0.3	4.2															
	250	0	0															
	Depth	500	0	0														
	750	-	0															
	1000	-	0	0														
	Net 0	0.5	1.7															
N. Sargasso Sea	Collection		25	26					63									
	0		0	0					0.4									
	250		0	0					0									
	Depth	500		0	0										0			
	750		0	0					0									
	1000		0	0					0									
	Net 0		0	0					0									

Lepidophanes guentheri,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71					
Slope Water	Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>			
	0	<u>7.7</u>	0	<u>0.8</u>	0	4.3	<u>5.2</u>	13.0	<u>2.1</u>			
	250	<u>0</u>	0	<u>0</u>	1.2	0	<u>1.6</u>	0	<u>0</u>			
	500	<u>0</u>	0	<u>0</u>	-	-	<u>0.9</u>	0	<u>0</u>			
	750	-	0	-	-	-	<u>0</u>	0	<u>0</u>			
	1000											
	Net 0	<u>15.0</u>	0	<u>0</u>	0.2	0	<u>2.1</u>	2.3	<u>6.3</u>			
Ring Center	Collection	<u>20</u>	35	<u>27</u>	<u>28</u>	<u>32</u>	<u>58</u>	59	61	<u>62</u>	65	<u>66</u>
	0	<u>Al</u>	Al	Bob	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	Em	Frank	<u>Frank</u>	Frank	<u>Frank</u>
	250	<u>0.2</u>	0	0	<u>0</u>	-	<u>1.3</u>	0	0	<u>1.8</u>	0	<u>0.4</u>
	500	<u>0</u>	0.7	0	<u>0</u>	<u>0</u>	<u>0</u>	2.2	1.7	<u>0</u>	3.0	<u>0</u>
	750	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
	1000											
	Net 0	<u>0.4</u>	0.9	0	<u>0</u>	<u>0.6</u>	<u>0.9</u>	0.2	2.5	<u>1.5</u>	0.4	<u>0.5</u>
Ring Flank	Collection	<u>22</u>	<u>33</u>									
	0	<u>Al</u>	<u>Bob</u>									
	250	<u>0</u>	-									
	500	<u>0</u>	<u>0</u>									
	750	-	<u>0</u>									
	1000											
	Net 0	<u>0</u>	<u>1.7</u>									
Ring Fringe	Collection	<u>23</u>	<u>29</u>									
	0	<u>Al-Art</u>	<u>Bob</u>									
	250	<u>0</u>	<u>3.2</u>									
	500	<u>0</u>	<u>0</u>									
	750	<u>0</u>	<u>5.0</u>									
	1000											
	Net 0	<u>0</u>	<u>1.7</u>									
Sea	Collection		<u>25</u>	26								
	0		<u>0.9</u>	0								
	250		<u>0</u>	1.2								
			<u>0</u>	0								
			<u>0</u>	0								

Lobianchia dofleini
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
Slope Water	Depth	Collection	24	36	38	39	56	57	67	68			
		0	<u>0.3</u>	0	<u>0</u>	0	2.0	<u>0</u>	0	<u>0.3</u>			
		250	<u>0</u>	2.9	<u>0</u>	1.6	0	<u>0</u>	0.4	<u>0</u>			
		500	<u>0</u>	0	<u>0.7</u>	-	-	<u>0</u>	0	<u>0</u>			
		750	-	0.7	-	-	-	<u>0</u>	0	<u>0</u>			
		1000	-	0.7	-	-	-	<u>0</u>	0	<u>0</u>			
Ring Center	Depth	Collection	20	35	27	28	32	58	59	61	62	65	66
		0	<u>Al</u>	<u>Al</u>	<u>Bob</u>	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>
		250	<u>0</u>	0	0	<u>0.5</u>	-	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
		500	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
		750	<u>0</u>	0.7	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
		1000	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	-	<u>0</u>	0	<u>0</u>
Ring Flank	Depth	Collection	22	33									
		0	<u>Al</u>	<u>Bob</u>									
		250	<u>0</u>	-									
		500	<u>0</u>	<u>0</u>									
		750	<u>0</u>	<u>0</u>									
		1000	<u>0</u>	<u>0</u>									
Ring Fringe	Depth	Collection	23	29									
		0	<u>Al-Art</u>	<u>Bob</u>									
		250	<u>0</u>	<u>0.5</u>									
		500	<u>0</u>	<u>0</u>									
		750	<u>0</u>	<u>0</u>									
		1000	<u>0</u>	<u>0</u>									
N. Sargasso Sea	Depth	Collection	25	26									
		0	<u>0</u>	0									
		250	<u>0</u>	0									
		500	<u>0</u>	0									
		750	<u>0</u>	0									
		1000	<u>0</u>	0									

Myctophum affine,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
Slope Water	Depth	Collection	24	36	38	39	56	57	67	68			
		0	<u>1.8</u>	0	<u>0.5</u>	0	1.1	<u>0.4</u>	0.5	<u>0.7</u>			
		250	<u>0.7</u>	2.1	<u>0.2</u>	0.8	0	<u>0</u>	0	<u>0</u>			
		500	<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>			
		750	-	0	-	-	-	<u>0</u>	0	<u>0</u>			
		1000	-	0	-	-	-	<u>0</u>	0	<u>0</u>			
Ring Center	Depth	Net 0	<u>3.1</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>			
		Collection	20	35	27	28	32	58	59	61	62	65	66
		0	Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
		250	<u>0</u>	0	0	<u>1.0</u>	-	<u>0</u>	0	0.8	<u>0</u>	0	<u>3.8</u>
		500	<u>0.8</u>	0.7	1.9	<u>0</u>	<u>0</u>	<u>0.7</u>	0.6	6.7	<u>1.3</u>	4.1	<u>0</u>
		750	<u>0</u>	0.3	0.4	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
Ring Flank	Depth	1000	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
		Net 0	<u>0</u>	0	0	<u>1.8</u>	<u>0</u>	<u>0</u>	0	0	<u>0.5</u>	0	<u>0</u>
		Collection	22	33									
		0	Al	Bob									
		250	<u>2.1</u>	-									
		500	<u>0</u>	<u>1.1</u>									
Ring Fringe	Depth	750	-	<u>0</u>									
		1000	-	<u>0</u>									
		Net 0	<u>1.8</u>	<u>0.8</u>									
		Collection	23	29									
		0	Al-Art	Bob									
		250	<u>3.8</u>	<u>12.1</u>									
N. Sargasso Sea	Depth	500	<u>0</u>	<u>0.5</u>									
		750	<u>0</u>	<u>0</u>									
		1000	-	<u>0</u>									
		Net 0	<u>0</u>	<u>0.8</u>									
		Collection	25	26									
		0	<u>1.3</u>	0									
N. Sargasso Sea	Depth	250	<u>0.4</u>	8.2									
		500	<u>0</u>	<u>0</u>									
		750	<u>0</u>	<u>0</u>									
		1000	<u>0</u>	<u>0</u>									
		Net 0	<u>0</u>	1.0									
		0	<u>1.6</u>	0									

Notolychnus valdiviae,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
Slope Water	Collection	24	36	38	39	56	57	67	68				
	0	0	0	1.0	0	0	2.2	0	0.3				
	250	0	0	0	0	1.8	0	0	0				
	500	0	0	0	-	-	0	0.4	0				
	750	-	1.1	-	-	-	0	1.2	0				
	1000	-	-	-	-	-	-	-	-				
	Net 0	0	0.4	0	0.3	1.0	0.4	0	0.2				
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66	
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank	
	0	0	0	0	1.0	-	0	0	0	0	0	0	
	250	0	0	0	0	0	0	0	0	0	0	0	
	500	0	0	0	0	0	0	0	0	0	0	0	
	750	0	0.4	0	0	0	0	0	0.4	-	0	0	
	Net 0	0	0	0	0	0	0	0	0	0.5	0	0	
Ring Flank	Collection	22	33										
		Al	Bob										
	0	0	-										
	250	0	-										
	500	0	0										
	750	-	0										
	Net 0	0	0.8										
Ring Fringe	Collection	23	29										
		Al-Art	Bob										
	0	0	0										
	250	0	0										
	500	0	0										
	750	0	0.8										
	Net 0	0	1.7										
N. Sargasso Sea	Collection	25	26										
	0	0	0										
	250	0	0										
	500	0	0										
	750	0.5	0										
	1000	0	8.9										
	Net 0	0	2.0										

Notoscopelus resplendens,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68		
Slope Water	Depth	0	0	1.1	0.3	0	0	0	0	0		
	250	0	0	0	0	0	0	0	0	0.3		
	500	0	0	0	-	-	-	0	0	0		
	750	-	0	-	-	-	-	0	0	0		
	1000	0	0	0	0	0	0	0	0	0		
	Net 0	0	0	0	0	0	0	0	0	0		
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0	0	0	0	0	-	0	0	0	0.5	0.5	0.8
	250	3.3	1.3	0	0	0.7	0	0.6	1.7	0	1.1	0
	500	0	0	0	0	0	0	0	0	0	0	0
	750	0	0	0	0	0	0	0	0	-	0	0
1000	0	0	0	0	0	0	0	0	-	0	0	
Net 0	0.9	1.8	0	0	0	0.5	0.5	0.4	0.5	0	0	
Ring Flank	Collection	22	33									
		Al	Bob									
	0	0	0									
	250	1.9	4.4									
	500	-	0									
	750	-	0									
1000	0	0										
Net 0	0.5	2.5										
Ring Fringe	Collection	23	29									
		Al-Art	Bob									
	0	0.3	0									
	250	0	2.1									
	500	0	0									
	750	-	0									
1000	0	6.7										
Net 0	0	6.7										
N. Sargasso Sea	Collection		25	26								
			0	0								
	250		1.1	0								
	500		0	0								
	750		0	0								
	1000		0	0								
Net 0		0.6	0									
							63					

Argyrolepecus aculeatus,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
Slope Water	Depth	Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>			
		0	<u>0</u>	0	<u>0.3</u>	1.3	0	<u>0</u>	0	<u>0</u>			
		250	<u>0</u>	0	<u>0.7</u>	0	0	<u>0</u>	0.4	<u>0.6</u>			
		500	<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>			
		750	-	0	-	-	-	<u>0</u>	0	<u>0</u>			
		1000	<u>0</u>	0	<u>0</u>	0	0.3	<u>2.1</u>	0.4	<u>0.2</u>			
		Net 0	<u>0</u>	0	<u>0</u>	0							
Ring Center	Depth	Collection	<u>20</u>	35	27	<u>28</u>	<u>32</u>	<u>58</u>	59	61	<u>62</u>	65	<u>66</u>
			<u>Al</u>	<u>Al</u>	<u>Bob</u>	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>
		0	<u>0</u>	0.4	0	0	-	<u>0.6</u>	0	0	<u>0</u>	0	<u>0</u>
		250	<u>4.2</u>	4.7	0	0	0	<u>4.7</u>	0	0.6	<u>1.3</u>	1.9	<u>3.7</u>
		500	<u>1.5</u>	0	0	0	0	<u>10.8</u>	22.9	0	<u>0</u>	0	<u>0</u>
		750	<u>0</u>	0	0	0	0	<u>0</u>	0	0	-	0	<u>0</u>
		1000	<u>0</u>	0	0	0	0	<u>0</u>	0	0	-	0	<u>0</u>
Net 0	<u>3.5</u>	5.5	0	<u>1.8</u>	0	<u>4.1</u>	3.9	0.7	<u>0.5</u>	0	<u>0</u>		
Ring Flank	Depth	Collection	<u>22</u>	<u>33</u>									
			<u>Al</u>	<u>Bob</u>									
		0	<u>0</u>	<u>0</u>									
		250	<u>0</u>	<u>0</u>									
		500	<u>22.9</u>	<u>0</u>									
		750	<u>-</u>	<u>0</u>									
		1000	<u>-</u>	<u>0</u>									
Net 0	<u>0.9</u>	<u>0</u>											
Ring Fringe	Depth	Collection	<u>23</u>	<u>29</u>									
			<u>Al-Art</u>	<u>Bob</u>									
		0	<u>0.3</u>	<u>0</u>									
		250	<u>1.6</u>	<u>1.1</u>									
		500	<u>0.9</u>	<u>4.2</u>									
		750	<u>-</u>	<u>0</u>									
		1000	<u>1.1</u>	<u>15.8</u>									
N. Sargasso Sea	Depth	Collection	<u>25</u>	26									
		0	<u>0</u>	0									
		250	<u>4.6</u>	0.6									
		500	<u>0</u>	0									
		750	<u>0</u>	0									
		1000	<u>0</u>	0									
		Net 0	<u>1.3</u>	0									
		Collection	<u>63</u>										
		0	<u>0</u>										
		250	<u>5.4</u>										
		500	<u>1.3</u>										
		750	<u>0</u>										
		1000	<u>0</u>										
		Net 0	<u>1.4</u>										

Argyropelecus hemigymnus,
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	0	0.4	0	0	0	0.4	0	0	
	250	0	0	0	0	0	0	0.4	0	0	
	500	0	0	0	0	0	0	0.4	0	0	
	750	2.2	1.2	2.1	-	-	-	2.3	0.7	2.9	
	1000	-	1.8	-	-	-	-	0.9	0.4	0	
	Net 0	1.3	2.3	0	1.0	0.7	1.3	0	0	0	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	0	0	0	0	-	0	0	0	0	0
	250	0	0	0	0	0	0	0	0	0	0
	500	0	0.3	0.8	1.3	0.6	0.8	0	0	0	0.4
	750	0	1.1	0	0	0	1.3	1.1	0.4	-	0
Ring Flank	1000	0	0.5	0	1.8	0.6	2.3	0.2	0	0.5	0
	Net 0	0.4	0.5	0	1.8	0.6	2.3	0.2	0	0.5	0
	Collection	22	33				64				
		Al	Bob				Frank				
	0	0	0				0				
	250	0	0				0				
Ring Fringe	500	0	0				0				
	750	-	1.3				0.4				
	1000	-	0				4.4				
	Net 0	0.5	0.8				1.3				
	Collection	23	29								
		Al-Art	Bob								
N. Sargasso Sea	0	0	0								
	250	0	0								
	500	0	0								
	750	0	0								
	1000	-	1.4								
	Net 0	0	2.5								
	Collection		25	26			63				
	0		0	0			0				
	250		0	0			0				
	500		0	0			0				
	750		0	0			0.4				
	1000		1.3	1.6			1.7				
	Net 0		1.9	2.0			2.3				

Sternoptyx diaphana
specimens/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	<u>1.8</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>	
	250		<u>0</u>	0	<u>0.2</u>	0	0	<u>0</u>	0	<u>0</u>	
	500		<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0.3</u>	
	750		-	0	-	-	-	<u>0</u>	0	<u>0</u>	
	1000										
	Net 0		<u>0.6</u>	0.8	<u>0.3</u>	0.8	0.3	<u>1.3</u>	0	<u>0</u>	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0										
	250		<u>0.4</u>	0	0	<u>0</u>	-	<u>0</u>	0	0	<u>0.8</u>
	500		<u>0</u>	0	0.4	<u>0</u>	<u>0.7</u>	<u>0</u>	0	<u>0.3</u>	0.4
	750		<u>0</u>	0.7	1.2	<u>0</u>	<u>0</u>	0.6	2.1	<u>0</u>	<u>0.3</u>
Ring Flank	1000		<u>0</u>	0	0	<u>0</u>	<u>0</u>	0.6	0	-	<u>0</u>
	Net 0		<u>0.4</u>	0	0.5	<u>1.8</u>	<u>0.6</u>	<u>0.5</u>	0	0	<u>0.5</u>
	Collection	22	33				64				
		Al	Bob				Frank				
	0										
	250		<u>4.1</u>	<u>0</u>			<u>0.3</u>				
Ring Fringe	500		<u>0</u>	<u>0</u>			<u>0.4</u>				
	750		-	<u>0</u>			<u>0</u>				
	1000		-	<u>0</u>			<u>0</u>				
	Net 0		<u>0.2</u>	<u>4.2</u>			<u>0</u>				
	Collection	23	29								
		Al-Art	Bob								
N. Sargasso Sea	0										
	250		<u>2.0</u>	<u>13.7</u>							
	500		<u>0</u>	<u>0</u>							
	750		<u>0</u>	<u>0</u>							
	1000		-	<u>0</u>							
	Net 0		<u>1.1</u>	<u>0</u>							
N. Sargasso Sea	Collection	25	26				63				
	0										
	250		<u>0</u>	<u>0</u>			<u>1.2</u>				
	500		<u>0</u>	<u>0</u>			<u>0</u>				
	750		<u>0</u>	<u>0</u>			<u>0</u>				
	Net 0		<u>0</u>	0.5			<u>0</u>				

Gonostoma elongatum,
specimens/10,000 m³

SPECIES

FISH VOLUME PER UNIT VOLUME OF WATER BY DEPTH INTERVAL

WITHIN STATIONS, KNORR CRUISES

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
Slope Water	Collection	24	36	38	39	56	57	67	68			
	0	1.79	0	4.23	.04	5.71	.26	0.4	7.67			
	250	2.67	12.1	2.33	16.0	2.06	.28	6.67	9.09			
	500	5.00	0	1.16	-	-	7.95	.89	8.71			
	750	-	0	-	-	-	1.14	2.20	5.18			
	1000 Net 0	3.44	.96	2.21	3.06	15.0	7.08	.38	3.95			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0	0	0	0	46.67	-	0	0	.08	0	.05	0
	250	0	0	7.04	1.00	4.43	0	0	1.38	.78	.37	.81
	500	.92	.34	5.38	0	2.19	0	0	2.29	1.73	2.00	3.60
	750	.06	0	0	1.19	0	2.81	.55	1.96	-	.48	.96
1000 Net 0	1.09	0	1.19	16.4	23.38	.09	1.71	4.29	2.30	.89	.86	
Ring Flank	Collection	22	33									
		Al	Bob									
	0	0	-									
	250	0	.22									
	500	-	4.63									
	750	-	0									
1000 Net 0	.02	4.33										
Ring Fringe	Collection	23	29									
		Al-Art	Bob									
	0	0	0									
	250	0	0									
	500	0	0									
	750	0	0									
1000 Net 0	0	0										
N. Sargasso Sea	Collection	25	26									
	0	0	0									
	250	0	0									
	500	0	0									
	750	0	0									
	1000 Net 0	0	0									

Benthosema glaciale,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
		Collection 24	36	38	39	56	57	67	68			
Slope Water	Depth	0										
		.15	0	.10	0	.03	.04	0	0			
	250	0	.07	0	.04	0	0	.04	0			
	500	0	0	0	-	-	0	0	0			
	750	-	.04	-	-	-	0	0	0			
	1000											
	Net 0	.38	.04	0	0	0	0	0	0			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0											
		.04	0	0	.19	-	0	0	0	0	0	.08
	250	0	.03	.07	0	0	0	0	.33	0	.15	0
	500	0	0	0	0	0	0	.06	0	0	.03	0
	750	0	0	0	0	0	0	0	-	0	0	0
1000												
Net 0	0	0	0	.09	0	0	0	0	0	.04	.05	
Ring Flank	Collection	22	33									
		Al	Bob									
	0											
		.10	-									
	250	0	0									
	500	0	0									
	750	0	0									
1000												
Net 0	0	.08										
Ring Fringe	Collection	23	29									
		Al-Art	Bob									
	0											
		.02	.11									
	250	0	0									
	500	0	.08									
	750	-	0									
1000												
Net 0	.05	.08										
N. Sargasso Sea	Collection		25	26								
	0		0	0								
	250		0	0								
	500		0	0								
	750		0	0								
1000		0	0									
Net 0		0	0									

Benthosema suborbitale,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
Slope Water	Depth	Collection	24	36	38	39	56	57	67	68			
		0	.05	0	0	0	.03	.09	0	.03			
		250	0	.11	0	.12	0	0	.04	0			
		500	0	0	0	-	-	0	0	0			
		750	-	0	-	-	-	0	0	0			
		1000	-	0	-	-	-	0	0	0			
Net 0		.12	0	.06	0	.08	0	0	0				
Ring Center	Depth	Collection	20	35	27	28	32	58	59	61	62	65	66
			AI	AI	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
		0	.02	0	0	.10	-	.62	.27	0	.50	0	.04
		250	0	0	.07	0	0	0	.22	.28	0	.15	0
		500	0	.76	0	0	0	0	.18	0	0	.17	0
		750	0	0	0	0	0	0	0	0	-	0	0
1000		0	0	0	0	0	0	0	0	0	-	0	0
Net 0		.09	.09	0	.09	0	0	.39	0	.15	.11	0	
Ring Flank	Depth	Collection	22	33									
			AI	Bob									
		0											
		250	1.10	-									
		500	.03	0									
		750	-	0									
1000		-	0										
Net 0		.53	.17										
Ring Fringe	Depth	Collection	23	29									
			AI-Art	Bob									
		0											
		250	1.38	1.32									
		500	0	0									
		750	.04	0									
1000		-	0										
Net 0		0	.33										
N. Sargasso Sea	Depth	Collection	25	26									
		0											
		250	0	0									
		500	0	0									
		750	0	1.33									
		1000	0	.26									
Net 0		0	.30										

		Bolinichthys indicus,	
		m1/10,000 m ³	

Bolinichthys indicus,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0									
			<u>1.59</u>	0	<u>1.03</u>	0	.07	<u>.04</u>	.05	<u>.47</u>	
	250		0	0	0	0	1.47	0	2.59	<u>.06</u>	
	500		0	0	0	-	-	<u>.36</u>	0	<u>.32</u>	
	750		0	0	0	-	-	0	0	0	
	1000		-	0	-	-	-	0	0	0	
	Net 0		<u>.31</u>	0	0	0	.05	0	.12	<u>.93</u>	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0										
			<u>.02</u>	0	0	0	0	0	.08	<u>.23</u>	0
	250		0	0	0	0	0	0	1.22	<u>.31</u>	.37
	500		0	0	0	0	0	0	3.21	<u>1.92</u>	<u>1.60</u>
	750		0	0	0	0	0	0	.22	-	.05
Ring Flank	1000		0	0	0	0	0	0	.22	-	.05
	Net 0		<u>.30</u>	0	0	0	0	0	.18	<u>.10</u>	.32
	Collection	22	33				64				
		Al	Bob				Frank				
	0										
			<u>.07</u>	-			<u>.18</u>				
	250		0	0			0				
Ring Fringe	500		0	0			<u>.04</u>				
	750		-	0			<u>.06</u>				
	1000		0	0			<u>.30</u>				
	Net 0		<u>.09</u>	0							
	Collection	23	29								
		Al-Art	Bob								
	0										
N. Sargasso Sea			<u>.20</u>	0							
	250		0	0							
	500		0	0							
	750		0	0							
	1000		-	0							
	Net 0		<u>.05</u>	0							
	Collection	25	26				63				
N. Sargasso Sea											
	0		0	0			<u>.21</u>				
	250		0	0			0				
	500		0	0			<u>.04</u>				
	750		0	0			<u>1.30</u>				
	1000		0	0			<u>.05</u>				
	Net 0		0	0							

Ceratoscopelus maderensis.
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
		Collection	24	36	38	39	56	57	67	68		
Slope Water	Depth	0										
			.33	0	.18	0	.07	.35	0	.73		
	250		0	0	0	0	1.47	0	0	0		
	500		0	0	0	-	-	0	.04	0		
	750		-	.04	-	-	-	0	.24	0		
	1000											
	Net 0		.06	.08	0	.06	.05	.33	0	.37		
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0											
			.30	0	0	.10	.25	0	0	1.82	.05	1.85
	250		0	0	0	0	0	0	0	0	0	0
	500		0	0	0	0	.15	.12	0	.38	0	0
	750		0	0	.04	0	.25	1.00	1.96	-	.19	0
1000												
Net 0		.43	0	0	1.64	0	.14	.73	1.36	.55	.71	.38
Ring Flank	Collection	22	33				64					
		Al	Bob				Frank					
	0											
			2.41				.32					
	250											
	Depth		.03				0					
	500						.04					
750						.11						
1000												
Net 0		.27				.87						
Ring Fringe	Collection	23	29									
		Al-Art	Bob									
	0											
			3.50									
	250		0									
	Depth		.04									
	500											
750												
1000												
Net 0		3.68										
N. Sargasso Sea	Collection		25	26			63					
	0		0	0			.36					
	250		0	0			0					
	Depth		0	0			0					
	500		0	0			0					
	750		0	.05								
	1000											
Net 0		0	0									

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WOODS HOLE OCEANOGRAPHIC INSTITUTION MASS

F/G 8/1

MIDWATER FISH DATA REPORT: COLD CORE RINGS TIME SERIES CRUISES --ETC(U)

MAR 80 R H BACKUS, J E CRADDOCK

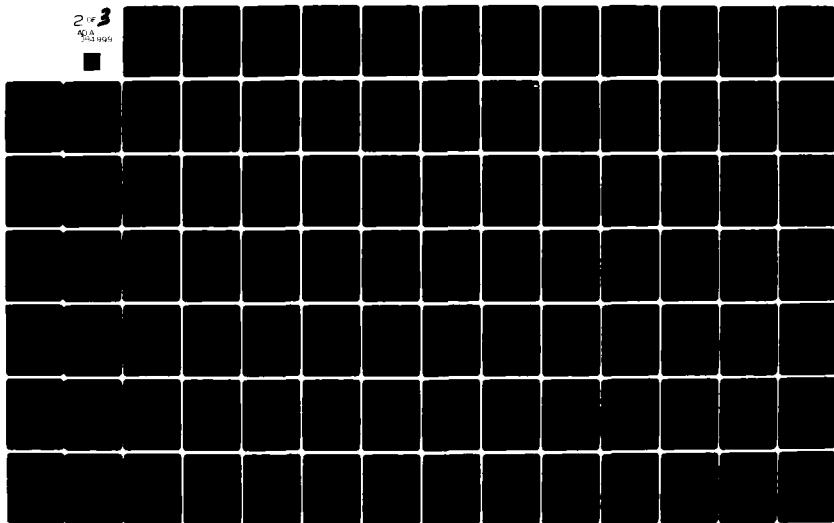
N00014-79-C-0071

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		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71						
		Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>			
Slope Water	Depth	0	<u>.03</u>	0	<u>.13</u>	0	0	<u>0</u>	.15	<u>0</u>			
	250		<u>0</u>	.07	<u>0</u>	.28	0	<u>0</u>	0	<u>0</u>			
	500		<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>			
	750		<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>			
	1000		<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>			
	Net 0		<u>1.38</u>	0	<u>.03</u>	0	0	<u>0</u>	0	<u>0</u>			
		Collection	<u>20</u>	35	27	<u>28</u>	<u>32</u>	<u>58</u>	59	61	<u>62</u>	65	<u>66</u>
			<u>Al</u>	Al	Bob	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	Em	Frank	<u>Frank</u>	Frank	<u>Frank</u>
Ring Center	Depth	0	<u>0</u>	0		<u>.10</u>	-	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
	250		<u>0</u>	0		<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
	500		<u>0</u>	0		<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
	750		<u>0</u>	0		<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
	1000		<u>0</u>	0		<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
	Net 0		<u>0</u>	0		<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
		Collection	<u>22</u>	<u>33</u>									
			<u>Al</u>	<u>Bob</u>									
Ring Flank	Depth	0	<u>0</u>	-									
	250		<u>0</u>	<u>0</u>									
	500		<u>0</u>	<u>0</u>									
	750		<u>0</u>	<u>0</u>									
	1000		<u>0</u>	<u>0</u>									
	Net 0		<u>0</u>	<u>0</u>									
		Collection	<u>23</u>	<u>29</u>									
			<u>Al-Art</u>	<u>Bob</u>									
Ring Fringe	Depth	0	<u>.05</u>	<u>.05</u>									
	250		<u>0</u>	<u>0</u>									
	500		<u>0</u>	<u>0</u>									
	750		<u>0</u>	<u>0</u>									
	1000		<u>0</u>	<u>0</u>									
	Net 0		<u>0</u>	<u>0</u>									
		Collection	<u>25</u>	26									
			<u>0</u>	0									
N. Sargasso Sea	Depth	250	<u>0</u>	0									
	500		<u>0</u>	0									
	750		<u>0</u>	0									
	1000		<u>0</u>	0									
	Net 0		<u>0</u>	0									
		Collection	<u>63</u>										
			<u>0</u>										
			<u>0</u>										
			<u>0</u>										
			<u>0</u>										
			<u>0</u>										
			<u>0</u>										
			<u>0</u>										

Diaphus dumerilii,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	0	0	0	0	0	0	0	0	
		250	0	0	0	0	0	0	0	0	
		500	0	0	0	-	-	0	0	0	
		750	0	0	0	-	-	0	0	0	
		1000	0	0	0	0	0	0	0	0	
	Net 0	0	0	0	0	0	0	0	0	0	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		A1	A1	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	0	0	0	0	-	0	0	0	1.23	0
	250	0	0	15.9	0	0	0	.06	16.1	0	2.59
	500	0	0	0	0	0	0	0	0	0	0
	750	0	0	0	0	0	0	0	0	-	0
Ring Flank	1000	0	0	0	0	0	0	0	0	0	0
	Net 0	0	0	0	0	0	0	0	0	0	0
	Collection	22	33				64				
		A1	Bob				Frank				
	0	0	-				.11				
	250	0	0				0				
Ring Fringe	500	0	0				0				
	750	-	0				0				
	1000	-	0				0				
	Net 0	.02	12.4				0				
	Collection	23	29								
		A1-Art	Bob								
N. Sargasso Sea	0	.15	.05								
	250	0	0								
	500	0	0								
	750	-	0								
	1000										
	Net 0	34.7	1.83								
N. Sargasso Sea	Collection		25	26			63				
	0		0	0			0				
	250		0	0			0				
	500		0	1.33			0				
	750		0	0			0				
	1000		0	0			0				

Diaphus effulgens,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0									
			<u>.05</u>	0	<u>0</u>	0	0	<u>.22</u>	0	<u>0</u>	
	250		<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>	
	500		<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>	
	750		<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>	
	1000		<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	0	<u>0</u>	
		Net 0	<u>.38</u>	0	<u>0</u>	.04	0	<u>0</u>	0	<u>0</u>	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0										
			<u>.22</u>	0	0	<u>.10</u>	<u>.19</u>	.40	0	<u>.18</u>	0
	250		<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	<u>.35</u>
	500		<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	<u>0</u>
Ring Flank	Depth	0									
			<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	<u>0</u>
	250		<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	<u>0</u>
	500		<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	<u>0</u>
	750		<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	<u>0</u>
	1000		<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	.04	<u>0</u>	<u>0</u>
		Net 0	<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	.04	<u>0</u>	<u>0</u>
Ring Fringe	Collection	22	33				64				
		Al	Bob				Frank				
	0										
			<u>.76</u>	-			<u>.24</u>				
	250		<u>0</u>	<u>0</u>			<u>0</u>				
	500		<u>0</u>	<u>0</u>			<u>0</u>				
N. Sargasso Sea	Depth	0									
			<u>0</u>	<u>0</u>			<u>0</u>				
	250		<u>0</u>	<u>0</u>			<u>0</u>				
	500		<u>0</u>	<u>0</u>			<u>0</u>				
	750		<u>0</u>	<u>0</u>			<u>0</u>				
	1000		<u>0</u>	<u>0</u>			<u>0</u>				
		Net 0	<u>0</u>	<u>0</u>			<u>0</u>				
N. Sargasso Sea	Collection	23	29								
		Al-Art	Bob								
	0										
			<u>.45</u>	<u>1.32</u>							
	250		<u>0</u>	<u>0</u>							
	500		<u>0</u>	<u>0</u>							
N. Sargasso Sea	Depth	0									
			<u>0</u>	<u>0</u>							
	250		<u>0</u>	<u>0</u>							
	500		<u>0</u>	<u>0</u>							
	750		<u>0</u>	<u>0</u>							
	1000		<u>0</u>	<u>0</u>							
		Net 0	<u>0</u>	<u>0</u>							
N. Sargasso Sea	Collection	25	26				63				
	0										
			<u>0</u>	<u>0</u>			<u>0</u>				
	250		<u>0</u>	<u>0</u>			<u>0</u>				
	500		<u>0</u>	<u>0</u>			<u>0</u>				
N. Sargasso Sea	Depth	0									
			<u>0</u>	<u>0</u>			<u>0</u>				
	250		<u>0</u>	<u>0</u>			<u>0</u>				
	500		<u>0</u>	<u>0</u>			<u>0</u>				
	750		<u>0</u>	<u>0</u>			<u>0</u>				
	1000		<u>0</u>	<u>0</u>			<u>0</u>				
		Net 0	<u>0</u>	<u>0</u>			<u>0</u>				

Diaphus mollis,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	0	.04	.10	0	0	0	0	0	
		250	0	.18	0	.16	0	0	1.70	0	
		500	0	0	0	-	-	0	0	0	
		750	-	0	-	-	-	0	0	0	
		1000	-	0	-	-	-	0	0	0	
	Net 0	0	0	0	.06	0	0	0	1.73	0	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	.02	0	0	0	-	0	0	0	0	0
	250	0	1.37	0	0	5.57	0	0	7.22	0	0
	500	0	0	0	0	0	0	0	0	0	0
	750	0	0	0	0	0	0	0	0	0	0
Ring Flank	1000	0	0	0	0	0	0	0	0	-	0
	Net 0	0	.09	0	0	0	0	0	0	0	2.14
	Collection	22	33				64				
		Al	Bob				Frank				
	0	.03	-				0				
	250	5.81	0				2.39				
Ring Fringe	500	-	0				0				
	750	-	0				0				
	1000	0	0				0				
	Net 0	.02	1.58				1.74				
	Collection	23	29								
		Al-Art	Bob								
N. Sargasso Sea	0	.02	0								
	250	1.61	0								
	500	0	0								
	750	-	0								
	1000	0	0								
	Net 0	0	0								
N. Sargasso Sea	Collection	25	26				63				
	0	.09	0				0				
	250	0	0				0				
	500	0	0				0				
	750	0	0				0				
	1000	0	0				0				
N. Sargasso Sea	Net 0	0	0				0				
	Collection	25	26				63				
	0	.09	0				0				
	250	0	0				0				
	500	0	0				0				
	750	0	0				0				
N. Sargasso Sea	1000	0	0				0				
	Net 0	0	0				0				
	Collection	25	26				63				
	0	.09	0				0				
	250	0	0				0				
	500	0	0				0				
N. Sargasso Sea	750	0	0				0				
	1000	0	0				0				
	Net 0	0	0				0				
	Collection	25	26				63				
	0	.09	0				0				
	250	0	0				0				
N. Sargasso Sea	500	0	0				0				
	750	0	0				0				
	1000	0	0				0				
	Net 0	0	0				0				
	Collection	25	26				63				
	0	.09	0				0				
N. Sargasso Sea	250	0	0				0				
	500	0	0				0				
	750	0	0				0				
	1000	0	0				0				
	Net 0	0	0				0				
	Collection	25	26				63				
N. Sargasso Sea	0	.09	0				0				
	250	0	0				0				
	500	0	0				0				
	750	0	0				0				
	1000	0	0				0				
	Net 0	0	0				0				

Diaphus rafinesquii,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	0	0	.13	0	.03	.04	0	0	
	250	0	0	.07	0	.04	.06	0	.11	0	
	500	0	0	0	0	-	-	.05	0	.03	
	750	.04	0	0	-	-	-	0	0	0	
	1000	-	0	-	-	-	-	0	0	0	
	Net 0	.06	0	0	0	0	0	0	0	0	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	0	0	0	.05	-	.06	0	0	0	0
	250	0	0	0	0	0	0	.06	.06	0	.04
	500	0	.07	0	0	0	0	.06	0	0	0
	750	.06	0	0	0	0	.06	.06	.04	-	.05
	Net 0	0	.05	0	0	0	.05	.02	0	0	0
Ring Flank	Collection	22	33				64				
		Al	Bob				Frank				
	0	.03	-				.03				
	250	0	0				0				
	500	-	0				0				
	750	-	0				.06				
	Net 0	0	0				0				
Ring Fringe	Collection	23	29								
		Al-Art	Bob								
	0	.02	.05								
	250	0	0								
	500	.04	0								
	750	-	0								
	Net 0	0	.17								
N. Sargasso Sea	Collection	25	26				63				
	0	.04	.05				0				
	250	0	0				0				
	500	0	0				0				
	750	0	0				0				
	1000	0	.05				0				
	Net 0	0	0				0				

Diogenichthys atlanticus,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	0	0	.03	0	.31	.04	.30	.10	
	250	0	0	.04	0	.04	0	0	0	0	
	500	0	0	.04	0	-	-	0	0	0	
	750	.35	0	0	-	-	-	0	0	0	
	1000	-	0	0	-	-	-	0	0	0	
	Net 0	0	0	0	0	0	0	0	.04	.05	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		A1	A1	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	.02	0	0	0	-	0	0	0	0	0
	250	0	.03	0	0	0	.07	0	.11	0	0
	500	0	.28	0	0	0	0	.65	.50	.38	.09
	750	1.24	0	0	0	.06	0	0	0	-	0
Ring Flank	1000	.74	0	0	.73	0	0	.07	.29	.05	.18
	Net 0	.74	0	0	.73	0	0	.07	.29	.05	.18
	Collection	22	33				64				
		A1	Bob				Frank				
	0	.10	-				0				
	250	.06	0				0				
Ring Fringe	500	-	0				.04				
	750	-	0				.33				
	1000	.34	0				0				
	Net 0	.34	0				0				
	Collection	23	29								
		A1-Art	Bob								
N. Sargasso Sea	0	0	0								
	250	0	0								
	500	0	0								
	750	-	.07								
	1000	0	0								
	Net 0	0	0								
N. Sargasso Sea	Collection	25	26				63				
	0	0	0				0				
	250	0	0				0				
	500	0	0				.13				
	750	0	0				.13				
	1000	0	0				.18				
	Net 0	0	0				.18				

Hygophum benoiti,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71								
		Collection	24	36	38	39	56	57	67	68				
Slope Water	Depth	0	0	0	2.56	0	1.57	0	0	0				
	250	0	.89	0	5.20	0	0	0	0	0				
	500	0	0	0	-	-	0	0	0	0				
	750	-	0	-	-	-	0	0	0	0				
	1000	-	1.19	.44	.20	1.07	0	0	0	0				
	Net 0	-	1.19	.44	.20	1.07	0	0	0	0				
		Collection	20	35	27	28	32	58	59	61	62	65	66	
			Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank	
Ring Center	Depth	0	0	0	0	3.81	-	0	0	0	0	0	0	
	250	0	.13	.04	0	0	0	0	0	0	0	0	0	
	500	0	.41	0	0	0	0	0	0	0	0	1.03	0	
	750	0	0	0	0	0	0	0	0	-	0	0	0	
	1000	0	0	0	0	0	0	0	0	-	0	0	0	
	Net 0	0	0	.19	5.45	3.50	0	.85	0	2.85	0	0	0	
		Collection	22	33									64	
			Al	Bob									Frank	
Ring Flank	Depth	0	0	-									0	
	250	0	0	0									0	
	500	-	0	0									0	
	750	-	0	0									0	
	1000	-	0	0									0	
	Net 0	0	2.00	0									0	
		Collection	23	29										
			Al-Art	Bob										
Ring Fringe	Depth	0	.55	.37										
	250	0	0	0										
	500	0	1.25	0										
	750	-	0	0										
	1000	0	.17	0										
	Net 0	0	.17	0										
		Collection	25	26									63	
			.35	0									0	
N. Sargasso Sea	Depth	250	.04	0									0	
	500	0	1.00	0									0	
	750	.06	.11	0									0	
	1000	.25	.40	0									0	
	Net 0	.25	.40	0									0	

Hygophum hygomii,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68		
Slope Water	Depth	0										
			.64	0	.26	0	.14	0	0	0		
	250		0	.21	.02	.08	.71	.44	0	.70		
	500		0	.32	0	-	-	0	0	0		
	750		-	0	-	-	-	0	0	0		
	1000		0	0	0	0	0	0	0	0		
Net 0			.69	0	.03	0	.23	0	0	0		
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0		0	0	2.86	-	0	0	0	0	0	.04
	250		0	.41	0	0	0	0	0	.03	.04	0
	500		0	0	0	0	0	.35	.14	0	.71	0
	750		0	0	0	0	0	0	0	-	0	0
1000			0	0	0	0	0	0	-	0	0	
Net 0			0	0	0	0	0	0	.29	1.2	.46	.22
Ring Flank	Collection	22	33				64					
		Al	Bob				Frank					
	0		-				.03					
	250		0				0					
	500		0				0					
	750		0				0					
1000			0				0					
Net 0			0				0					
Ring Fringe	Collection	23	29									
		Al-Art	Bob									
	0											
	250		.02	.21								
	500		0	0								
	750		0	0								
1000			0									
Net 0			0	.08								
N. Sargasso Sea	Collection		25	26			63					
	0		.09	0			0					
	250		0	0			0					
	500		0	0			0					
	750		0	0			0					
	1000		0	0			0					
Net 0												

Lampanyctus alatus,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	<u>.05</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>.27</u>	
	250		<u>0</u>	0	<u>0</u>	0	.41	<u>0</u>	0	<u>.76</u>	
	500		<u>0</u>	3.60	<u>0</u>	-	-	<u>0</u>	2.96	<u>0</u>	
	750		<u>0</u>	0	-	-	-	<u>0</u>	0	<u>0</u>	
	1000		<u>0</u>	0	<u>0</u>	0	.17	<u>1.08</u>	.31	<u>0</u>	
	Net 0		<u>0</u>	0	<u>0</u>	0					
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0		0	0	<u>0</u>	-	<u>0</u>	0	0	<u>0</u>	<u>.15</u>
	250		<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>.63</u>	0
	500		<u>0</u>	0	<u>0</u>	<u>0</u>	<u>.23</u>	0	1.21	<u>.42</u>	.09
	750		<u>0</u>	0	<u>0</u>	<u>0</u>	<u>.44</u>	.50	.13	-	1.05
Ring Flank	1000		<u>.06</u>	0	<u>0</u>	<u>0</u>	<u>.44</u>	.50	.13	-	1.05
	Net 0		<u>0</u>	0	<u>0</u>	<u>0</u>	<u>.18</u>	.24	.07	<u>1.05</u>	.46
	Collection	22	33				64				
		Al	Bob				Frank				
	0		0				<u>0</u>				
	250		<u>0</u>				<u>0</u>				
Ring Fringe	Depth	500		<u>.55</u>			<u>0</u>				
	750		<u>0</u>				<u>0</u>				
	1000		<u>0</u>				<u>.33</u>				
	Net 0		<u>0</u>	<u>.08</u>			<u>0</u>				
	Collection	23	29								
		Al-Art	Bob								
N. Sargasso Sea	0		<u>0</u>	<u>.05</u>							
	250		<u>0</u>	<u>0</u>							
	500		<u>0</u>	<u>0</u>							
	750		<u>0</u>	<u>0</u>							
	1000		<u>0</u>	<u>.25</u>							
	Net 0		<u>0</u>	<u>.25</u>							
N. Sargasso Sea	Collection	25	26				63				
	0		<u>.26</u>	0			<u>0</u>				
	250		<u>.04</u>	0			<u>0</u>				
	500		<u>0</u>	0			<u>0</u>				
	750		<u>0</u>	.84			<u>.22</u>				
	1000		<u>.06</u>	.10			<u>0</u>				

Lampanyctus crocodilus,

ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68				
Slope Water	Depth	0	<u>.13</u>	0	<u>.18</u>	0	0	<u>0</u>	0	<u>0</u>				
	250	<u>0</u>	0	<u>.19</u>	0	0	<u>.44</u>	0	<u>.48</u>					
	500	<u>0</u>	0	<u>0</u>	-	-	<u>0</u>	.04	<u>.10</u>					
	750	-	0	-	-	-	<u>0</u>	0	<u>0</u>					
	1000													
	Net 0	<u>0</u>	.12	<u>.53</u>	0	.58	<u>.71</u>	.54	<u>0</u>					
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66		
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank		
	0	<u>0</u>	0	0	<u>0</u>	-	<u>0</u>	0	0	<u>0</u>	0	<u>.04</u>		
	250	<u>2.25</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>.06</u>	0	<u>0</u>		
	500	<u>0</u>	.34	0	<u>1.09</u>	<u>.19</u>	<u>.77</u>	0	0	<u>.08</u>	0	<u>.04</u>		
	750	<u>0</u>	1.11	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	-	0	<u>0</u>		
Ring Flank	1000													
	Net 0	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	.27	0	<u>0</u>	.0	<u>.03</u>		
	Collection	22	33											
		Al	Bob											
	0	<u>0</u>	-											
	250	<u>0</u>	<u>0</u>											
Ring Fringe	Depth	500	<u>0</u>											
	750	-	<u>0</u>											
	1000													
	Net 0	<u>0</u>	<u>0</u>											
	Collection	23	29											
		Al-Art	Bob											
N. Sargasso Sea	0													
	250	<u>.95</u>	<u>1.58</u>											
	Depth	500	<u>.26</u>	<u>.95</u>										
	750	<u>0</u>	<u>0</u>											
	1000	-	<u>0</u>											
	Net 0	<u>0</u>	<u>7.08</u>											
N. Sargasso Sea	Collection	25	26											
	0													
	250	<u>.17</u>	0											
	Depth	500	<u>0</u>	0										
	750	<u>0</u>	.73											
N. Sargasso Sea	1000	<u>0</u>	.74											
	Net 0	<u>0</u>	0											
	Collection	63												
	0													
	250	<u>.08</u>												
N. Sargasso Sea	Depth	500	<u>0</u>											
	750	<u>0</u>												
	1000	<u>1.52</u>												
	Net 0	<u>2.5</u>												

Lampanyctus cuprarius,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>			
Slope Water	Depth	0	<u>.28</u>	0	<u>0</u>	0	0	<u>0</u>	0	<u>.03</u>			
	250		<u>0</u>	0	<u>0</u>	0	.06	<u>0</u>	0	<u>0</u>			
	500		<u>0</u>	.28	<u>0</u>	-	-	<u>0</u>	.04	<u>0</u>			
	750		-	0	-	-	-	<u>0</u>	0	<u>0</u>			
	1000		-	0	-	-	-	<u>0</u>	0	<u>0</u>			
	Net 0		<u>0</u>	0	<u>0</u>	.01	0	<u>0</u>	0	<u>0</u>			
Ring Center	Depth	Collection	<u>20</u>	35	27	<u>28</u>	<u>32</u>	<u>58</u>	59	61	<u>62</u>	65	<u>66</u>
	0		<u>Al</u>	<u>Al</u>	<u>Bob</u>	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>
	250		<u>.04</u>	0	0	<u>0</u>	-	<u>0</u>	0	0	<u>.09</u>	0	<u>.42</u>
	500		<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>.07</u>	0	0	<u>.03</u>	0	<u>0</u>
	750		<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>.08</u>	.12	.43	<u>.04</u>	.17	<u>.04</u>
	1000		<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>.19</u>	0	0	-	0	<u>0</u>
	Net 0		<u>.09</u>	0	0	<u>0</u>	<u>0</u>	<u>.05</u>	.07	0	<u>.50</u>	0	<u>.30</u>
Ring Flank	Depth	Collection	<u>22</u>	<u>33</u>									
	0		<u>Al</u>	<u>Bob</u>									
	250		<u>.14</u>	-									
	500		<u>0</u>	<u>0</u>									
	750		-	<u>0</u>									
	1000		-	<u>0</u>									
	Net 0		<u>.34</u>	<u>.33</u>									
Ring Fringe	Depth	Collection	<u>23</u>	<u>29</u>									
	0		<u>Al-Art</u>	<u>Bob</u>									
	250		<u>1.25</u>	<u>.26</u>									
	500		<u>0</u>	<u>0</u>									
	750		<u>0</u>	<u>0</u>									
	1000		-	<u>0</u>									
	Net 0		<u>.11</u>	<u>0</u>									
N. Sargasso Sea	Depth	Collection		<u>25</u>	26								
	0			<u>0</u>	0								
	250			<u>0</u>	0								
	500			<u>0</u>	0								
	750			<u>0</u>	0								
	1000			<u>0</u>	.26								
	Net 0		<u>0</u>	0									

Lampanyctus photonotus,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0	0	0	.03	0	.11	.04	0	.33			
	250	0	0	0	0	0	.18	0	0	0			
	500	0	0	.04	0	-	-	0	0	0			
	750	-	0	0	-	-	-	0	0	0			
	1000	0	0	0	0	0	.02	0	0	0			
	Net 0	0	0	0	0	0	0	0	0	0			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66	
		A1	A1	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank	
	0	.04	0	0	0	-	0	0	0	1.82	0	.88	
	250	.17	0	.11	0	0	0	0	.67	.03	.19	0	
	500	0	0	0	0	0	1.15	1.24	.29	0	1.71	0	
	750	0	0	0	0	0	1.06	.83	0	-	0	0	
Ring Flank	1000	0	0	0	0	0	1.06	.83	0	-	0	0	
	Net 0	.52	.27	0	0	.17	.09	.29	.18	1.95	.43	.22	
	Collection	22	33				64						
		A1	Bob				Frank						
	0	1.03	-				.11						
	250	0	.33				0						
Ring Fringe	500	-	0				0						
	750	-	0				0						
	1000	.14	.25				.17						
	Net 0	.14	.25				.17						
	Collection	23	29										
		A1-Art	Bob										
N. Sargasso Sea	0	.88	.21										
	250	0	0										
	500	.09	0										
	750	-	.07										
	1000	.05	.50										
	Net 0	.05	.50										
N. Sargasso Sea	Collection	25	26				63						
	0	.04	0				.44						
	250	0	0				0						
	500	0	.07				0						
	750	.06	0				.13						
	1000	0	0				.14						

Lampanyctus pusillus,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65			Oct-Nov 77 KNORR 71						
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0	0	0	0	0	0	0	0	0			
	250	0	0	0	0	0	0	0	0	0			
	500	0	0	0	-	-	-	0	0	0			
	750	-	0	-	-	-	-	0	0	0			
	1000	0	0	0	0	0	0	0	0	0			
	Net 0	0	0	0	0	0	0	0	0	0			
		Collection	20	35	27	28	32	58	59	61	62	65	66
			Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
Ring Center	Depth	0	.08	0	0	0	-	0	0	0	0	0	0
	250	0	0	0	0	0	0	0	0	0	0	.04	0
	500	0	0	0	0	0	0	0	.06	.21	0	0	0
	750	0	0	0	0	0	0	0	0	0	-	0	0
	1000	0	0	0	0	0	0	0	0	0	-	0	0
	Net 0	0	0	0	0	0	0	.14	.10	0	0	0	.05
		Collection	22	33			64						
			Al	Bob			Frank						
Ring Flank	Depth	0	.14	-			0						
	250	0	0	0			0						
	500	-	0	0			0						
	750	-	0	0			0						
	1000	0	0	0			0						
	Net 0	0	0	0			0						
		Collection	23	29									
			Al-Art	Bob									
Ring Fringe	Depth	0	.10	0			<u>Lepidophanes gaussi,</u> ml/10,000 m ³						
	250	0	0	0									
	500	0	0	0									
	750	-	0	0									
	1000	0	0	0									
	Net 0	.16	.42	0									
		Collection	25	26			63						
		0	0	0			.04						
N. Sargasso Sea	Depth	250	0	0			0						
	500	0	0	0			0						
	750	0	.53	0			0						
	1000	0	0	0			.09						
	Net 0	0	0	0			0						

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0											
			.08	0	.05	0	.06	.04	0	.03			
	250		0	.71	0	.52	2.12	0	0	0			
	500		0	.08	0	-	-	0	0	0			
	750		-	0	-	-	-	0	0	0			
	1000		-	0	-	-	-	0	0	0			
Net 0			.56	.15	0	0	.93	0	.04	0			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66	
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank	
	0		.36	0	0	.14	-	0	0	0	.77	0	1.54
	250		0	0	.07	0	0	0	0	.11	0	0	0
	500		0	0	0	0	0	0	2.14	0	1.69	0	0
	750		0	0	0	0	0	0	0	-	0	0	0
1000			0	0	0	0	0	0	0	0	0	0	
Net 0			.09	0	0	0	0	0	1.89	0	.89	0	
Ring Flank	Collection	22	33										
		Al	Bob										
	0		0	-									
	250		0	0									
	500		0	0									
	750		0	0									
1000			0	0									
Net 0			0	0									
Ring Fringe	Collection	23	29										
		Al-Art	Bob										
	0		.08	.79									
	250		0	0									
	500		0	0									
	750		0	0									
1000			0	0									
Net 0			.11	.17									
N. Sargasso Sea	Collection	25	26										
		0	0										
	250		0	0									
	500		0	0									
	750		0	0									
	1000		0	0									
Net 0			0	0									

Lepidophanes guentheri,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	<u>24</u>	36	<u>38</u>	39	56	<u>57</u>	67	<u>68</u>			
Slope Water	Depth	0	<u>4.36</u>	0	<u>.31</u>	0	1.29	<u>2.39</u>	5.50	<u>1.17</u>			
	250		<u>0</u>	0	<u>0</u>	.08	0	<u>1.20</u>	0	<u>0</u>			
	500		<u>0</u>	0	<u>0</u>	-	-	<u>.27</u>	0	<u>0</u>			
	750		-	0	-	-	-	<u>0</u>	0	<u>0</u>			
	1000												
	Net 0		<u>7.81</u>	0	<u>0</u>	.05	0	<u>.54</u>	.77	<u>3.26</u>			
		Collection	<u>20</u>	35	27	<u>28</u>	<u>32</u>	<u>58</u>	59	61	<u>62</u>	65	<u>66</u>
			<u>Al</u>	<u>Al</u>	<u>Bob</u>	<u>Bob</u>	<u>Bob</u>	<u>Em</u>	<u>Em</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>	<u>Frank</u>
Ring Center	Depth	0	<u>.16</u>	0	0	<u>0</u>	-	.44	0	0	<u>.64</u>	0	<u>.15</u>
	250		<u>0</u>	.03	0	<u>0</u>	<u>0</u>	<u>0</u>	1.11	.44	<u>0</u>	.74	<u>0</u>
	500		<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	<u>0</u>
	750		<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	-	0	<u>0</u>
	1000												
	Net 0		<u>.09</u>	.14	0	<u>0</u>	<u>.06</u>	<u>.27</u>	.10	1.00	<u>.25</u>	.11	<u>.27</u>
		Collection	<u>22</u>	<u>33</u>			<u>64</u>						
			<u>Al</u>	<u>Bob</u>			<u>Frank</u>						
Ring Flank	Depth	0	<u>0</u>	-			<u>.38</u>						
	250		<u>0</u>	<u>0</u>			<u>0</u>						
	500		-	<u>0</u>			<u>0</u>						
	750		-	<u>0</u>			<u>0</u>						
	1000		<u>0</u>	<u>.08</u>									
	Net 0		<u>0</u>	<u>.08</u>			.35						
		Collection	<u>23</u>	<u>29</u>									
			<u>Al-Art</u>	<u>Bob</u>									
Ring Fringe	Depth	0	<u>0</u>	<u>.32</u>									
	250		<u>0</u>	<u>0</u>									
	500		<u>0</u>	<u>.08</u>									
	750		-	<u>0</u>									
	1000												
	Net 0		<u>0</u>	<u>.08</u>									
		Collection			<u>25</u>	26	<u>63</u>						
N. Sargasso Sea	Depth	0			<u>.17</u>	0	<u>0</u>						
	250				<u>0</u>	.06	<u>0</u>						
	500				<u>0</u>	0	<u>0</u>						
	750				<u>0</u>	0	<u>0</u>						
	1000				<u>0</u>	0	<u>0</u>						
	Net 0				<u>0</u>	0	<u>0</u>						

Lobianchia dofleini,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	.03	0	0	0	.43	0	0	.67	
	250		0	.25	0	.20	0	0	.33	0	
	500		0	0	.02	-	-	0	0	0	
	750		-	.04	-	-	-	0	0	0	
	1000		0	.08	.12	.03	.43	.33	0	0	
	Net 0		0								
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	0	0	0	.05	-	0	0	0	0	0
	250	0	0	0	0	0	0	0	0	0	0
	500	0	.07	0	0	0	0	0	0	0	0
	750	0	0	0	0	0	0	0	0	0	0
	Net 0	0	0	0	0	0	0	0	.18	0	0
Ring Flank	Collection	22	33				64				
		Al	Bob				Frank				
	0	0	-				0				
	250	0	0				0				
	500	-	0				0				
	750	-	0				0				
	Net 0	0	.08				.04				
Ring Fringe	Collection	23	29								
		Al-Art	Bob								
	0	0	.11								
	250	0	0								
	500	0	0								
	750	-	0								
	Net 0	0	0								
N. Sargasso Sea	Collection		25	26			63				
	0		0	0			0				
	250		0	0			0				
	500		0	0			0				
	750		0	0			0				
	1000		0	0			0				
	Net 0		0	0			0				

Myctophum affine,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
		Collection	24	36	38	39	56	57	67	68			
Slope Water	Depth	0	.08	0	.03	0	.03	.04	.05	.03			
	250		.03	.14	.02	.04	0	0	0	0			
	500		0	0	0	-	-	0	0	0			
	750		-	0	-	-	-	0	0	0			
	1000												
	Net 0		.12	0	0	0	0	0	0	0			
		Collection	20	35	27	28	32	58	59	61	62	65	66
			Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
Ring Center	Depth	0	0	0	0	.05	-	0	0	.08	0	0	.12
	250		.08	.03	.07	0	0	.07	.06	.33	.03	.15	0
	500		0	.03	.04	0	0	0	0	0	0	0	0
	750		0	0	0	0	0	0	0	0	-	0	0
	1000		0	0	0	.09	0	0	0	0	.05	0	0
	Net 0		-	-	-	-	-	-	-	-	-	-	-
		Collection	22	33									
			Al	Bob									
Ring Flank	Depth	0											
	250		.07	-									
	500		0	.11									
	750		-	0									
	1000		-	0									
	Net 0		.09	.08									
		Collection	23	29									
			Al-Art	Bob									
Ring Fringe	Depth	0											
	250		.12	.53									
	500		0	.05									
	750		0	0									
	1000		-	0									
	Net 0		0	.08									
		Collection	25	26									
N. Sargasso Sea	Depth	0											
	250												
	500												
	750												
	1000												
	Net 0												

Notolychnus valdiviac,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71							
Slope Water	Depth	Collection	24	36	38	39	56	57	67	68			
		0	0	0	.97	0	0	3.48	0	.80			
		250	0	0	0	0	2.71	0	0	0			
		500	0	0	0	-	-	0	.70	0			
		750	-	.29	-	-	-	0	1.80	0			
		1000	0	.04	0	.05	1.50	.58	0	.47			
Net 0		0											
Ring Center	Depth	Collection	20	35	27	28	32	58	59	61	62	65	66
			Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
		0	0	0	0	.43	-	0	0	0	0	0	0
		250	0	0	0	0	0	0	0	0	0	0	0
		500	0	0	0	0	0	0	0	0	0	0	0
		750	0	.15	0	0	0	0	0	.70	-	0	0
1000		0	0	0	0	0	0	0	0	.70	0	0	
Net 0		0	0	0	0	0	0	0	0	.70	0	0	
Ring Flank	Depth	Collection	22	33									
			Al	Bob									
		0	0	-									
		250	0	0									
		500	0	0									
		750	0	0									
1000		0	0										
Net 0		0	.08										
Ring Fringe	Depth	Collection	23	29									
			Al-Art	Bob									
		0	0	0									
		250	0	0									
		500	0	0									
		750	0	.08									
1000		0	0										
Net 0		0	.25										
N. Sargasso Sea	Depth	Collection	25	26									
		0	0	0									
		250	0	0									
		500	0	0									
		750	.05	0									
		1000	0	1.32									
Net 0		0	.25										

Notoscopelus resplendens,
m1/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
Slope Water	Collection	24	36	38	39	56	57	67	68			
	0	0	.04	.43	0	0	0	0	0			
	250	0	0	0	0	0	0	0	.03			
	500	0	0	0	-	-	0	0	0			
	750	-	0	-	-	-	0	0	0			
	1000	0	0	0	0	0	0	0	0			
Net 0		0	0	0	0	0	0	0	0			
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0	0	0	0	0	-	0	0	0	.05	.75	.58
	250	2.50	.20	0	0	2.14	0	.56	6.11	0	3.33	0
	500	0	0	0	0	0	0	0	0	0	0	0
	750	0	0	0	0	0	0	0	0	-	0	0
1000		0	0	0	0	0	0	0	0	0	0	0
Net 0		.04	.68	0	0	0	.41	.02	1.79	.10	0	0
Ring Flank	Collection	22	33									
		Al	Bob									
	0	0	0									
	250	1.03	1.11									
	500	-	0									
	750	-	0									
1000		0	0									
Net 0		.02	2.08									
Ring Fringe	Collection	23	29									
		Al-Art	Bob									
	0	.25	0									
	250	0	.21									
	500	0	0									
	750	-	0									
1000		0	0									
Net 0		0	11.08									
N. Sargasso Sea	Collection	25	26									
	0	0	0									
	250	.43	0									
	500	0	0									
	750	0	0									
	1000	0	0									
Net 0		.06	0									

Argyropelecus aculeatus,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	0	0	.08	.04	0	0	0	0	
	250	0	0	0	.05	0	0	0	.04	.03	
	500	0	0	0	0	-	-	0	0	0	
	750	-	0	-	-	-	-	0	0	0	
	1000	0	0	0	0	0	.08	.17	.15	.30	
	Net 0	0	0	0	0	0	0	0	0	0	
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		AI	AI	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	0	.07	0	0	-	.06	0	0	0	0
	250	0	.43	0	0	0	.13	0	.06	.22	.07
	500	.61	0	0	0	0	.15	1.47	0	0	0
	750	0	0	0	0	0	0	0	0	-	0
Ring Flank	1000	0	0	0	0	0	0	0	0	0	0
	Net 0	.13	1.00	0	.45	0	.27	.39	.04	.05	0
	Collection	22	33				64				
		AI	Bob				Frank				
	0	0	0				.03				
	250	0	0				.83				
Ring Fringe	500	1.35	0				.33				
	750	-	0				0				
	1000	-	0				.13				
	Net 0	.23	0								
	Collection	23	29								
		AI-Art	Bob								
N. Sargasso Sea	0	.03	0								
	250	.13	.05								
	500	.17	.58								
	750	-	0								
	1000	.05	.83								
	Net 0										
N. Sargasso Sea	Collection	25	26				63				
	0	0	0				0				
	250	.79	.18				.38				
	500	0	0				.48				
	750	0	0				0				
	1000	.38	0				.23				

Argyropolecus hemigymnus,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71					
		Collection	24	36	38	39	56	57	67	68	
Slope Water	Depth	0	0	.07	0	0	0	.78	0	0	
	250	0	0	0	0	0	0	.12	0	0	
	500	1.91	.96	2.33	-	-	-	1.36	.33	1.61	
	750	-	1.07	-	-	-	-	1.14	.72	0	
	1000	.94	1.92	0	.97	.47	.63	0	0		
	Net 0										
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank
	0	0	0	0	0	-	0	0	0	0	0
	250	0	0	0	0	0	0	0	0	0	0
	500	0	.48	.38	1.78	.06	.08	0	0	0	.08
	750	0	.56	0	0	0	.38	.83	.13	-	0
	1000	.04	.05	0	.64	.61	.86	.02	0	.25	0
Ring Flank	Collection	22	33				64				
		Al	Bob				Frank				
	0	0	0				0				
	250	0	0				0				
	500	-	.13				.37				
	750	-	0				1.22				
	1000	.45	.33				.87				
Ring Fringe	Collection	23	29								
		Al-Art	Bob								
	0	0	0								
	250	0	0								
	500	0	0								
	750	-	1.29								
	1000	0	2.17								
N. Sargasso Sea	Collection	25	26				63				
	0	0	0				0				
	250	0	0				0				
	500	0	0				.04				
	750	1.19	.42				.30				
	1000	.56	1.25				1.82				
	Net 0										

Sternoptyx diaphana,
ml/10,000 m³

		Nov-Dec 76 KNORR 62		April 77 KNORR 65		Oct-Nov 77 KNORR 71						
Slope Water	Collection	24	36	38	39	56	57	67	68			
	0	14.36	0	0	0	0	0	0	0			
	250	0	0	1.63	0	0	0	0	0			
	500	0	0	0	-	-	0	0	5.16			
	750	-	0	-	-	-	0	0	0			
	1000	9.38	30.96	.88	11.89	1.50	9.17	0	0			
Net 0												
Ring Center	Collection	20	35	27	28	32	58	59	61	62	65	66
		Al	Al	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0	.02	0	0	0	-	0	0	0	.15	0	.08
	250	0	0	5.22	0	35.29	0	0	0	9.38	.07	12.22
	500	-	1.72	35.08	0	0	0	12.35	39.29	0	7.14	0
	750	0	0	0	0	0	0	16.67	0	-	0	0
1000		3.04	0	.38	26.00	27.00	13.64	0	0	.20	0	4.05
Net 0												
Ring Flank	Collection	22	33									
		Al	Bob									
	0	.10	0									
	250	0	0									
	500	-	0									
	750	-	0									
1000		2.27	1.58									
Net 0												
Ring Fringe	Collection	23	29									
		Al-Art	Bob									
	0	.13	5.53									
	250	0	0									
	500	0	0									
	750	-	0									
1000		.11	0									
Net 0												
N. Sargasso Sea	Collection	25	26									
	0	0	0									
	250	0	0									
	500	0	0									
	750	0	0									
	1000	0	0									
Net 0		0	.30									

Gonostoma elongatum,
ml/10,000 m³

SPECIES

NUMBER OF SPECIMENS BY STATION, ALL CRUISES

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68	
	113	32 30 63	107 101	451 128 80 175	
Ring Center	Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 Dave Bob Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank	
Ring Flank	8	1 49 221 (98)	0 140 65 41 46 80	8 6 145 90 113 180	
Ring Fringe	Collection 22 Al	33 30 Bob Bob	51 51 Bob Bob	64 64 Frank Frank	
	4	(21)	6	4	
Sargasso Sea	Collection 23 Al-Art	29 30 Bob Bob	46 46 Bob Bob		
	0	0 0 0	0 0 0		
	Collection	25 26	43 44 45 52	63	
		0 0	0 0 0 0	0	

Benthosema glaciale,
number

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71
Slope Water	Collection <u>24</u>	36 38 39	53 54	56 57 67 68
	<u>11</u>	7 8 1	0 8	1 5 1 0
Ring Center	Collection <u>20</u> Al	35 27 28 32 Al Bob Bob Bob	40 42 Dave Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank
Ring Flank	<u>1</u>	1 4 9 (0)	0 0 0 0 0 0	0 1 7 0 7 4
Ring Fringe	Collection <u>22</u> Al	33 Bob	51 Bob	64 Frank
	<u>6</u>	(1)	3	0
Sargasso Sea	Collection <u>23</u> Al-Art	29 30 Bob Bob	46 Bob	
	<u>2</u>	9 3	0	
	Collection	25 26	43 44 45 52	63
		0 0	1 0 2 0	1
				Benthosema suborbitale, number

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68	
	4	2 1 1	1 1	3 11 2 1	
Ring Center	Collection 20 Al	35 27 28 Al Bob Bob	40 42 Dave Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank	
	8	8 1 3	7 5 (0)	3 21 5 17 17 2	
Ring Flank	Collection 22 Al	33 Bob	51 Bob	64 Frank	
	55	(1)	16	4	
Ring Fringe	Collection 23 Al-Art	29 30 Bob Bob	46 Bob		
	41	12 5	8		
Sargasso Sea	Collection	25 26	43 44 45 52	63	Bolinichthys indicus, number
		0 10	15 2 15 4	11	

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	Nov-Dec 76		April 77		July-Aug 77		Oct-Nov 77	
	KNORR 62		KNORR 65		ENDEAVOR 11		KNORR 71	
Slope Water	Collection							
	24		36	38 39	53 54		56 57 67 68	
	2		3	6 1	7 4		1 5 3 4	
Ring Center	Collection		35	27 28	40 42	49	58 59 61 62 65 66	
	20		AI	Bob Bob	Dave Bob Bob	Bob Bob	Em Frank Frank Frank Frank	
	5		0	1 2	0 4	2	17 13 9 8 5 9	
Ring Flank	Collection		33	33	51		64	
	22		Bob	Bob	Bob		Frank	
	41		(0)		20		17	
Ring Fringe	Collection		29	30	46			
	23		Bob	Bob	Bob			
	105		29	16	15			
Sargasso Sea	Collection		25	26	43 44 45 52		63	
			0	1	40 28 25 10		25	

Ceratoscopelus warmingii,
number

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
	Collection		Collection		Collection		Collection	
Slope Water	24	36	38	39	53	54	56	57 67 68
	6	5	7	10	0	1	0	0 1 0
Ring Center	Collection	35	27	28	40	42	58	59 61 62 65 66
	20 AI	AI	Bob	Bob	Dave	Bob	Em	Em Frank Frank Frank Frank
Ring Flank	0	0	0	1	0	0	0	0 0 0 0 0
	Collection	33	33	32	51	50	64	Frank
	22 AI	Bob	Bob	Bob	Bob	Bob	Frank	
Ring Fringe	0	(0)			0		0	
	Collection	29	30		46			
	23 AI-Art	Bob	Bob		Bob			
Sargasso Sea	1	2	0		0			
	Collection	25	26		43	44	63	
		0	0		0	0	0	

Diaphus dumerilii,
number

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Collection	36	38	39	53	54
24					
Slope Water	0	0	0	0	1
Collection	35	27	28	40	42
20					
AI	AI	Bob	Bob	Dave	Bob
Ring Center	0	1	0	1	0
Collection	33			51	
22					
AI	Bob			Bob	
Ring Flank	1	(1)		0	
Collection	29	30		46	
23					
AI-Art	Bob	Bob		Bob	
Ring Fringe	4	3	1	0	
Collection	25	26		43	44
25					
Sea	0	1		0	0
Collection					
26					
Sargasso Sea					

Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71				
Collection		36	38	39	53	54	56	57	67	68
24										
Slope Water		2	0	0	0	0	0	1	0	0
Collection		35	27	28	40	42	48	49	50	58
20										
AI		AI	Bob	Bob	Dave	Bob	Bob	Bob	Bob	Em
Ring Center		1	0	0	5	1	1	0	5	4
1				(0)						
Collection		33	30	32	51	52	64	61	62	65
22										
AI		Bob	Bob	Bob	Bob	Bob	Frank	Em	Frank	Frank
Ring Flank		7	(0)		15		2	2	1	0
7										
Collection		29	30	30	46	46	43	44	45	52
23										
AI-Art		Bob	Bob	Bob	Bob	Bob				
Ring Fringe		5	5	0	0					
5										
Collection		25	26	26	43	44	63	63	63	63
Sargasso Sea		1	2	2	4	1	0	1	1	0
1										

Diaphus mollis,
number

Nov-Dec 76
KNORR 62

April 77
KNORR 65

July-Aug 77
ENDEAVOR 11

Oct-Nov 77
KNORR 71

Collection

Slope Water

36	38	39	53	54	56	57	67	68
24								
0	3	7	0	0	0	0	2	0

Collection

Ring Center

35	27	28	40	42	47	48	49	50	58	59	61	62	65	66
Al	Bob	Bob	Dave	Bob	Bob	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
32														
Bob														
3	0	0	0	0	0	0	0	0	0	0	2	0	1	2

Collection

Ring Flank

33	51	64
Bob	Bob	Frank
22		
Al		
12	0	2

Collection

Ring Fringe

29	30	46	0	43	44	45	52
Bob	Bob	Bob					
23							
Al-Art							
4	0	0	0	0	0	0	0

Collection

Sargasso Sea

25	26	63
2	0	0

Diaphus rafinesquii,
number

Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
Collection 24		36	38 39	53 54	56 57 67 68		
Slope Water		3	6 1	1 3	2 3 4 1		
Collection 20 AI		35	27 28 Bob Bob	40 42 Dave Bob Bob	47 48 Bob Bob	49 50 Bob Bob	58 59 61 62 65 66 Em Em Frank Frank Frank Frank
Ring Center		1	4 0 1 (0)	6 1 2 0 0 1	6 5 3 0 5 0		
Collection 22 AI		33	30 Bob	51 Bob	64 Frank		
Ring Flank		4	(9)	15	2		
Collection 23 AI-Art		29	30 Bob	46 Bob			
Ring Fringe		7	5 0	8			
Collection		25	26	43 44 45 52	63	Diogenichthys atlanticus, number	
Sargasso Sea		2	2	32 2 11 1	0		

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
	Collection		Collection		Collection		Collection	
Slope Water	24	36	38	39	53	54	56	57 67 68
	1	11	2	1	8	5	15	3 3 2
Ring Center	20	35	27	28	40	42	58	59 61 62 65 66
	Al	Al	Bob	Bob	Dave	Bob	Em	Em Frank Frank Frank Frank
	51	2	0	2	0	5	2	15 14 10 4 24
				(1)				
Ring Flank	22	33			51		64	
	Al	Bob			Bob		Frank	
	16	(0)			11		8	
Ring Fringe	23	29	30		46			
	Al-Art	Bob	Bob		Bob			
	0	4	2		5			
Sargasso Sea	Collection	25	26		43	44	63	
		0	0		9	1	5	

Hygophum benoiti,
number

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71
Slope Water	Collection 24	36 38 39 0 0 0	53 54 0 0	56 57 67 68 8 0 0 0
Ring Center	Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob Bob	58 59 61 62 65 66 Em Em Frank Frank Frank Frank
Ring Flank	Collection 22 Al	9 5 85 0 0 0	51 52 53 54 55 56 Bob Bob Bob Bob Bob Bob	64 65 66 67 68 69 Frank Frank Frank Frank Frank Frank
Ring Fringe	Collection 23 Al-Art	29 30 31 32 Bob Bob Bob Bob	46 47 48 49 50 51 Bob Bob Bob Bob Bob Bob	52 53 54 55 56 57 Bob Bob Bob Bob Bob Bob
Sargasso Sea	Collection	25 26 27 28 29 30	43 44 45 46 47 48	58 59 60 61 62 63

Hygophum hygomii,
number

Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36	38 39	53 54	56 57 67 68		
	9	14	9 1	0 2	7 1 0 1		
Ring Center	Collection 20 Al	35	27 28 Bob Bob	40 42 Dave Bob	48 49 Bob Bob	58 59 Em Em	62 65 66 Frank Frank Frank
	0	0	4 44 (0)	0 3	5 2 2 0	0 1 4 5 11 2	
Ring Flank	Collection 22 Al	33	Bob	51 Bob	64 Frank		
	0	(0)		1	1		
Ring Fringe	Collection 23 Al-Art	29	30 Bob Bob	46 Bob			
	1	6	6	2			
Sargasso Sea	Collection	25	26	43 44 45 52	63		
		1	0	1 0 0 0	0		
							Lampanyctus alatus, number

Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71					
Collection 24	Slope Water	36	38	53	54	56	57	67	68		
		1	0	8	2	8	9	10	2		
Collection 20	Ring Center	35	27	40	42	58	59	61	62	65	66
		Al	Bob	Dave	Bob	Em	Em	Frank	Frank	Frank	Frank
1		0	0	0	12	6	9	8	18	14	6
Collection 22	Ring Flank	33	51	64							
		Al	Bob	Bob		Frank					
0		(2)	2			2					
Collection 23	Ring Fringe	29	30	46							
		Al-Art	Bob	Bob							
0		3	3	3							
Collection	Sargasso Sea	25	26	43	44	63					
		9	19	1	0	2					

Lampanyctus crocodilus,
number

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36	53	54	56
	6	1	0	1	2
		4	0		3
					2
					8
Ring Center	Collection 20	35	40	42	58
	AI	AI	Dave	Bob	Em
	1	27	28	32	59
		Bob	Bob	Bob	Em
		0	1	(1)	61
					Frank
					62
					65
					66
Ring Flank	Collection 22	33	51		64
	AI	Bob	Bob		Frank
	0	(0)	0		7
Ring Fringe	Collection 23	29	46		
	AI-Art	Bob	Bob		
	17	10	1		
Sargasso Sea	Collection	25	43	44	63
		26		45	
				52	
		1	1	3	11
		4		0	

Lampanyctus cuprarius,
number

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
	Collection		Collection		Collection		Collection	
Slope Water	24		36	38 39	53 54	56 57 67 68		
	3		1 0 1		1 2	1 0 1 1		
Ring Center	20		35	27 28 32	40 42	58 59 61 62 65 66		
	AI		AI Bob Bob Bob		Dave Bob Bob Bob Bob Bob	lim lim Frank Frank Frank Frank		
	4		0 0 0 0		0 0 0 0 0 0	10 6 7 17 6 14		
Ring Flank	22		33	30 32	51	64		
	AI		Bob Bob		Bob Bob	Frank		
	3		(1)		3	9		
Ring Fringe	23		29	30 32	46			
	AI-Art		Bob Bob		Bob			
	11		1 2		1			
Sargasso Sea	25		25 26		43 44 45 52	63		
	Collection		0 1		0 1 0 1	3		

Lampanyctus photonotus,
number

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
	Collection		Collection		Collection		Collection	
Slope Water	24	36	38	39	53	54	56	57 67 68
	0	0	0	0	0	1	0	0 0 0
Ring Center	20	35	27	28	40	42	58	59 61 62 65 66
	Al	Al	Bob	Bob	Dave	Bob	Em	Frank Frank Frank Frank Frank
Ring Flank	1	0	0	0	40	2	1	3 1 0 1 2
	22	33	Bob	(0)	51	50	64	
	Al	Bob	Bob	Bob	Bob	Bob	Frank	
Ring Fringe	23	29	30	46	3	46	0	
	Al-Art	Bob	Bob	Bob				
Sargasso Sea	9	2	0	2	43	44	63	
	Collection	25	26	15	45	52	3	
		0	2	5	4	1		

Lepidophanes gaussi,
number

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68
	3	24 4 3	2 2	19 1 1 1
Ring Center	Collection 20 Al	35 27 28 Al Bob Bob	40 42 Dave Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank Frank
	5	0 2 2 2 (0)	0 1 2 2 0 0	0 0 17 7 18 5
Ring Flank	Collection 22 Al	33 Bob	51 Bob	64 Frank
	0	(0)	0	3
Ring Fringe	Collection 23 Al-Art	29 30 Bob Bob	46 Bob	
	2	10 7	1	
Sargasso Sea	Collection	25 26	43 44 45 52	
		0 0	2 0 0 0	

Lepidophanes guentheri,
number

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68	
	54	0 3 5	2 10	13 23 32 34	
Ring Center	Collection 20 AI	35 27 28 32 AI Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob	58 59 61 62 65 66 lim Frank Frank Frank Frank	
	2	4 0 0 0 (1)	1 2 1 9 3 2	4 5 10 7 9 3	
Ring Flank	Collection 22 AI	33 33 Bob Bob	51 51 Bob Bob	64 64 Frank Frank	
	0	(2)	1	6	
Ring Fringe	Collection 23 AI-Art	29 30 Bob Bob	46 46 Bob Bob		
	0	14 0 0	4		
Sargasso Sea	Collection	25 26	43 44 45 52	63	
		2 2	2 2 0 0	0	
					<i>Lobianchia dofleini</i> , number

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
	Collection		Collection		Collection		Collection	
Slope Water	24	36	38	39	53	54	56	57 67 68
	1	12	4	6	0	0	9	2 1 1
Ring Center	20	35	27	28	40	42	58	59 61 62 65 66
	Al	Al	Bob	Bob	Dave	Bob	Em	Em Frank Frank Frank Frank
	0	2	0	1	0	0	0	0 1 0 0 0
Ring Flank	22	33	Bob		51		64	Frank
	Al	Bob			Bob		Frank	
	0	(2)			0		1	
Ring Fringe	23	29	30		46			
	Al-Art	Bob	Bob		Bob			
	0	1	0		0			
Sargasso Sea	Collection	25	26		43	44	63	
		0	0		0	1	0	
						0	0	

Myctophum affine,
number

	Nov-Dec 76		April 77		July-Aug 77		Oct-Nov 77	
	KNORR 62		KNORR 65		ENDEAVOR 11		KNORR 71	
Slope Water	Collection 24		36	38 39	53 54		56 57 67 68	
	14		6	3 2	1 3		4 1 1 2	
Ring Center	Collection 20 Al		35	27 28 Bob Bob	40 42 Dave Bob	47 48 Bob Bob	58 59 61 62 65 66 Jim Em Frank Frank Frank	
	1		3	6 4	4 3	2 1 1 2	1 1 13 5 11 10	
Ring Flank	Collection 22 Al		33	Bob	51 Bob		64 Frank	
	14		(2)		17		4	
Ring Fringe	Collection 23 Al-Art		29	30 Bob Bob	46 Bob			
	15		25	8	1			
Sargasso Sea	Collection		25	26	43 44 45 52		63	
			4	16	15 4 2 0		4	
Notolychmus valdiviae, number								

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68	
	0	4 4 3	0 0	9 6 4 2	
Ring Center	Collection 20 Al	35 27 28 Al Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob Bob	58 59 61 62 65 66 Em Em Frank Frank Frank Frank	
	0	1 0 2	0 0 0 0 0 0	0 0 1 1 0 0	
Ring Flank	Collection 22 Al	33 Bob	51 Bob	64 Frank	
	0	(1)	0	1	
Ring Fringe	Collection 23 Al-Art	29 30 Bob Bob	46 Bob		
Ring	0	3 6	0		
Sargasso Sea	Collection	25 26	43 44 45 52	63	
		1 21	0 0 0 0	0	

Notoscopelus resplendens,
number

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68	
	0	0 4 3	0 4	2 5 2 3	
Ring Center	Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 Dave Bob Bob Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank	
Ring Flank	Collection 22 Al	27 0 2 (0)	23 4 3 2 1 3	31 55 3 5 10	
Ring Fringe	Collection 23 Al-Art	33 29 30 Bob Bob Bob	51 46 Bob Bob	64 Frank	
Sargasso Sea	Collection 10	26 13	17	49	
		25 26	43 44 45 52	63	
		15 1	10 11 4 8	19	
					Argyropelecus hemigymnus, number

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection <u>24</u>	36 38 39	53 54	56 57 67 68	
	8	2 2 8	2 1	2 3 0 1	
Ring Center	Collection 20 Al	35 27 28 32	40 42 47 48 49 50	58 59 61 62 65 66	
		Al Bob Bob Bob Bob Bob Bob	Dave Bob Bob Bob Bob Bob	Em Frank Frank Frank Frank Frank	
Ring Flank	Collection 22 Al	3 2 5 2 (2)	0 1 1 2 0 0	1 2 3 2 2 4	
	13	5	51 Bob	64 Frank	
Ring Fringe	Collection 23 Al-Art	29 30	46 Bob	2	
		Bob Bob	Bob Bob		
Ring Fringe	10	26 10	0		
					Gonostoma elongatum, number
Carrizoso Sea	Collection	25 26	43 44 45 52	63	
		0 1	0 0 6 0	3	

SPECIES

NUMBER OF SPECIMENS PER UNIT VOLUME OF WATER BY STATION,
ALL CRUISES

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
	Collection		Collection		Collection		Collection	
Slope Water	24		36	38 39	53 54		56 57 67 68	
	.8		.1 .2 .1		.1 .1		.3 .6 .1 <.1	
Ring Center	20		35	27 28 32	40 42 47 48 49		58 59 61 62 65 66	
	Al		Al Bob Bob Bob Bob		Dave Bob Bob Bob Bob		Jim Frank Frank Frank Frank	
	1.0		.6 .1 .6 (0)		.7 .4 .3 0 0		.2 1.1 .4 1.6 1.0 .1	
Ring Flank	22		33	33 34	51 52		64 65	
	Al		Bob Bob		Bob Bob		Frank Frank	
	5.8		(.8)		1.4		.2	
Ring Fringe	23		29	30 31	46 47			
	Al-Art		Bob Bob Bob		Bob Bob			
	1.7		1.5 .6		.7			
Sargasso Sea	25		25 26		43 44 45 52		63	
	Collection		0 1.2		1.2 .2 1.3 .3		1.1	

Bolinichthys indicus,
specimens/10,000 m³

	Nov-Dec 76		April 77		July-Aug 77		Oct-Nov 77	
	KNORR 62		KNORR 65		ENDEAVOR 11		KNORR 71	
Slope Water	Collection 24		36	38 39	53 54		56 57 67 68	
	2.7		0 .1 0		.5 6.0		1.5 1.1 7.7 6.2	
Ring Center	Collection 20 Al		35 27 28 32		40 42 47 48 49 50		58 59 61 62 65 66	
	3.3		Al Bob Bob Bob Bob Bob		Dave Bob Bob Bob Bob Bob		Em Frank Frank Frank Frank Frank	
Ring Flank	Collection 22 Al		33 33 33		51 51 51		64 64 64	
	1.1		(0) (0) (0)		.2 .2 .2		3.5 3.5 3.5	
Ring Fringe	Collection 23 Al-Art		29 30 30		46 46 46			
	.6		Bob Bob Bob		Bob Bob Bob			
Sargasso Sea	Collection		25 26 26		43 44 45 52		63 63 63	
			0 0 0		.2 0 0 0		4.9 4.9 4.9	

Ceratoscopelus maderensis,
specimens/10,000 m³

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68	
	.4	.4 .2 <.1	.6 .3	.1 .6 .2 .3	
Ring Center	Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob	58 59 61 62 65 66 Jim Frank Frank Frank Frank	
	.1	0 <.1 .5 (0)	0 .3 1.2 .8 .2 1.2	1.9 1.1 .9 .8 .5 .5	
Ring Flank	Collection 22 Al	53 22 Bob Al	51 51 Bob Bob	64 Frank	
	3.8	(0)	1.7	1.9	
Ring Fringe	Collection 23 Al-Art	29 30 Bob Bob	46 Bob		
	8.9	2.9 1.8	1.4		
Sargasso Sea	Collection	25 26	43 44 45 52	63	
		0 .1	3.0 2.4 2.2 .8	2.0	
					<i>Ceratoscopelus warmingii</i> , specimens/10,000 m ³

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71			
Slope Water	Collection 24	36	38	39	53	54	56	57	67	68
	0	0	0	0	0	.1	0	0	0	0
Ring Center	Collection 20	35	27	28	40	42	58	59	61	62
	AI	AI	Bob	Bob	Dave	Bob	Em	Em	Frank	Frank
	0	0	<.1	0	.1	0	0	.1	.4	.1
Ring Flank	Collection 22	33			51		64			
	AI	Bob			Bob		Frank			
	.1	(.8)			0		<.1			
Ring Fringe	Collection 23	29	30		46					
	AI-Art	Bob	Bob		Bob					
	.6	.9	.1		0					
Ring Fringe	Collection	25	26		43	44	63			
		0	.1		0	0	0			
Sargasso Sea										

Diaphus effulgens,
specimens/10,000 m³

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
	Collection		Collection		Collection		Collection	
Slope Water	24		36	38 39	53 54	56	57 67 68	
	0		.1	.5 .5	0 0	0	0 .2 0	
Ring Center	Collection		35	27 28 32	40 42 47 48 49 50	58	59 61 62 65 66	
	20		Al	Bob Bob Bob	Dave Bob Bob Bob Bob Bob	Lim	Em Frank Frank Frank Frank	
	.1		.5	0 0 0 (0)	0 0 0 0 0 0	0	0 .1 0 .2 .1	
Ring Flank	Collection		33	33	51	64		
	22		Bob	Bob	Bob	Frank		
	1.3		(5.8)		0	.1		
Ring Fringe	Collection		29	30	46			
	23		Bob	Bob	Bob			
	.2		0	0 0	0			
Sargasso Sea	Collection		25	26	43 44 45 52	63		
			.1	0	0 0 0 0	0		

Diaphus rafinesquii,
specimens/10,000 m³

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68	
	.1	.5 .1 .1	.7 .4	1.1 .2 .3 .1	
Ring Center	Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob Bob	58 59 61 62 65 66 Jim Em Frank Frank Frank Frank	
	6.9	.1 0 .9 (0)	0 .4 .1 .2 0 .3	.2 1.3 1.9 .7 .3 1.9	
Ring Flank	Collection 22 Al	33 Bob	51 Bob	64 Frank	
	1.3	(0)	.9	.5	
Ring Fringe	Collection 23 Al-Art	29 30 Bob Bob	46 Bob		
	0	.4 .2	.5		
Sargasso Sea	Collection	25 26	43 44 45 52	63	
		0 0	.7 .1 .8 .2	.6	
					Hygophum benoiti, specimens/10,000 m ³

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71											
Slope Water	Collection																	
	24		36	38	39	53	54	56	57	67	68							
	0		2.4	2.2	5.2	0	0	.7	0	0	0							
Ring Center	Collection																	
	20		35	27	28	32	40	42	47	48	49	50	58	59	61	62	65	66
	Al		Al	Bob	Bob	Bob	Dave	Bob	Bob	Bob	Bob	Bob	Em	Em	Frank	Frank	Frank	Frank
	0		.4	.6	20.5	(14.4)	0	.2	0	0	.1	0	0	.2	0	.8	.1	0
Ring Flank	Collection																	
	22		33				51						64					
	Al		Bob				Bob						Frank					
Ring Fringe	Collection																	
	23		29	30			46											
	Al-Art		Bob	Bob			Bob											
Ring	<.1		6.4	3.2			0											
Sargasso Sea	Collection		25	26			43	44	45	52			63					
			2.3	2.3			.1	0	.2	0			0					

Hygophum hygomi,
specimens/10,000 m³

Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71				
Collection <u>24</u>		36	<u>38</u>	39	<u>53</u>	54	56	<u>57</u>	67	<u>68</u>
<u>.2</u>		<.1	0	<.1	<u>.1</u>	.2	<.1	0	.1	<u><.1</u>
Slope Water										
Collection <u>20</u> Al		35	27	<u>28</u>	<u>40</u>	42	<u>58</u>	59	61	<u>62</u>
<u>.5</u>		Al	Bob	Bob	Dave	Bob	Lim	Em	Frank	Frank
Ring Center		0	0	0	0	0	1.0	.6	.6	<u>3.0</u>
				(0)						<u>.2</u>
										<u>.9</u>
Collection <u>22</u> Al		<u>33</u>			<u>51</u>		<u>64</u>			
<u>.3</u>		Bob			Bob		Frank			
Ring Flank		(.8)			<u>.3</u>					
Collection <u>23</u> Al-Art		29	30		46					
<u>.4</u>		Bob	Bob		Bob					
Ring Fringe		.1	<u>.2</u>		.1					
Collection <u>25</u>		25	26		43	44	<u>63</u>			
Sargasso Sea										

Lampanyctus photonotus,
specimens/10,000 m³

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71
Collection	24	36	53	56
Slope Water		38	54	57
	0	0	0	68
	0	0	.1	0
	0	0	0	0
Collection	20	35	40	58
Ring Center	Al	Al	Dave	Em
Ring Center	20	27	42	59
	Al	Bob	Bob	Em
	20	28	49	61
	Al	Bob	Bob	Frank
	20	32	50	62
	Al	Bob	Bob	Frank
	20	39	51	65
	Al	Bob	Bob	Frank
	20	40	52	66
	Al	Bob	Bob	Frank
	20	41	53	67
	Al	Bob	Bob	Frank
	20	42	54	68
	Al	Bob	Bob	Frank
	20	43	55	69
	Al	Bob	Bob	Frank
	20	44	56	70
	Al	Bob	Bob	Frank
	20	45	57	71
	Al	Bob	Bob	Frank
	20	46	58	72
	Al	Bob	Bob	Frank
	20	47	59	73
	Al	Bob	Bob	Frank
	20	48	60	74
	Al	Bob	Bob	Frank
	20	49	61	75
	Al	Bob	Bob	Frank
	20	50	62	76
	Al	Bob	Bob	Frank
	20	51	63	77
	Al	Bob	Bob	Frank
	20	52	64	78
	Al	Bob	Bob	Frank
	20	53	65	79
	Al	Bob	Bob	Frank
	20	54	66	80
	Al	Bob	Bob	Frank
	20	55	67	81
	Al	Bob	Bob	Frank
	20	56	68	82
	Al	Bob	Bob	Frank
	20	57	69	83
	Al	Bob	Bob	Frank
	20	58	70	84
	Al	Bob	Bob	Frank
	20	59	71	85
	Al	Bob	Bob	Frank
	20	60	72	86
	Al	Bob	Bob	Frank
	20	61	73	87
	Al	Bob	Bob	Frank
	20	62	74	88
	Al	Bob	Bob	Frank
	20	63	75	89
	Al	Bob	Bob	Frank
	20	64	76	90
	Al	Bob	Bob	Frank
	20	65	77	91
	Al	Bob	Bob	Frank
	20	66	78	92
	Al	Bob	Bob	Frank
	20	67	79	93
	Al	Bob	Bob	Frank
	20	68	80	94
	Al	Bob	Bob	Frank
	20	69	81	95
	Al	Bob	Bob	Frank
	20	70	82	96
	Al	Bob	Bob	Frank
	20	71	83	97
	Al	Bob	Bob	Frank
	20	72	84	98
	Al	Bob	Bob	Frank
	20	73	85	99
	Al	Bob	Bob	Frank
	20	74	86	100
	Al	Bob	Bob	Frank
	20	75	87	101
	Al	Bob	Bob	Frank
	20	76	88	102
	Al	Bob	Bob	Frank
	20	77	89	103
	Al	Bob	Bob	Frank
	20	78	90	104
	Al	Bob	Bob	Frank
	20	79	91	105
	Al	Bob	Bob	Frank
	20	80	92	106
	Al	Bob	Bob	Frank
	20	81	93	107
	Al	Bob	Bob	Frank
	20	82	94	108
	Al	Bob	Bob	Frank
	20	83	95	109
	Al	Bob	Bob	Frank
	20	84	96	110
	Al	Bob	Bob	Frank
	20	85	97	111
	Al	Bob	Bob	Frank
	20	86	98	112
	Al	Bob	Bob	Frank
	20	87	99	113
	Al	Bob	Bob	Frank
	20	88	100	114
	Al	Bob	Bob	Frank
	20	89	101	115
	Al	Bob	Bob	Frank
	20	90	102	116
	Al	Bob	Bob	Frank
	20	91	103	117
	Al	Bob	Bob	Frank
	20	92	104	118
	Al	Bob	Bob	Frank
	20	93	105	119
	Al	Bob	Bob	Frank
	20	94	106	120
	Al	Bob	Bob	Frank
	20	95	107	121
	Al	Bob	Bob	Frank
	20	96	108	122
	Al	Bob	Bob	Frank
	20	97	109	123
	Al	Bob	Bob	Frank
	20	98	110	124
	Al	Bob	Bob	Frank
	20	99	111	125
	Al	Bob	Bob	Frank
	20	100	112	126
	Al	Bob	Bob	Frank
	20	101	113	127
	Al	Bob	Bob	Frank
	20	102	114	128
	Al	Bob	Bob	Frank
	20	103	115	129
	Al	Bob	Bob	Frank
	20	104	116	130
	Al	Bob	Bob	Frank
	20	105	117	131
	Al	Bob	Bob	Frank
	20	106	118	132
	Al	Bob	Bob	Frank
	20	107	119	133
	Al	Bob	Bob	Frank
	20	108	120	134
	Al	Bob	Bob	Frank
	20	109	121	135
	Al	Bob	Bob	Frank
	20	110	122	136
	Al	Bob	Bob	Frank
	20	111	123	137
	Al	Bob	Bob	Frank
	20	112	124	138
	Al	Bob	Bob	Frank
	20	113	125	139
	Al	Bob	Bob	Frank
	20	114	126	140
	Al	Bob	Bob	Frank
	20	115	127	141
	Al	Bob	Bob	Frank
	20	116	128	142
	Al	Bob	Bob	Frank
	20	117	129	143
	Al	Bob	Bob	Frank
	20	118	130	144
	Al	Bob	Bob	Frank
	20	119	131	145
	Al	Bob	Bob	Frank
	20	120	132	146
	Al	Bob	Bob	Frank
	20	121	133	147
	Al	Bob	Bob	Frank
	20	122	134	148
	Al	Bob	Bob	Frank
	20	123	135	149
	Al	Bob	Bob	Frank
	20	124	136	150
	Al	Bob	Bob	Frank
	20	125	137	151
	Al	Bob	Bob	Frank
	20	126	138	152
	Al	Bob	Bob	Frank
	20	127	139	153
	Al	Bob	Bob	Frank
	20	128	140	154
	Al	Bob	Bob	Frank
	20	129	141	155
	Al	Bob	Bob	Frank
	20	130	142	156
	Al	Bob	Bob	Frank
	20	131	143	157
	Al	Bob	Bob	Frank
	20	132	144	158
	Al	Bob	Bob	Frank
	20	133	145	159
	Al	Bob	Bob	Frank
	20	134	146	160
	Al	Bob	Bob	Frank
	20	135	147	161
	Al	Bob	Bob	Frank
	20	136	148	162
	Al	Bob	Bob	Frank
	20	137	149	163
	Al	Bob	Bob	Frank
	20	138	150	164
	Al	Bob	Bob	Frank
	20	139	151	165
	Al	Bob	Bob	Frank
	20	140	152	166
	Al	Bob	Bob	Frank
	20	141	153	167
	Al	Bob	Bob	Frank
	20	142	154	168
	Al	Bob	Bob	Frank
	20	143	155	169
	Al	Bob	Bob	Frank
	20	144	156	170
	Al	Bob	Bob	Frank
	20	145	157	171
	Al	Bob	Bob	Frank
	20	146	158	172
	Al	Bob	Bob	Frank
	20	147	159	173
	Al	Bob	Bob	Frank
	20	148	160	174
	Al	Bob	Bob	Frank
	20	149	161	175
	Al	Bob	Bob	Frank
	20	150	162	176
	Al	Bob	Bob	Frank
	20	151	163	177
	Al	Bob	Bob	Frank
	20	152	164	178
	Al	Bob	Bob	Frank
	20	153	165	179
	Al	Bob	Bob	Frank
	20	154	166	180
	Al	Bob	Bob	Frank
	20	155	167	181
	Al	Bob	Bob	Frank
	20	156	168	182
	Al	Bob	Bob	Frank
	20	157	169	183
	Al	Bob	Bob	Frank
	20	158	170	184
	Al	Bob	Bob	Frank
	20	159	171	185
	Al	Bob	Bob	Frank
	20	160	172	186
	Al	Bob	Bob	Frank
	20	161	173	187
	Al	Bob	Bob	Frank
	20	162	174	188
	Al	Bob	Bob	Frank
	20	163	175	189
	Al	Bob	Bob	Frank
	20	164	176	190
	Al	Bob	Bob	Frank
	20	165	177	191
	Al	Bob	Bob	Frank
	20	166	178	192
	Al	Bob	Bob	Frank
	20	167	179	193
	Al	Bob	Bob	Frank
	20	168	180	194
	Al	Bob	Bob	Frank
	20	169	181	195
	Al	Bob	Bob	Frank
	20	170	182	196
	Al	Bob	Bob	Frank
	20	171	183	197
	Al	Bob	Bob	Frank
	20	172	184	198
	Al	Bob	Bob	Frank
	20	173	185	199
	Al	Bob	Bob	Frank
	20	174	186	200
	Al	Bob	Bob	Frank
	20	175	187	201
	Al	Bob	Bob	Frank
	20	176	188	202
	Al	Bob	Bob	Frank
	20	177	189	203
	Al	Bob	Bob	Frank
	20	178	190	204
	Al	Bob	Bob	Frank
	20	179	191	205
	Al	Bob	Bob	Frank
	20	180	192	206
	Al	Bob	Bob	Frank
	20	181	193	207
	Al	Bob	Bob	Frank
	20	182	194	208
	Al	Bob	Bob	Frank
	20	183	195	209
	Al	Bob	Bob	Frank
	20	184	196	210
	Al	Bob	Bob	Frank
	20	185	197	211
	Al	Bob	Bob	Frank
	20	186	198	212
	Al	Bob	Bob	Frank
	20	187	199	213
	Al	Bob	Bob	Frank
	20	188	200	214
	Al	Bob	Bob	Frank
	20	189	201	215
	Al	Bob	Bob	Frank
	20	190	202	216
	Al	Bob	Bob	Frank
	20	191	203	217
	Al	Bob	Bob	Frank
	20	192	204	218
	Al	Bob	Bob	Frank
	20	193	205	219
	Al	Bob	Bob	Frank
	20	194	206	220
	Al	Bob	Bob	Frank
	20	195	207	221
	Al	Bob	Bob	Frank
	20	196	208	222
	Al	Bob	Bob	Frank
	20	197	209	223
	Al	Bob	Bob	Frank
	20	198	210	224
	Al	Bob	Bob	Frank
	20	199	211	225
	Al	Bob	Bob	Frank
	20	200	212	226
	Al	Bob	Bob	Frank
	20	201	213	227
	Al	Bob	Bob	Frank
	20	202	214	228
	Al	Bob	Bob	Frank
	20	203	215	229
	Al	Bob	Bob	Frank
	20	204	216	230
	Al	Bob	Bob	Frank
	20	205	217	231
	Al	Bob	Bob	Frank
	20	206	218	232
	Al	Bob	Bob	Frank
	20	207	219	233
	Al	Bob	Bob	Frank

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71
Slope Water	Collection 24 <u>.7</u>	36 38 39 <u>.2</u> <u>.2</u> <u>.3</u>	53 54 <u>.2</u> <u>.2</u>	56 57 67 68 <u>.1</u> <u>.1</u> <u>0</u> <u><.1</u>
Ring Center	Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank Frank
Ring Flank	Collection 22 Al	33 22 27 28 32 Bob Bob Bob Bob Bob	51 40 42 47 48 49 50 Bob Bob Bob Bob Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank Frank
Ring Fringe	Collection 23 Al-Art	29 30 30 32 Bob Bob Bob Bob	46 40 42 47 48 49 50 Bob Bob Bob Bob Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank Frank
Sargasso Sea	Collection 25 Al	25 26 27 28 32 Al Bob Bob Bob Bob	43 44 45 48 49 50 Bob Bob Bob Bob Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank Frank

Lepidophanes guentheri,
specimens/10,000 m⁵

	Nov-Dec 76		April 77		July-Aug 77		Oct-Nov 77	
	KNORR 62		KNORR 65		ENDEAVOR 11		KNORR 71	
Slope Water	Collection							
	24		36	38 39	53 54		56 57 67 68	
Ring Center								
	20		35	27 28 32	40 42 47 48 49 50		58 59 61 62 65 66	
Ring Flank	Al		Al	Bob	Dave Bob Bob Bob Bob Bob		Em Frank Frank Frank Frank	
	0		<.1	0 .1	0 0 0 0 0 0 0		0 0 .2 0 0 0	
Ring Fringe	Collection							
	22		33	30	51		64	
Ring Fringe	Al-Art		Bob	Bob	Bob		Frank	
	0		(1.7)	0	0		.2	
Sargasso Sea								
	23		29	30	46			
Sargasso Sea	Al-Art		Bob	Bob	Bob			
	0		.1	0	0			
Sargasso Sea	Collection							
	25		25	26	43 44 45 52		63	
Sargasso Sea								
	0		0	0	0 .1 0 0		.1	

Nyctophum affine,
specimens/10,000 m³

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68
	2.2	.3 .1 .2	.1 .3	.3 .1 .1 .1
Ring Center	Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob Bob	58 59 61 62 65 66 Em Em Frank Frank Frank Frank
	.1	.1 .3 1.0 (0)	.4 .2 .2 .1 .1 .2	.1 .1 .1 .4 .5 .5
Ring Flank	Collection 22 Al	33 Bob	51 Bob	64 Frank
	1.3	(.8)	1.5	.3
Ring Fringe	Collection 23 Al-Art	29 30 Bob Bob	46 Bob	
	.6	2.0 .9	.1	
				<u>Notolychnus valdiviae,</u> specimens/10,000 m ³
Sargasso Sea	Collection	25 26	43 44 45 52	63
		.2 1.5	1.0 .3 .2 0	.2

Notolychnus valdiviae,
specimens/10,000 m³

	Nov-Dec 76 KNORR 62			April 77 KNORR 65			July-Aug 77 ENDEAVOR 11			Oct-Nov 77 KNORR 71		
Slope Water	Collection 24	36	38	39	53	54			56	57	67	68
	0	.2	.2	.2	0	0			.9	.5	.2	.1
Ring Center	Collection 20	35	27	28	40	42	47	48	49	50	58	59
	Al	Al	Bob	Bob	Dave	Bob	Bob	Bob	Bob	Bob	Em	Em
	0	<.1	0	.1	0	0	0	0	0	0	0	0
				(0)							Frank	Frank
											65	66
Ring Flank	Collection 22	33			51						64	
	Al	Bob			Bob						Frank	
	0	(.8)			0						<.1	
Ring Fringe	Collection 23	29	30		46							
	Al-Art	Bob	Bob		Bob							
	0	1.0	.7		0							
Ring Fringe												

Notoscopelus resplendens,
specimens/10,000 m³

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
Slope Water	Collection <u>24</u>	36 38 39	53 54	56 57 67 68				
	<u>0</u>	0 .2 .2	0 .3	.2 1.1 .1 .2				
Ring Center	Collection <u>20</u> Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank				
	<u>1.2</u>	3.4 0 0 .9 (0)	2.3 .3 .3 .2 .1 .3	4.1 4.8 .5 .4 .5 .5				
Ring Flank	Collection <u>22</u> Al	33 30 Bob Bob	51 52 Bob Bob	64 Frank				
	<u>4.4</u>	0	1.5	3.1				
Ring Fringe	Collection <u>23</u> Al-Art	29 30 Bob Bob	46 Bob					
	<u>1.0</u>	8.6 1.4	.5					
Sargasso Sea	Collection	25 26	43 44 45 52	63				
	<u>1.5</u>	.1	.8 .9 .3 .7	1.6				
					Argyropelecus hemigymnus, specimens/10,000 m ³			

Argyropelecus hemigymnus,
specimens/10,000 m³

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water					
Collection					
24	36	38	53	54	56
					57
					67
					68
	.4	.2	.2	.1	.2
					.7
					0
					.1
Ring Center					
Collection					
20	35	27	40	42	47
AI	AI	Bob	Dave	Bob	Bob
					48
					49
					50
					Bob
	.3	.1	0	.1	.1
		.5			.2
					.3
					.1
					.2
Ring Flank					
Collection					
22	33		51		64
AI	Bob		Bob		Frank
	.8	2.2	0		.1
Ring Fringe					
Collection					
23	29	30	46		
AI-Art	Bob	Bob			
	1.6	1.7	0		
		1.1			
Sargasso Sea					
Collection					
25	25	26	43	44	45
					52
	0	.3	0	0	.5
					0
					.1
					.1

Gonostoma elongatum,
specimens/10,000 m³

SPECIES

FISH VOLUME PER UNIT VOLUME OF WATER BY STATION,

ALL CRUISES

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68	
	3.72	2.00 2.39 3.93	1.68 1.23	11.06 4.80 1.46 6.03	
Ring Center	Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob	58 Em 59 61 62 65 66 Em Frank Frank Frank Frank	
Ring Flank	.67	.04 2.15 14.29 (23.33)	0 .94 .58 .83 .19 1.05	.40 .93 2.86 1.47 1.12 1.10	
Ring Fringe	Collection 22 Al	33 Bob	51 Bob	64 Frank	
	.02	(4.33)	.51	.04	
Ring Fringe	Collection 23 Al-Art	29 30 Bob Bob	46 Bob		
Ring Fringe	0	0 0 0	0		
Sargasso Sea	Collection 25	26	43 44 45 52	63	
	0	0 0 0 0	0 0 0 0	0	
					Benthosema glaciale, ml/10,000 m ³

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
	Collection							
Slope Water	24	36	38	39	53	54	56	57 67 68
	.07	.01	.03	.02	.01	.01	.06	.01 .01 <.01
Ring Center	Collection	35	27	28	40	42	58	59 61 62 65 66
	20	Al	Bob	Bob	Dave	Bob	Em	Em Frank Frank Frank Frank
	<.01	.14	.01	.06 (0)	.03	.01	.08	.29 .04 .14 .10 .01
Ring Plank	Collection	33			51		64	
	22	Bob			Bob		Frank	
	.54	(.17)			.22		<.01	
Ring Fringe	Collection	29	30		46			
	23	Bob	Bob		Bob			
	.24	.18	.06		.02			
Sanquassio Sea	Collection	25	26		43	44	63	
		0	.35		.03	.01	.09	

Bolinichthys indicus,
ml/10,000 m³

Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
Collection 24		36	38 39	53 54	56 57 67 68		
	.42	0	.17 0	.03 .25	.24 .05 .39 .57		
Collection 20 Al		35	27 28 Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank		
	.15	0	0 0 0 (0)	0 .20 .08 .09 .06 .03	0 0 0 .68 .08 .79 .34		
Collection 22 Al		33	Bob	51 Bob	64 Frank		
	.07	(0)		.01	.19		
Collection 23 Al-Art		29	30 Bob Bob	46 Bob			
	.06	0	0 0	.02			
Collection		25	26	43 44 45 52	63		
		0	0	.01 0 0 0 0	.24		
Ceratoscopelus maderensis, ml/10,000 m³							

	Nov-Dec 76		April 77		July-Aug 77		Oct-Nov 77	
	KNORR 62		KNORR 65		ENDEAVOR 11		KNORR 71	
Slope Water	Collection							
	24		36	38 39	53 54		56 57 67 68	
	.09		.05 .03 .05		.05 .03		.03 .21 .04 .28	
Ring Center	Collection							
	20		35 27 28 32		40 42 47 48 49 50		58 59 61 62 65 66	
	Al		Al Bob Bob Bob		Dave Bob Bob Bob Bob Bob		Em Frank Frank Frank Frank	
	.26		0 .01 .84 (0)		0 .01 .19 .05 .01 .02		.15 .14 .93 .55 .39 .42	
Ring Flank	Collection							
	22		33 33		51 51		64 64	
	Al		Bob Bob		Bob Bob		Frank Frank	
	.59		(0)		.16		.50	
Ring Fringe	Collection							
	23		29 30		46 46			
	Al-Art		Bob Bob		Bob Bob			
	2.43		.35 .42		.09			
Sargasso Sea	Collection							
	25		25 26		43 44 45 52		63 63	
	0		0 .01		.23 .17 .13 .08		.16 .16	

Ceratoscopelus warmingii,
ml/10,000 m³

Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71				
Collection										
24		36	38	39	53	54	56	57	67	68
Slope Water		.01	.04	.04	0	.01	0	0	.02	0
		.70								
Collection										
20		35	27	28	40	42	48	49	50	58
AI		AI	Bob	Bob	Dave	Bob	Bob	Bob	Bob	Em
		0	0	.02	0	0	0	0	0	0
Ring Center										
Collection										
22		33	33	32	51	51	64	65	66	66
AI		Bob	Bob	Bob	Bob	Bob	Frank	Em	Frank	Frank
		0	(0)	(0)	0	0	0	0	0	0
Ring Flank										
Collection										
23		29	30	30	46	46	63	63	63	63
AI-Art		Bob	Bob	Bob	Bob	Bob	Bob	Bob	Bob	Bob
		.01	0	0	0	0	0	0	0	0
Ring Fringe										
Collection										
25		25	26	26	43	44	45	52	52	52
Sea		0	0	0	0	0	0	0	0	0
							</			

Diaphus dumerilii,
ml/10,000 m³

	Nov-Dec 76 KNORR 62			April 77 KNORR 65			July-Aug 77 ENDEAVOR 11			Oct-Nov 77 KNORR 71		
	Collection	24	36	38	39	53	54	56	57	67	68	
Slope Water		0	0	0	0	0	.58	0	0	0	0	
Ring Center	Collection	20	35	27	28	40	42	47	48	49	50	
	Al	Al	Al	Bob	Bob	Dave	Bob	Bob	Bob	Bob	Bob	
Ring Flank		0	0	1.99	0	.01	0	0	.56	0	0	
					(0)							
Ring Fringe	Collection	22	33	51	51	51	51	51	51	51	51	
	Al	Al	Bob	Bob	Bob	Bob	Bob	Bob	Bob	Bob	Bob	
Sargasso Sea		.02	(12.42)	0	0	0	0	0	0	0	0	
Diaphus effulgens, ml/10,000 m ³	Collection	23	29	30	30	46	46	46	46	46	46	
	Al	Al	Bob	Bob	Bob	Bob	Bob	Bob	Bob	Bob	Bob	
		17.40	.92	.07	.07	0	0	0	0	0	0	
	Collection	25	25	26	26	43	44	45	52	52	52	
		0	0	.17	.17	0	0	0	0	0	0	

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68	
	0	.03 .04 .02	0 0	0 0 1.08 0	
Ring Center	Collection 20 Al	35 27 28 Al Bob Bob	40 42 Dave Bob Bob	58 59 61 62 65 66 Em Frank Frank Frank Frank	
	<.01	.22 0 0 (0)	0 0 0 0 0 0	0 0 .90 0 1.07 .47	
Ring Flank	Collection 22 Al	33 Bob	51 Bob	64 Frank	
	.99	(1.58)	0	1.17	
Ring Fringe	Collection 25 Al-Art	29 30 Bob Bob	46 Bob		
	.27	0 0 0	0		
Sargasso Sea	Collection	25 26	43 44 45 52	63	
		.01 0	0 0 0 0	0	
					Diaphus rafinesquii, ml/10,000 m ³

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71
Collection	24	36	38	39
		53	54	56
Slope Water				57
				67
				68

Diogenichthys atlanticus,
ml/10,000 m³

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68	
	.06	.01 <.01 .01	.01 .03	.08 .01 .06 .04	
Ring Center	Collection 20 Al	35 27 28 32	40 42 47 48 49	58 59 61 62 65 66	
	.53	Al Bob Bob Bob Bob	Dave Bob Bob Bob Bob	Em Frank Frank Frank Frank Frank	
		.04 0 .37 (0)	0 .02 .01 .01 0	.01 .12 .22 .07 .10 .24	
Ring Flank	Collection 22 Al	33 Bob	51 Bob	64 Frank	
	.26	(0)	.02	.05	
Ring Fringe	Collection 23 Al-Art	29 30 Bob Bob	46 Bob		
	0	.01 .01	.02		
Sargasso Sea	Collection	25 26	43 44 45 52	63	
		0 0	.01 .01 .01 .01	.12	

lygophum benoiti,
ml/10,000 m³

Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
Collection		Collection		Collection		Collection	
24		36 38 39		53 54		56 57 67 68	
0		.71 .65 .80		0 0		1.06 0 0 0	
Slope Water							
Collection		Collection		Collection		Collection	
20		35 27 28 32		40 42 47 48 49 50		58 59 61 62 65 66	
Al		Al Bob Bob Bob Bob Bob		Dave Bob Bob Bob Bob Bob		Em Frank Frank Frank Frank Frank	
0		.07 .10 3.20 (3.50)		0 .12 0 0 .12 0		0 .43 0 1.43 .13 0	
Ring Center							
Collection		Collection		Collection		Collection	
22		33 33		51 51		64 64	
Al		Bob Bob		Bob Bob		Frank Frank	
0		(2.00)		.07		0	
Ring Flank							
Collection		Collection		Collection		Collection	
23		29 30		46 46		43 44 45 52	
Al-Art		Bob Bob		Bob Bob		.02 .01 .14 0	
.09		.29 .39		0		63	
Ring Fringe							
Collection		Collection		Collection		Collection	
25		25 26		43 44 45 52		63	
Al-Art		Bob Bob		.02 .01 .14 0		0	
.18		.34					
Sargasso Sea							

lygophum hygomi,
ml/10,000 m³

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68
	.45	.07 .06 .01	0 .04	.27 .06 0 .09
King Center	Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob	58 59 61 62 65 66 Lim Em Frank Frank Frank Frank
King Flank	Collection 22 Al	0 .05 .34 (0)	0 .11 .25 .02 .08 0	0 .04 .16 .60 .33 .12
King Fringe	Collection 23 Al-Art	33 30 Bob Bob	51 46 Bob Bob	64 Frank
King Fringe	<.01	(0) .07 .03	.01 .10	<.01
Sargasso Sea	Collection	25 26	43 44 45 52	63
		.01 0	.02 0 0 0	0
				<i>Lampanyctus alatus</i> , ml/10,000 m ³

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71			
Collection	24	36	38	39	53	54	56	57	67	68
Slope Water	.01	.45	0	0	.10	.03	.16	.54	.53	.13
Collection	20	35	27	28	40	42	48	49	50	58
Al	Al	Al	Bob	Bob	Dave	Bob	Bob	Bob	Bob	Em
										Frank
										Frank
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Lampanyctus crocodilus,
ml/10,000 m³

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Collection	24	36 38 39	53 54	56 57 67 68	
Slope Water	.02	.06 .33 0	0 .08	.37 .41 .28 .07	
Collection	20	35 27 28 32	40 42 47 48 49 50	58 59 61 62 65 66	
Ring Center	Al	Al Bob Bob Bob Bob Bob	Dave Bob Bob Bob Bob Bob	Em Frank Frank Frank Frank Frank	
Ring Center	.28	.18 0 .13 (0)	0 0 0 0 0 0	.10 .14 0 .02 0 .03	
Collection	22	33	51	64	
Ring Flank	Al	Bob	Bob	Frank	
Ring Flank	0	(0)	0	.21	
Collection	23	29 30	46		
Ring Fringe	Al-Art	Bob Bob	Bob		
Ring Fringe	.20	3.86 .16	.01		
Collection	25	26	43 44 45 52	63	
Sargasso Sea	.02	.19	.05 .12 .28 0	1.45	

Lampanyctus cuprarius,
ml/10,000 m

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71
Collection	24	36	38	39
Slope Water		53	54	56
	.05	.04	0	.01
		.01	.11	.01
				<.01
Collection	20	35	27	28
Al	Al	Al	Bob	Bob
		32	32	32
		Bob	Bob	Bob
	.05	0	0	0
Ring Center		(0)	0	0
		0	0	0
		0	0	0
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Lampanyctus photonotus,
ml/10,000 m³

Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
Slope Water	Collection						
	24	36	38 39	53 54		56 57 67 68	
Slope Water	0	.01	<.01 0	.01 .11		.07 .01 0 .04	
Ring Center	Collection						
	20	35	27 28	40 42	47 48 49	58 59 61 62 65 66	
	Al	Al	Bob	Dave Bob	Bob Bob Bob	Em Frank Frank Frank Frank	
Ring Flank	.29	.14	.01 0	.01 .19	.03 .02 .19	.32 .41 .21 .71 .45 .22	
Ring Fringe	Collection						
	22	33	30	51		64	
	Al	Bob	Bob	Bob		Frank	
Ring Fringe	.27	(.25)		.02		.10	
Sargasso Sea	Collection						
	23	29	30	46			
	Al-Art	Bob	Bob	Bob			
Sargasso Sea	.19	.29	.09	.03			
Sargasso Sea	Collection						
	25	43	44 45 52	63			
		.02	.05 .03 .03 .05	.14			

Lampanyctus pusillus,
ml/10,000 m³

AD-A084 999

WOODS HOLE OCEANOGRAPHIC INSTITUTION MASS

F/G 8/1

MIDWATER FISH DATA REPORT: COLD CORE RINGS TIME SERIES CRUISES --ETC(U)

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N00014-79-C-0071

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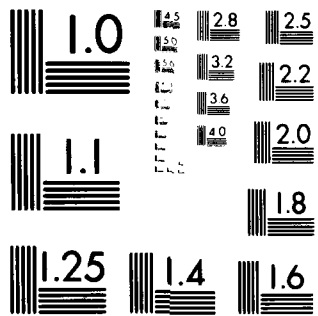
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
	Collection		Collection		Collection		Collection	
Slope Water	24	36	38	39	53	54	56	57 67 68
	0	0	0	0	0	.01	0	0 0 0
Ring Center	20	35	27	28	40	42	58	59 61 62 65 66
	Al	Al	Bob	Bob	Dave	Bob	Em	Em Frank Frank Frank Frank
	.01	0	0	0	.13	.01	0	.06 .03 0 .01 .03
Ring Plank	22	33			51		64	
	Al	Bob			Bob		Frank	
	.03	(0)			.01		0	
Ring Fringe	23	29	30		46			
	Al-Art	Bob	Bob		Bob			
	.10	.21	0		.08			
Sargasso Sea	Collection	25	26		43	44	63	
		0	.07		.14	.03	.02 .03	

Lepidophanes gaussi,
ml/10,000 m³

	Nov-Dec 76		April 77		July-Aug 77		Oct-Nov 77	
	KNORR 62		KNORR 65		ENDEAVOR 11		KNORR 71	
Slope Water	Collection							
	24		36	38	53	54	56	57
				39				67
								68
	.30		.18	.01	.13	.06	.86	.01
				.07				.02
								<.01
King Center	Collection		35	27	40	42	58	59
	20		Al	Bob	Dave	Bob	Em	Em
	Al			Bob		Bob	Frank	Frank
				32		49		61
				Bob		Bob		62
	.09		0	.01	0	.08	0	1.23
				.02		.05	0	.10
				(0)			0	.66
								.19
Ring Flank	Collection		33	22	51		64	
	22		Bob	Al	Bob		Frank	
	Al							
	0		(0)		0		.01	
Ring Fringe	Collection		29	30	46			
	23		Bob	Bob	Bob			
	Al-Art							
	.07		.19	.11	.01			
Sargasso Sea	Collection		25	26	43	44	63	
						45	52	
			0	0	.06	0	0	
						0	0	
							.01	

Lepidophanes guentheri,
ml/10,000 m³

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection <u>24</u>	36 <u>38</u> 39	53 <u>54</u>	56 <u>57</u> 67 <u>68</u>	
	<u>.01</u>	.08 <u>.06</u> .05	0 0	.38 <u>.17</u> .04 <u>.08</u>	
Ring Center	Collection <u>20</u> Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob	58 <u>Em</u> 59 Em 61 Frank 62 Frank 65 Frank 66 Frank	
Ring Flank	Collection <u>22</u> Al	0	0 0 0 0 0 0	0 0 .09 0 0 0	
Ring Fringe	Collection <u>23</u> Al-Art	33 <u>Bob</u> (.08)	51 <u>Bob</u>	64 <u>Frank</u>	
Ring Fringe	Collection <u>29</u> Bob	29 30 46 Bob BOB Bob	0 0	.02	
Sargasso Sea	Collection <u>25</u>	.02 0 26	43 44 45 52		
	0 0	0 .01 0 0	0 0		
					<u>Myctophum affine,</u> ml/10,000 m ³

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
	Collection		Collection		Collection		Collection	
Slope Water	24		36	38 39	53 54	56 57 67 68		
	.08		.02 .01 .01		.01 .01	.01 .01 .01 <.01		
Ring Center	20		35 27 28 32		40 42 47 48 49 50	58 59 61 62 65 66		
	Al		Al Bob Bob Bob Bob Bob		Dave Bob Bob Bob Bob Bob	Em Em Frank Frank Frank Frank		
	.01		.01 .01 .05 (0)		.02 .02 .01 .01 .01 .02	.01 .01 .05 .03 .02 .02		
Ring Flank	22		33		51	64		
	Al		Bob		Bob	Frank		
	.07		(.08)		.04	.02		
Ring Fringe	23		29 30		46			
	Al-Art		Bob Bob		Bob			
	.02		.12 .03		.01			
Sargasso Sea	25		25 26		43 44 45 52	63		
			.02 .10		.04 .02 .01 0	.01		

Notolychmus valdiviae,
ml/10,000 m³

	Nov-Dec 76 KNORR 62			April 77 KNORR 65			July-Aug 77 ENDEAVOR 11			Oct-Nov 77 KNORR 71		
	Collection	24		36	38	39	53	54		56	57	68
Slope Water		0		.06	.16	.04	0	0		1.28	.73	.34
Ring Center	Collection	20		35	27	28	40	42	47	48	49	50
	Al	Al		Al	Bob	Bob	Dave	Bob	Bob	Bob	Bob	Bob
		0		.04	0	.05	0	0	0	0	0	0
Ring Flank	Collection	22		33			51					
	Al	Al		Bob			Bob					
		0		(.08)			0					
Ring Fringe	Collection	23		29	30		46					
	Al-Art	Al-Art		Bob	Bob		Bob					
		0		.14	.09		0					
Sargasso Sea	Collection	25		25	26		43	44	45	52	63	
				.01	.29		0	0	0	0	0	

Notoscopecus resplendens,
ml/10,000 m³

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
	Collection		Collection		Collection		Collection	
Slope Water	24		36	38	53	54	56	57
	0		.01	.07	2.10	0	0	0
Ring Center	20		35	27	40	42	58	61
	Al		Al	Bob	Dave	Bob	Em	Frank
Ring Flank	22		37	0	.08	0	.21	.08
	Al		.34	0	(0)		.06	.51
Ring Fringe	23		33	30	51	50	64	65
	Al-Art		Bob	Bob	Bob	Bob	Frank	Frank
Sargasso Sea	25		5.56	.01	.01		.01	
	.04							
Sargasso Sea	26		43	44	45	52	63	
	.09		.01	.01	.13	.01	.17	
Argyropelecus aculeatus, ml/10,000 m ³								

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
	Collection		Collection		Collection		Collection	
Slope Water	24		36	38 39	53 54	56 57 68		
	0		0	.02 .01	0	.05 .09 .08 .16		
Ring Center	Collection		35	27 28 32	40 42 47 48 49 50	58 59 61 62 65 66		
	20		Al	Bob Bob Bob Bob Bob Bob	Dave Bob Bob Bob Bob Bob Bob	Em Em Frank Frank Frank Frank Frank		
	.14		.57	0 .23 (0)	.21 .05 .01 .08 .01 .02	.18 .38 .03 .06 .01 .01		
Ring Flank	Collection		33	Bob	51	64		
	22		Bob		Bob	Frank		
	.38		0		.03	.22		
Ring Fringe	Collection		29	30	46			
	23		Bob	Bob	Bob			
	.08		.50	.31	.01			
Sargasso Sea	Collection		25	26	43 44 45 52	63		
			.29	.03	.06 .03 .02 .02	.23		

Argyroleleucus hemisymus,
ml/10,000 m

	Nov-Dec 76 KNORR 62		April 77 KNORR 65		July-Aug 77 ENDEAVOR 11		Oct-Nov 77 KNORR 71	
	Collection		Collection		Collection		Collection	
Slope Water	24	36 38 39	53 54	56 57 67 68				
	.79	.73 .39 .61	0 0	.30 1.06 .13 .20				
Ring Center	20	35 27 28 32	40 42 Bob Bob	49 50	58 59 Em Frank Frank Frank Frank	65 66		
	Al	Al Bob Bob Bob	Dave Bob Bob Bob	Bob Bob Bob Bob	Em Frank Frank Frank Frank	Frank Frank Frank Frank		
	.02	.16 .05 .55 (.61)	0 0	.01 .14 .04 .20	.49 .12 .02 .13 0 .01			
Ring Flank	22	33 Bob	51 Bob	64 Frank				
	.30	.18	.01	.64				
Ring Fringe	23	29 30 Bob Bob	46 Bob					
	Al-Art	1.25 .54	.01					
	0							
Sargasso Sea	25	26	43 44 45 52	63				
	.43	.68	.05 .08 .03 .05	.96				

Sternoptyx diaphana,
ml/10,000 m³

	Nov-Dec 76 KNORR 62	April 77 KNORR 65	July-Aug 77 ENDEAVOR 11	Oct-Nov 77 KNORR 71	
Slope Water	Collection 24	36 38 39	53 54	56 57 67 68	
	7.08	15.48 .71 7.43	1.09 .59	.94 4.59 0 .65	
Ring Center	Collection 20 Al	35 27 28 32 Al Bob Bob Bob	40 42 47 48 49 50 Dave Bob Bob Bob Bob Bob	58 59 61 62 65 66 Em Em Frank Frank Frank Frank	
	1.53	.22 5.23 13.00 (27.00)	0 1.35 .12 .93 0 0	6.82 3.63 4.91 1.29 .90 3.57	
Ring Flank	Collection 22 Al	33 Bob	51 Bob	64 Frank	
	1.60	.79	0	.77	
Ring Fringe	Collection 23 Al-Art	29 30 Bob Bob	46 Bob		
	.08	.69 1.02	0		
Sargasso Sea	Collection	25 26	43 44 45 52	63	
	0	.15	0 0 2.59 0	.02	
					$\frac{\text{Gonostoma elongatum,}}{m1/10,000 m^3}$

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