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FROM: Eleanor Bochenek
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SUBJECT: Final Report for NA07NMF4540019

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This is the final report for our grant (NA07NMF4540019) entitled "Supplemental finfish survey targeting Mid-Atlantic Migratory Species. In 2007, four Supplemental Finfish Surveys Targeting Mid-Atlantic Migratory Species were completed. The January field effort sampled a total of 35 stations on the Hudson, Baltimore, and Poor Man's Canyon transects and took place from January 21-February 2, 2007 (Figure 1; Table 1). During this cruise, over 1500 *Illex* squid samples were retained for Lisa Hendrickson (NMFS-NEFSC) for maturity analysis. The March survey occurred from March 18-30, 2007 and a total of 56 stations were sampled on Hudson, Baltimore, Poor Man's, and Alvin Canyon transects (Figure 1; Table 2). In addition, 16 comparison tows were made to evaluate the old survey gear with the dedicated survey gear purchased in March 2006. Sampling performance did not differ between the two nets. The May survey took place on May 2-9, 2007 and sampled Hudson and Baltimore Canyon transects. A total of 28 tows were made during this survey (Figure 1; Table 3). The final survey occurred from November 14-20, 2007 and sampled 28 stations on the Hudson and Baltimore Canyon transects (Figure 1; Table 4). All four surveys conducted during 2007 occurred on the F/V Jason & Danielle out of Montauk, NY. Attached are individual reports summarizing the results for each of the four cruises as well as a manuscript published in 2007 that examines the influence of implementing adaptive stations into a transect-based sampling design. These five documents are being submitted as a final report for the 2007 Supplemental Finfish Survey Targeting Mid-Atlantic Migratory Species.

Figure 1. Location of Alvin, Hudson, Baltimore, and Poor Man's Canyon transects in the Mid-Atlantic.

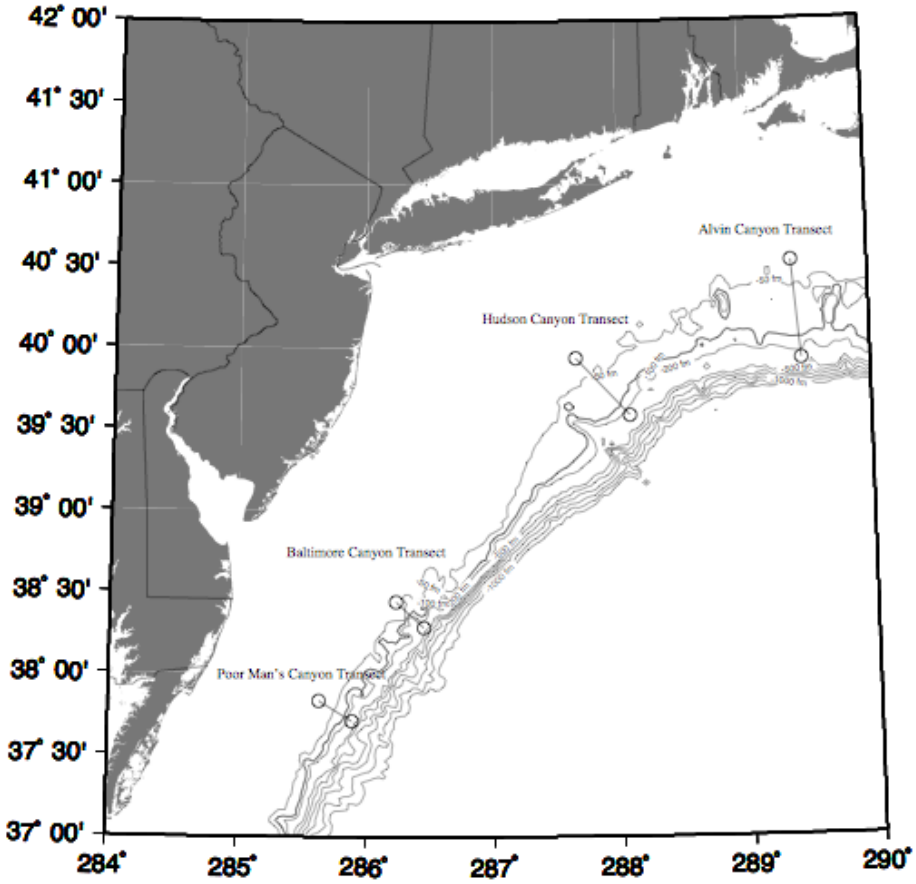

Table 1. Set and haul positions at each target depth sampled during the January 2007 survey.

Tow	Date	Target Depth (fm)	Set Latitude		Set Longitude		Haul Latitude		Haul Longitude	
1	1/22/07	40	39	55.869	72	20.468	39	55.063	72	21.501
2	1/22/07	50	39	48.090	72	10.731	39	48.231	72	9.058
3	1/22/07	60	39	45.876	72	7.249	39	45.578	72	8.621
4	1/22/07	80	39	42.428	72	3.297	39	41.562	72	4.243
5	1/22/07	100	39	39.744	72	1.041	39	40.708	72	0.279
6	1/22/07	200	39	38.189	71	56.985	39	37.085	71	57.432
7	1/22/07	225	39	37.052	71	56.565	39	38.175	71	56.306
8	1/22/07	250	39	37.201	71	56.034	39	36.132	71	56.080
9	1/23/07	150	39	39.613	71	58.113	39	40.679	71	57.624
10	1/23/07	125	39	38.327	72	0.172	39	39.249	71	59.460
11	1/23/07	112	39	40.423	71	59.886	39	41.339	71	58.963
12	1/23/07	137	39	37.020	72	0.791	39	37.926	71	59.940
13	1/23/07	175	39	37.572	71	58.314	39	38.526	71	57.680
14	1/24/07	55	39	45.874	72	9.951	39	46.239	72	8.639
15	1/24/07	45	39	53.448	72	15.978	39	54.487	72	16.585
16	1/28/07	125	38	16.821	73	37.674	38	15.744	73	37.955
17	1/28/07	150	38	16.232	73	37.486	38	17.230	73	36.952
18	1/28/07	200	38	15.772	73	36.595	38	16.824	73	36.808
19	1/28/07	225	38	16.934	73	36.328	38	15.800	73	36.374
20	1/29/07	40	38	22.721	73	47.936	38	22.047	73	49.058
21	1/29/07	50	38	22.337	73	44.467	38	23.025	73	43.419
22	1/29/07	60	38	22.908	73	40.333	38	22.134	73	41.262
23	1/29/07	80	38	17.169	73	38.495	38	16.230	73	39.170
24	1/30/07	100	38	16.737	73	38.113	38	17.648	73	37.281
25	1/30/07	137	38	15.873	73	38.016	38	16.848	73	37.456
26	1/30/07	112	38	17.829	73	36.846	38	16.927	73	37.711
27	1/30/07	90	38	16.650	73	38.450	38	15.718	73	39.138
28	1/30/07	70	38	20.258	73	38.148	38	20.890	73	37.083
29	1/30/07	225	37	45.330	74	9.401	37	44.306	74	9.138
30	1/30/07	200	37	44.896	74	9.680	37	43.911	74	9.032
31	1/31/07	40	37	47.626	74	19.194	37	46.752	74	19.928
32	1/31/07	50	37	47.377	74	17.016	37	46.424	74	17.602
33	1/31/07	60	37	46.579	74	14.076	37	45.598	74	14.716
34	1/31/07	80	37	47.099	74	10.362	37	46.206	74	11.273
35	1/31/07	100	37	45.156	74	11.055	37	44.055	74	11.067

Table 2. Set and haul positions at each target depth sampled during the March 2007 survey.

Tow	Date	Target Depth (fm)	Set Latitude		Set Longitude		Haul Latitude		Haul Longitude	
1	3/19/07	40	38	22.790	73	47.959	38	22.091	73	48.925
2	3/19/07	50	38	22.389	73	44.298	38	23.122	73	43.338
3	3/19/07	60	38	22.912	73	40.216	38	22.217	73	41.233
4	3/19/07	80	38	17.275	73	38.393	38	16.362	73	39.062
5	3/19/07	100	38	17.239	73	37.715	38	18.222	73	36.778
6	3/19/07	125	38	16.821	73	38.101	38	15.740	73	38.101
7	3/19/07	150	38	16.653	73	37.315	38	17.560	73	36.412
8	3/19/07	200	38	16.002	73	36.269	38	15.936	73	36.760
9	3/19/07	225	38	15.758	73	36.411	38	15.758	73	36.309
10	3/20/07	45	38	22.451	73	46.250	38	21.678	73	47.113
11	3/20/07	55	38	22.034	73	43.538	38	22.783	73	42.439
12	3/20/07	112	38	17.974	73	36.793	38	16.971	73	37.699
13	3/20/07	137	38	15.709	73	38.338	38	16.579	73	37.559
14	3/21/07	40	37	47.703	74	19.199	37	46.723	74	19.534
15	3/21/07	50	37	47.346	74	17.033	37	46.365	74	17.513
16	3/21/07	60	37	46.372	74	14.125	37	45.562	74	14.469
17	3/21/07	80	37	47.051	74	10.466	37	46.132	74	11.306
18	3/21/07	100	37	45.301	74	11.075	37	44.791	74	10.986
19	3/21/07	125	37	44.335	74	10.204	37	45.328	74	10.540
20	3/21/07	200	37	44.908	74	9.705	37	43.880	74	9.159
21	3/21/07	225	37	43.752	74	8.814	37	44.810	74	9.354
22	3/22/07	150	37	45.016	74	10.201	37	43.981	74	9.730
23	3/22/07	90	37	45.505	74	11.244	37	46.349	74	10.468
24	3/22/07	70	37	45.962	74	12.058	37	45.059	74	12.706
25	3/27/07	55	37	47.019	74	15.342	37	47.031	74	14.571
26	3/27/07	45	37	45.542	74	19.068	37	46.456	74	18.327
27	3/25/07	40	39	56.024	72	22.088	39	54.995	72	22.148
28	3/25/07	50	39	48.150	72	11.162	39	48.240	72	9.838
29	3/25/07	60	39	45.803	72	8.039	39	45.276	72	9.345
30	3/25/07	80	39	42.538	72	3.215	39	41.603	72	4.009
31	3/25/07	100	39	39.678	72	1.310	39	40.612	72	0.513
32	3/25/07	150	39	39.609	71	58.145	39	40.703	71	57.627
33	3/25/07	200	39	38.256	71	56.912	39	37.117	71	57.326
34	3/25/07	225	39	36.893	71	56.681	39	38.037	71	56.437
35	3/25/07	250	39	37.130	71	56.062	39	35.922	71	56.155
36	3/26/07	125	39	38.071	72	0.339	39	39.087	71	59.618
37	3/26/07	90	39	40.036	72	2.009	39	39.225	72	2.842
38	3/26/07	112	39	40.521	71	59.756	39	41.424	71	58.784
39	3/26/07	70	39	41.281	72	7.219	39	42.092	72	6.255
40	3/26/07	55	39	45.956	72	9.283	39	46.402	72	8.980
41	3/26/07	45	39	53.559	72	16.359	39	54.524	72	16.639
42	3/28/07	40	40	28.747	70	34.164	40	29.049	70	35.247
43	3/28/07	50	40	21.726	70	38.101	40	21.958	70	38.101
44	3/28/07	60	40	16.773	70	36.048	40	16.454	70	34.668
45	3/28/07	80	40	2.685	70	37.922	40	2.931	70	35.614
46	3/28/07	100	40	1.824	70	35.585	40	2.143	70	34.183
47	3/28/07	125	40	0.707	70	34.421	40	1.213	70	33.016
48	3/28/07	150	40	0.074	70	33.07	39	59.532	70	34.419
49	3/28/07	200	39	56.951	70	34.589	39	56.6	70	36.02
50	3/28/07	50	39	56.005	70	35.582	39	56.081	70	34.101
51	3/28/07	250	39	55.049	70	35.274	39	54.943	70	36.847
52	3/29/07	137	40	0.008	70	34.913	40	0.273	70	33.466
53	3/29/07	112	40	1.19	70	35.488	40	1.422	70	34.048
54	3/29/07	90	40	2.636	70	34.85	40	2.222	70	36.18
55	3/29/07	70	40	3.468	70	37.123	40	3.315	70	35.769
56	3/29/07	55	40	18.711	70	36.906	40	19.326	70	38.002

Table 3. Set and haul positions at each target depth sampled during the May 2007 survey.

Tow	Target	Set Latitude	Set Longitude	Haul Latitude	Haul Longitude

	Date	Depth (fm)								
1	5/3/07	40	39	55.714	72	20.649	39	54.922	72	21.584
2	5/3/07	50	39	48.196	72	10.732	39	48.279	72	9.399
3	5/3/07	60	39	45.896	72	7.620	39	45.405	72	8.990
4	5/3/07	80	39	42.451	72	3.207	39	41.608	72	4.116
5	5/3/07	100	39	39.701	72	1.123	39	40.635	72	0.265
6	5/3/07	125	39	38.641	71	59.877	39	39.644	71	59.187
7	5/3/07	150	39	40.019	71	57.748	39	41.158	71	57.299
8	5/3/07	200	39	38.458	71	56.622	39	37.408	71	57.185
9	5/3/07	225	39	37.299	71	56.147	39	38.485	71	56.065
10	5/3/07	250	39	37.681	71	56.072	39	36.446	71	56.090
11	5/4/07	70	39	41.032	72	7.301	39	41.868	72	6.403
12	5/4/07	55	39	45.760	72	9.699	39	46.225	72	8.435
13	5/4/07	45	39	53.694	72	16.069	39	54.738	72	16.040
14	5/4/07	112	39	40.300	72	0.105	39	39.310	72	0.592
15	5/4/07	137	39	37.416	72	0.457	39	38.352	71	59.564
16	5/5/07	40	38	22.008	73	47.837	38	22.281	73	48.891
17	5/5/07	50	38	22.056	73	44.819	38	22.889	73	43.786
18	5/5/07	60	38	22.832	73	40.385	38	22.094	73	41.614
19	5/5/07	80	38	17.669	73	38.089	38	18.631	73	37.313
20	5/5/07	100	38	17.055	73	37.951	38	17.971	73	37.009
21	5/5/07	125	38	16.898	73	37.551	38	15.764	73	38.000
22	5/5/07	150	38	16.421	73	37.471	38	17.310	73	36.531
23	5/5/07	200	38	15.766	73	36.623	38	16.975	73	36.465
24	5/5/07	225	38	16.887	73	36.438	38	15.792	73	36.450
25	5/6/07	137	38	15.929	73	38.021	38	16.917	73	37.361
26	5/6/07	112	38	17.727	73	36.928	38	16.753	73	37.922
27	5/6/07	55	38	21.870	73	43.793	38	22.413	73	42.870
28	5/6/07	45	38	22.757	73	45.421	38	22.204	73	46.479

Table 4. Set and haul positions at each target depth sampled during the November 2007 survey.

Tow	Date	Target Depth (fm)	Set Latitude		Set Longitude		Haul Latitude		Haul Longitude	
1	11/15/07	150	39	39.749	71	58.024	39	40.709	71	57.562
2	11/15/07	125	39	39.608	71	59.279	39	38.729	71	59.924
3	11/15/07	100	39	39.798	72	1.149	39	40.745	72	0.397
4	11/15/07	80	39	42.475	72	3.200	39	41.655	72	4.059
5	11/15/07	60	39	45.936	72	7.228	39	45.626	72	8.470
6	11/15/07	50	39	48.247	72	10.282	39	48.283	72	9.022
7	11/15/07	40	39	54.927	72	21.917	39	55.924	72	22.096
8	11/16/07	40	38	22.926	73	47.732	38	22.316	73	48.608
9	11/16/07	50	38	22.347	73	44.448	38	22.963	73	43.442
10	11/16/07	60	38	22.815	73	40.342	38	22.086	73	41.209
11	11/16/07	80	38	17.117	73	38.568	38	16.241	73	39.198
12	11/16/07	100	38	16.752	73	38.103	38	17.564	73	37.315
13	11/17/07	225	38	16.030	73	36.506	38	17.015	73	36.387
14	11/17/07	200	38	16.595	73	36.672	38	15.728	73	36.634
15	11/17/07	150	38	16.306	73	37.399	38	17.181	73	36.870
16	11/17/07	125	38	16.900	73	37.643	38	15.992	73	37.988
17	11/17/07	137	38	15.810	73	38.152	38	16.609	73	37.567
18	11/17/07	112	38	17.036	73	37.606	38	17.779	73	36.792
19	11/17/07	55	38	22.016	73	43.632	38	22.701	73	42.572
20	11/17/07	45	38	22.386	73	46.347	38	21.577	73	46.965
21	11/18/07	200	39	38.304	71	56.888	39	37.375	71	57.235
22	11/18/07	225	39	36.898	71	56.642	39	37.810	71	56.280
23	11/18/07	250	39	37.248	71	56.113	39	36.262	71	56.171
24	11/19/07	112	39	40.349	71	59.959	39	41.071	71	59.097
25	11/19/07	90	39	40.070	72	2.162	39	39.086	72	2.637
26	11/19/07	70	39	41.192	72	7.283	39	41.891	72	6.387
27	11/19/07	55	39	45.797	72	9.949	39	46.129	72	8.730
28	11/19/07	45	39	53.540	72	16.000	39	54.472	72	16.092