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Results for the 2020 VIMS Industry Cooperative Surveys of the Mid-Atlantic, Nantucket Lightship, Great South Channel, Closed Area I, and Closed Area II Resource Areas

Submitted to:

Sea Scallop Fishing Industry

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VIMS Marine Resource Report No. 2020-10



October 12, 2020

The Virginia Institute of Marine Science (VIMS) conducted high resolution sea scallop dredge surveys of the entire Mid-Atlantic (MAB), the Nantucket Lightship (NLCA), Great South Channel (GSC), Closed Area I (CAI), and Closed Area II (CAII) during July–September 2020. These surveys were funded by the Sea Scallop Research Set-Aside Program (RSA). Exploitable biomass for each survey is shown in Table 1 for each spatially explicit SAMS Area (Scallop Area Management Simulator). SAMS Areas represent management relevant spatial subunits of the resource and explicitly account for differences in recruitment, vital rates, and fishing effort in the forward projection of survey information. Maps of SAMS Areas are provided in Figures 1-5. At the time of the surveys, exploitable biomass estimated from the commercial dredge was 7,443 mt or 16.4 million pounds for the ET Open SAMS Area and 3,081 mt or 6.8 million pounds in the ET Flex SAMS Area. For open bottom in the LI SAMS Area, exploitable biomass was estimated at 6,082 mt or 13.4 million pounds. In the NLCA South Deep SAMS Area, the exploitable biomass was 4,222 mt or 9.3 million pounds. This estimate is lower than total biomass in the SAMS Area and a function of accounting for potential high grading due to scallop sizes observed in this SAMS Area. In the GSC, no data are available for the commercial dredge this year.

The MAB survey was conducted aboard two commercial vessels: *F/V Carolina Capes II* and *F/V Italian Princess* during July 2020. Each vessel completed one survey leg and occupied a total of 450 stations throughout the MAB survey area. The CAI and CAII survey was conducted onboard the *F/V Pyxis* in July 2020 and a total of 111 stations were completed. The *F/V Celtic* conducted the NLCA and GSC survey during September 2020 and occupied a total of 119 survey stations using the commercial dredge. A total of 195 stations were surveyed in the NLCA and GSC with the survey dredge. All vessels towed a NMFS 8-foot survey dredge along with either a 14-foot Coonamessett Farm Turtle Deflector Dredge (CFTDD) or 14-foot New Bedford style commercial dredge. While the comparison of catches between the survey dredge and the commercial dredge are informative on a relative basis, for the purposes of this report, we present only the catch data from the commercial dredges as this information is more applicable to the resource conditions that the industry is likely to encounter. Dredge data were obtained during 15-minute survey tows at 3.8-4.0 kts with a 3:1 scope to depth ratio (Table 2). All surveys this year were delayed due to COVID-19. Typically the MAB survey is conducted in May of a given year and surveys on Georges Bank are completed in June and July of a given year.

Catch data in tabular form is shown in Table 2. The density and number of scallops caught in three size classes (<35 mm, 35–75 mm, and >75 mm) for each tow is shown in Figures 6-8. In Figures

9-11, the shell height frequency distribution from both dredges (survey and commercial) for the different surveys and SAMS Areas are shown.

In addition to the catch data that informed our understanding of scallop abundance and biomass, we also monitored meat quality during each survey. This protocol allowed us to determine the prevalence and intensity of a parasitic nematode observed in the scallop meat. Infected scallops typically present with rust colored lesions on the exterior of the adductor muscle, often opposite the sweet meat. Nematode infected scallops were observed only during the MAB survey with a typical number of nematodes observed per scallop meat ranging from 1-9. The spatial distribution of the nematode prevalence (percent of sampled scallops at a given station with at least one lesion) by year for 2015 - 2020 is shown in Figure 12. Since 2016, nematode infected scallops have also been detected in the HCS, although the distribution is patchy and prevalence is low (20 percent or less of scallops are infected). The distribution of infected scallops observed in 2020 was broader in distribution compared to 2019 for both prevalence and intensity. The ET Open and ET Flex SAMS Areas were identified as hot spots with high proportions of infected scallops, as well as the greatest number of lesions observed per scallop. The distribution of infected scallops in these two areas was patchy in terms of the number of lesions observed per scallop. A higher percentage of infected scallops were also observed in the HCS SAMS Area compared to 2018 and 2019. The number of infected scallops in the southern portion of the resource area has continued to decline since 2018. This decline may be related to a decline in biomass in the southern portion of the resource. Very few infected scallops were observed in the MAB Nearshore, NYB or the open areas off of LI and BI.

Table 1: Exploitable biomass for scallops captured in the commercial dredges during the VIMS/Industry cooperative surveys by survey and SAMS Area during July-September 2020.

Survey	SAMS Area	Exploitable Biomass (mt)	95% CI Lower Bound	95% CI Upper Bound
MAB	BI	498.17	320.03	676.31
	DMV	88.53	0.00	178.85
	ET_Flex	3,080.81	2,352.63	3,808.99
	ET_Open	7,443.41	6,224.35	8,662.47
	HCS	3,601.18	2,849.30	4,353.06
	LI	6,081.67	5,246.47	6,916.87
	MAB_Nearshore	430.34	198.59	662.09
	NYB	2,566.31	2,222.31	2,910.31
	VIR	0.00	0.00	0.00
NL	GSC	-	-	-
	NLS_North	1,311.87	997.11	1,626.63
	NLS_South_Deep*	4,222.01	2,297.21	6,146.81
	NLS_West	152.12	106.71	197.53
	VIMS_45	12.14	2.44	21.84
CA I II	CAI_Sliver	579.93	450.59	709.27
	CAII_Access_SE	1,342.36	818.37	1,866.35
	CAII_Access_SW	2,941.00	878.45	5,003.55
	CAII_Ext	1,468.64	956.06	1,981.22
	SF	801.84	584.18	1,019.50

Table 2: Catch data for the commercial dredges from the VIMS/Industry cooperative surveys completed during July-September 2020. Nematode prevalence (percentage of scallops sampled at a given station infected with nematodes) is also provided for each station.

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
MAB	202003001	36	32.51	74	48.91	0	0.00	0.00	0.00	0
MAB	202003002	36	34.35	74	45.64	0	0.00	0.00	0.00	0
MAB	202003003	36	36.23	74	47.30	0	0.00	0.00	0.00	0
MAB	202003004	36	40.84	74	46.86	0	0.00	0.00	0.00	0
MAB	202003005	36	41.37	74	46.07	0	0.00	0.00	0.00	0
MAB	202003006	36	49.95	74	48.80	0	0.00	0.00	0.00	0
MAB	202003007	36	57.38	74	52.65	0	0.00	0.00	0.00	0
MAB	202003008	36	59.94	74	42.87	0	0.00	0.00	0.00	0
MAB	202003009	37	3.56	74	41.57	0	0.00	0.00	0.00	0
MAB	202003010	37	4.78	74	51.33	0	0.00	0.00	0.00	0
MAB	202003012	37	9.12	74	53.48	0	0.00	0.00	0.00	0
MAB	202003013	37	11.68	74	46.97	0	0.00	0.00	0.00	0
MAB	202003014	37	12.74	74	48.28	0	0.00	0.00	0.00	0
MAB	202003015	37	16.76	74	46.80	0	0.00	0.00	0.00	0
MAB	202003016	37	18.81	74	48.99	0	0.00	0.00	0.00	0
MAB	202003017	37	20.22	74	45.54	0	0.00	0.00	0.00	0
MAB	202003018	37	17.26	74	37.70	0	0.00	0.00	0.00	0
MAB	202003019	37	18.18	74	32.33	0	0.00	0.00	0.00	0
MAB	202003020	37	25.51	74	31.22	0	0.00	0.00	0.00	0
MAB	202003022	37	30.75	74	28.25	0	0.00	0.00	0.00	0
MAB	202003023	37	26.62	74	36.09	0	0.00	0.00	0.00	0
MAB	202003024	37	27.42	74	43.71	0	0.00	0.00	0.00	0
MAB	202003025	37	31.55	74	45.16	0	0.00	0.00	0.00	0
MAB	202003026	37	34.53	74	46.27	0	0.00	0.00	0.00	0
MAB	202003027	37	36.52	74	45.07	0	0.00	0.00	0.00	0
MAB	202003028	37	38.80	74	38.24	0	0.00	0.00	0.00	0
MAB	202003029	37	38.96	74	34.30	0	0.00	0.00	0.00	0
MAB	202003030	37	38.50	74	28.84	0	0.00	0.00	0.00	0
MAB	202003031	37	44.48	74	19.67	0	0.00	0.00	0.00	0
MAB	202003032	37	44.18	74	34.25	0	0.00	0.00	0.00	0
MAB	202003033	37	44.18	74	37.27	0	0.00	0.00	0.00	0
MAB	202003034	37	43.69	74	40.59	0	0.00	0.00	0.00	0
MAB	202003035	37	43.19	74	43.49	0	0.00	0.00	0.00	0
MAB	202003036	37	45.01	74	46.71	0	0.00	0.00	0.00	0
MAB	202003037	37	48.19	74	47.81	0	0.00	0.00	0.00	0
MAB	202003038	37	48.81	74	40.76	0	0.00	0.00	0.00	0
MAB	202003039	37	49.26	74	32.18	0	0.00	0.00	0.00	0

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
MAB	202003040	37	52.15	74	28.11	0	0.00	0.00	0.00	0
MAB	202003041	37	52.74	74	21.11	0	0.00	0.00	0.00	0
MAB	202003042	37	54.94	74	18.18	0	0.00	0.00	0.00	0
MAB	202003043	37	55.74	74	22.43	0	0.00	0.00	0.00	0
MAB	202003044	37	55.93	74	26.10	0	0.00	0.00	0.00	0
MAB	202003045	37	54.65	74	34.82	0	0.00	0.00	0.00	0
MAB	202003046	37	56.89	74	48.11	0	0.00	0.00	0.00	0
MAB	202003047	37	58.64	74	29.49	0	0.00	0.00	0.00	0
MAB	202003048	38	1.05	74	24.39	0	0.00	0.00	0.00	0
MAB	202003049	38	1.73	74	29.79	0	0.00	0.00	0.00	0
MAB	202003050	38	3.42	74	41.73	0	0.00	0.00	0.00	0
MAB	202003051	38	5.97	74	43.89	0	0.00	0.00	0.00	0
MAB	202003052	38	8.45	74	45.68	0	0.00	0.00	0.00	0
MAB	202003053	38	6.71	74	31.93	0	0.00	0.00	0.00	0
MAB	202003054	38	6.16	74	22.73	0	0.00	0.00	0.00	0
MAB	202003055	38	4.38	74	16.20	2	0.13	0.10	0.00	33
MAB	202003056	38	4.52	74	6.22	0	0.00	0.00	0.00	0
MAB	202003057	38	4.25	74	2.99	0	0.00	0.00	0.00	0
MAB	202003058	38	7.14	74	3.69	29	1.59	0.25	0.01	13
MAB	202003059	38	8.76	74	10.59	158	9.28	1.75	0.03	7
MAB	202003060	38	8.74	74	16.35	0	0.00	0.00	0.00	0
MAB	202003061	38	13.62	74	20.83	0	0.00	0.00	0.00	0
MAB	202003062	38	11.69	74	15.12	42	2.94	0.35	0.01	7
MAB	202003063	38	12.05	74	8.13	500	31.87	5.25	0.10	40
MAB	202003064	38	11.61	74	5.00	183	11.11	2.00	0.04	20
MAB	202003066	38	13.94	73	53.28	2	0.07	0.01	0.00	0
MAB	202003067	38	16.64	73	56.10	469	30.44	5.10	0.09	53
MAB	202003068	38	15.10	74	4.14	181	10.83	1.75	0.04	33
MAB	202003069	38	17.03	74	14.19	605	49.58	6.80	0.12	47
MAB	202003070	38	19.74	74	13.46	600	48.53	7.10	0.12	33
MAB	202003072	38	20.80	74	3.63	27	1.77	0.40	0.01	46
MAB	202003073	38	20.55	74	2.07	23	1.54	0.25	0.00	47
MAB	202003074	38	19.10	73	59.75	2	0.14	0.10	0.00	0
MAB	202003075	38	20.23	73	56.04	10	0.56	0.10	0.00	33
MAB	202003076	38	19.03	73	50.68	0	0.00	0.00	0.00	0
MAB	202003077	38	20.15	73	50.67	0	0.00	0.00	0.00	0
MAB	202003078	38	22.42	73	48.90	0	0.00	0.00	0.00	0
MAB	202003079	38	23.03	73	53.18	151	10.72	3.00	0.03	40
MAB	202003080	38	22.98	73	56.84	601	43.29	12.00	0.12	27

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
MAB	202003081	38	22.66	73	59.80	654	45.58	11.00	0.13	60
MAB	202003082	38	25.36	74	0.62	2240	167.52	30.50	0.45	21
MAB	202003083	38	25.40	74	2.58	1988	120.97	27.00	0.40	27
MAB	202003084	38	24.02	74	4.56	641	42.63	10.00	0.13	13
MAB	202003085	38	24.96	74	7.56	601	40.90	7.50	0.12	13
MAB	202003086	38	25.88	74	10.25	170	12.88	2.00	0.03	25
MAB	202003087	38	25.77	74	13.25	61	5.18	1.00	0.01	33
MAB	202003088	38	29.43	74	19.21	2	0.14	0.10	0.00	33
MAB	202003089	38	29.81	74	12.33	227	17.62	2.50	0.05	13
MAB	202003090	38	28.98	74	7.19	680	47.87	7.75	0.14	47
MAB	202003091	38	28.29	74	0.42	798	58.68	8.90	0.16	47
MAB	202003092	38	28.38	73	57.92	646	46.33	7.00	0.13	47
MAB	202003093	38	26.90	73	54.62	1160	79.98	12.90	0.23	60
MAB	202003094	38	25.48	73	51.37	1205	79.91	13.25	0.23	57
MAB	202003095	38	25.22	73	46.20	50	3.16	0.35	0.01	53
MAB	202003096	38	25.42	73	41.84	2	0.07	0.01	0.00	0
MAB	202003097	38	27.14	73	41.79	310	18.36	2.90	0.06	57
MAB	202003098	38	28.97	73	38.70	104	5.53	1.10	0.02	40
MAB	202003099	38	30.34	73	40.97	380	24.37	4.50	0.08	27
MAB	202003100	38	29.85	73	44.27	1058	74.64	14.10	0.21	47
MAB	202003101	38	28.19	73	49.19	1501	105.48	22.80	0.31	47
MAB	202003102	38	29.45	73	53.68	2979	213.31	38.00	0.59	45
MAB	202003103	38	29.99	73	55.55	784	55.15	11.00	0.15	47
MAB	202003104	38	30.96	74	1.81	1701	120.52	22.00	0.33	53
MAB	202003105	38	32.39	73	59.34	1482	102.55	26.00	0.28	33
MAB	202003106	38	34.15	74	1.21	1312	89.26	25.00	0.24	40
MAB	202003107	38	34.04	73	56.51	2185	139.96	42.00	0.42	67
MAB	202003108	38	32.28	73	54.27	306	21.69	7.00	0.06	20
MAB	202003109	38	32.05	73	49.78	881	63.31	17.50	0.18	33
MAB	202003110	38	33.25	73	47.03	448	33.70	9.50	0.09	40
MAB	202003111	38	33.05	73	37.32	226	12.70	3.50	0.05	20
MAB	202003112	38	34.92	73	35.44	279	16.00	4.50	0.06	33
MAB	202003113	38	35.20	73	39.04	790	55.69	12.00	0.16	36
MAB	202003114	38	35.01	73	43.28	652	48.14	10.00	0.13	44
MAB	202003115	38	35.54	73	48.09	228	16.48	3.00	0.05	13
MAB	202003116	38	35.64	73	50.43	289	21.32	4.50	0.05	44
MAB	202003117	38	36.50	73	53.93	66	4.98	1.00	0.01	27
MAB	202003118	38	37.47	73	57.61	111	8.66	2.00	0.02	27
MAB	202003119	38	37.57	74	0.71	156	11.15	2.00	0.03	33

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
MAB	202003120	38	39.51	73	56.16	77	5.88	1.00	0.02	7
MAB	202003121	38	39.22	73	53.07	86	7.52	1.00	0.02	7
MAB	202003122	38	40.36	73	50.11	92	7.09	1.00	0.02	31
MAB	202003123	38	41.69	73	46.32	73	5.26	0.85	0.01	27
MAB	202003124	38	40.21	73	45.27	164	12.94	1.95	0.03	67
MAB	202003125	38	38.35	73	42.70	381	30.27	4.40	0.08	44
MAB	202003127	38	37.75	73	38.84	561	44.39	8.10	0.11	47
MAB	202003128	38	38.67	73	36.52	373	29.53	4.40	0.07	33
MAB	202003129	38	39.01	73	18.21	0	0.01	0.01	0.00	0
MAB	202003130	38	42.18	73	27.81	588	34.05	6.75	0.11	20
MAB	202003131	38	43.36	73	30.65	1399	90.03	19.00	0.27	40
MAB	202003132	38	42.56	73	33.91	1313	90.25	17.00	0.25	40
MAB	202003133	38	43.29	73	40.14	171	13.50	2.00	0.03	40
MAB	202003134	38	43.55	73	41.86	173	13.15	2.00	0.03	36
MAB	202003135	38	48.37	73	36.14	172	11.70	2.00	0.03	33
MAB	202003136	38	49.39	73	33.26	142	10.46	2.00	0.03	13
MAB	202003137	38	51.59	73	31.29	124	8.41	1.75	0.02	13
MAB	202003138	38	50.10	73	27.95	1190	76.42	21.00	0.22	20
MAB	202003139	38	45.15	73	25.39	23	1.35	0.50	0.00	0
MAB	202003140	38	46.07	73	22.27	17	1.04	0.10	0.00	0
MAB	202003141	38	50.71	73	15.87	0	0.00	0.00	0.00	0
MAB	202003142	38	52.70	73	8.13	0	0.00	0.00	0.00	0
MAB	202003143	38	53.51	73	11.14	0	0.00	0.00	0.00	0
MAB	202003144	38	55.80	73	18.88	407	26.03	8.50	0.08	13
MAB	202003145	38	56.96	73	10.00	0	0.00	0.00	0.00	0
MAB	202003146	38	55.86	73	6.87	1	0.03	0.01	0.00	0
MAB	202003147	38	58.45	72	57.24	0	0.00	0.00	0.00	0
MAB	202003148	38	59.55	73	0.80	0	0.00	0.00	0.00	0
MAB	202003149	39	0.59	73	11.77	5	0.28	0.10	0.00	25
MAB	202003150	39	1.48	73	20.85	300	20.66	3.80	0.06	20
MAB	202003151	39	7.61	73	16.24	80	5.86	1.00	0.02	7
MAB	202003152	39	11.08	73	11.38	437	27.96	5.00	0.09	13
MAB	202003153	39	10.54	73	7.60	61	3.62	1.10	0.01	27
MAB	202003154	39	7.48	73	1.59	105	5.58	1.10	0.02	13
MAB	202003155	39	5.89	72	51.68	1	0.03	0.01	0.00	0
MAB	202003156	39	12.31	72	59.79	15	0.79	0.20	0.00	27
MAB	202003157	39	12.57	73	4.46	75	4.11	1.00	0.02	12
MAB	202003158	39	15.93	73	8.44	172	12.35	2.25	0.04	7
MAB	202003159	39	15.61	73	3.55	553	32.79	8.00	0.11	0

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
MAB	202003160	39	15.75	72	59.95	250	13.50	4.00	0.05	0
MAB	202003161	39	14.62	72	47.64	7	0.29	0.10	0.00	0
MAB	202003162	39	19.23	72	49.07	2	0.12	0.10	0.00	0
MAB	202003163	39	21.45	72	51.16	123	6.03	1.50	0.02	0
MAB	202003164	39	20.85	72	54.62	1412	77.82	19.00	0.29	0
MAB	202003165	39	21.28	72	57.68	217	12.22	2.75	0.04	19
MAB	202003166	39	21.54	72	59.53	125	7.08	1.75	0.03	33
MAB	202003167	39	24.50	72	58.62	130	9.13	1.75	0.03	7
MAB	202003168	39	24.96	72	54.79	276	15.93	3.50	0.06	6
MAB	202003169	39	23.13	72	42.14	2	0.10	0.10	0.00	0
MAB	202003170	39	25.83	72	44.96	3	0.16	0.10	0.00	0
MAB	202003171	39	27.10	72	51.24	153	10.04	2.00	0.03	0
MAB	202003172	39	28.68	72	48.99	264	18.50	2.80	0.05	0
MAB	202003173	39	29.32	72	44.19	64	3.59	0.80	0.01	14
MAB	202003174	39	32.07	72	47.21	93	5.77	1.00	0.02	0
MAB	202003175	39	29.89	72	54.71	183	11.81	1.80	0.04	7
MAB	202003176	39	30.25	72	58.24	205	16.02	2.60	0.04	7
MAB	202003177	39	31.23	73	0.85	112	7.52	1.25	0.02	7
MAB	202003178	39	28.81	73	5.52	98	6.08	1.25	0.02	7
MAB	202003179	39	27.24	73	12.24	22	1.78	0.25	0.00	0
MAB	202003180	39	26.79	73	8.67	87	6.71	1.25	0.02	0
MAB	202003181	39	25.59	73	4.78	268	16.16	3.00	0.05	0
MAB	202003182	39	24.84	73	3.65	436	25.47	5.25	0.08	12
MAB	202003183	39	22.90	73	7.16	228	14.20	2.50	0.04	0
MAB	202003184	39	24.00	73	11.96	80	5.17	1.10	0.02	0
MAB	202003185	39	22.56	73	15.73	353	23.51	3.80	0.07	0
MAB	202003187	39	19.47	73	11.19	155	11.64	2.00	0.03	0
MAB	202003188	39	16.92	73	13.33	90	7.37	1.50	0.02	27
MAB	202003189	39	18.30	73	17.28	240	17.94	3.25	0.05	7
MAB	202003190	39	18.97	73	21.32	110	9.03	1.50	0.02	0
MAB	202003191	39	18.01	73	23.08	154	13.92	2.20	0.03	7
MAB	202003192	39	15.35	73	24.47	4	0.37	0.10	0.00	0
MAB	202003193	39	13.64	73	19.38	185	14.50	3.25	0.04	0
MAB	202003194	39	12.31	73	17.16	144	10.29	2.50	0.03	13
MAB	202003195	39	9.08	73	20.94	212	14.39	2.75	0.04	0
MAB	202003196	39	9.40	73	23.85	313	21.95	5.00	0.06	0
MAB	202003197	39	10.37	73	28.52	291	19.45	3.30	0.06	0
MAB	202003198	39	6.66	73	23.74	281	20.72	4.20	0.06	0
MAB	202003199	39	5.45	73	25.39	189	13.46	2.75	0.04	13

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
MAB	202003200	39	4.88	73	28.93	388	28.08	5.00	0.08	7
MAB	202003201	39	2.58	73	37.36	25	1.65	0.20	0.01	7
MAB	202003202	39	1.65	73	31.41	135	10.53	1.75	0.03	0
MAB	202003203	38	59.28	73	32.30	124	9.84	1.50	0.02	0
MAB	202003204	38	58.89	73	28.94	142	11.82	1.50	0.03	14
MAB	202003205	38	58.09	73	24.72	153	11.20	1.80	0.03	14
MAB	202003206	38	54.06	73	25.84	360	28.96	3.90	0.07	14
MAB	202003207	38	55.36	73	31.20	121	9.83	1.40	0.02	14
MAB	202003208	38	55.66	73	35.57	62	5.72	0.80	0.01	13
MAB	202003209	38	57.08	73	39.22	71	6.20	0.90	0.01	0
MAB	202003210	38	49.71	73	42.53	495	37.69	4.90	0.09	7
MAB	202003211	38	47.28	73	49.45	107	8.54	1.20	0.02	0
MAB	202003212	38	47.45	73	55.62	296	24.25	3.10	0.06	7
MAB	202003213	38	45.16	73	56.53	139	10.90	1.50	0.03	7
MAB	202003214	38	46.16	74	4.25	83	7.84	1.05	0.02	0
MAB	202003215	38	46.00	74	15.56	5	0.55	0.05	0.00	0
MAB	202003216	38	46.14	74	19.05	0	0.00	0.00	0.00	0
MAB	202003218	38	44.19	74	6.99	149	12.63	2.00	0.03	7
MAB	202003219	38	44.04	74	2.31	128	9.93	1.80	0.03	13
MAB	202003220	38	42.04	74	4.47	99	8.03	1.50	0.02	7
MAB	202003221	38	38.61	74	9.81	89	6.75	1.50	0.02	0
MAB	202003222	38	38.14	74	8.53	79	5.95	1.25	0.02	0
MAB	202003223	38	36.07	74	5.57	669	46.24	12.00	0.14	7
MAB	202003224	38	35.03	74	8.02	111	8.75	1.75	0.02	0
MAB	202003225	38	32.31	74	7.83	87	6.85	1.25	0.02	7
MAB	202003226	38	32.64	74	10.46	69	5.79	1.00	0.01	0
MAB	202003227	38	35.19	74	12.33	141	12.28	2.00	0.03	13
MAB	202003228	38	35.51	74	14.59	7	0.57	0.10	0.00	0
MAB	202003229	38	35.67	74	19.49	0	0.00	0.00	0.00	0
MAB	202003230	38	37.39	74	21.90	0	0.00	0.00	0.00	0
MAB	202003231	38	37.08	74	25.74	0	0.00	0.00	0.00	0
MAB	202004001	38	53.75	73	58.50	3	0.19	0.10	0.00	60
MAB	202004002	38	57.38	73	57.88	0	0.00	0.00	0.00	0
MAB	202004003	38	58.85	73	47.92	2	0.18	0.10	0.00	0
MAB	202004004	39	3.32	73	53.72	0	0.00	0.00	0.00	0
MAB	202004005	39	4.25	73	50.08	0	0.00	0.00	0.00	0
MAB	202004006	39	3.47	73	40.91	6	0.54	0.10	0.00	0
MAB	202004008	39	4.91	73	36.43	56	4.95	0.75	0.01	0
MAB	202004009	39	7.70	73	33.24	78	6.57	1.00	0.02	7

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
MAB	202004010	39	8.21	73	37.03	13	1.12	0.10	0.00	0
MAB	202004011	39	8.06	73	43.44	0	0.00	0.00	0.00	0
MAB	202004012	39	10.15	73	49.04	0	0.00	0.00	0.00	0
MAB	202004013	39	12.68	73	41.69	10	0.75	0.10	0.00	8
MAB	202004014	39	12.05	73	36.90	13	1.12	0.20	0.00	0
MAB	202004015	39	15.97	73	44.04	3	0.22	0.10	0.00	0
MAB	202004016	39	16.60	73	39.56	1	0.02	0.10	0.00	0
MAB	202004017	39	24.31	73	24.88	35	2.45	0.30	0.01	0
MAB	202004018	39	28.71	73	28.44	0	0.00	0.00	0.00	0
MAB	202004019	39	28.64	73	19.93	71	6.61	0.90	0.01	0
MAB	202004020	39	36.43	73	14.32	72	6.10	0.75	0.01	0
MAB	202004021	39	39.12	73	25.37	7	0.65	0.10	0.00	0
MAB	202004022	39	41.67	73	17.42	33	2.71	0.25	0.01	0
MAB	202004023	39	43.92	73	23.12	2	0.17	0.10	0.00	0
MAB	202004024	39	46.29	73	16.13	108	8.53	1.25	0.02	0
MAB	202004025	39	47.89	73	20.31	199	14.14	2.00	0.04	0
MAB	202004026	39	48.10	73	29.62	5	0.43	0.10	0.00	0
MAB	202004027	39	49.43	73	34.26	0	0.01	0.10	0.00	0
MAB	202004028	39	52.66	73	34.83	0	0.00	0.00	0.00	0
MAB	202004029	39	55.03	73	25.05	81	5.21	0.75	0.02	0
MAB	202004030	39	54.55	73	18.32	754	35.85	10.50	0.15	0
MAB	202004031	39	52.27	73	15.68	333	17.07	5.00	0.06	0
MAB	202004032	39	52.06	73	8.76	424	18.68	6.75	0.08	0
MAB	202004033	39	57.23	73	7.49	74	5.75	0.90	0.02	0
MAB	202004034	39	57.48	73	10.83	18	1.41	0.30	0.00	14
MAB	202004035	39	58.49	73	13.55	11	0.99	0.20	0.00	7
MAB	202004036	39	59.15	73	17.67	13	1.28	0.20	0.00	0
MAB	202004037	39	56.22	73	23.93	122	7.68	1.20	0.02	0
MAB	202004039	39	58.99	73	24.64	263	15.42	2.70	0.05	0
MAB	202004040	39	59.41	73	29.32	10	0.62	0.10	0.00	0
MAB	202004041	39	59.84	73	35.23	0	0.00	0.00	0.00	0
MAB	202004042	39	59.90	73	46.84	0	0.00	0.00	0.00	0
MAB	202004043	40	3.48	73	48.88	0	0.00	0.10	0.00	0
MAB	202004044	40	3.62	73	43.36	0	0.00	0.00	0.00	0
MAB	202004045	40	3.00	73	35.06	0	0.00	0.00	0.00	0
MAB	202004046	40	2.69	73	31.56	81	6.28	1.10	0.02	0
MAB	202004047	40	3.51	73	25.23	29	2.45	0.40	0.01	7
MAB	202004048	40	1.72	73	19.26	53	4.60	0.75	0.01	0
MAB	202004049	40	1.02	73	10.32	152	12.34	2.25	0.03	0

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
MAB	202004050	40	5.34	73	7.09	60	4.72	0.75	0.01	0
MAB	202004051	40	6.58	73	10.78	76	6.34	0.75	0.01	0
MAB	202004052	40	4.42	73	17.61	7	0.77	0.10	0.00	0
MAB	202004053	40	4.41	73	20.62	21	1.62	0.25	0.00	0
MAB	202004054	40	10.44	73	27.33	0	0.00	0.00	0.00	0
MAB	202004055	40	9.18	73	30.16	2	0.16	0.10	0.00	0
MAB	202004056	40	7.97	73	36.84	0	0.00	0.00	0.00	0
MAB	202004057	40	7.97	73	40.20	0	0.00	0.00	0.00	0
MAB	202004058	40	10.58	73	38.68	0	0.00	0.00	0.00	0
MAB	202004059	40	13.03	73	34.51	0	0.00	0.00	0.00	0
MAB	202004060	40	14.05	73	40.96	0	0.00	0.00	0.00	0
MAB	202004061	40	13.93	73	47.32	0	0.00	0.00	0.00	0
MAB	202004062	40	18.33	73	36.52	0	0.00	0.00	0.00	0
MAB	202004063	40	20.56	73	33.48	0	0.00	0.00	0.00	0
MAB	202004064	40	21.36	73	28.81	0	0.00	0.00	0.00	0
MAB	202004065	40	18.94	73	25.10	0	0.00	0.00	0.00	0
MAB	202004066	40	15.55	73	21.17	2	0.21	0.10	0.00	11
MAB	202004067	40	13.94	73	16.75	1	0.07	0.10	0.00	0
MAB	202004068	40	11.83	73	10.75	0	0.00	0.00	0.00	0
MAB	202004069	40	10.71	73	5.02	47	3.51	0.50	0.01	0
MAB	202004070	40	11.35	72	57.32	145	10.92	1.60	0.03	0
MAB	202004071	40	11.22	72	53.51	114	9.21	1.50	0.02	0
MAB	202004072	40	13.84	72	53.88	248	16.97	2.70	0.05	0
MAB	202004073	40	14.53	72	58.85	101	7.99	1.30	0.02	0
MAB	202004074	40	14.05	73	3.46	39	3.30	0.40	0.01	0
MAB	202004075	40	17.39	73	15.21	7	0.64	0.10	0.00	0
MAB	202004076	40	22.52	73	20.03	1	0.08	0.10	0.00	0
MAB	202004077	40	23.96	73	17.11	0	0.00	0.00	0.00	0
MAB	202004078	40	20.04	73	12.24	3	0.24	0.10	0.00	0
MAB	202004079	40	19.89	73	2.94	121	11.56	1.75	0.02	0
MAB	202004080	40	19.45	72	51.43	73	4.74	0.75	0.01	0
MAB	202004082	40	19.42	72	44.02	213	14.67	2.25	0.04	0
MAB	202004083	40	18.33	72	40.65	72	5.09	1.00	0.01	0
MAB	202004084	40	17.78	72	37.80	85	5.70	1.00	0.02	0
MAB	202004085	40	24.15	72	44.68	33	2.44	0.50	0.01	0
MAB	202004086	40	23.89	72	48.17	97	7.38	1.20	0.02	0
MAB	202004087	40	22.94	72	52.16	68	5.03	0.75	0.01	0
MAB	202004088	40	24.88	72	56.89	35	2.83	0.50	0.01	0
MAB	202004089	40	25.20	73	1.39	4	0.32	0.10	0.00	0

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
MAB	202004090	40	23.76	73	4.46	7	0.62	0.10	0.00	0
MAB	202004091	40	26.98	73	6.04	1	0.07	0.10	0.00	0
MAB	202004092	40	31.09	73	5.47	0	0.00	0.00	0.00	0
MAB	202004093	40	28.40	72	50.86	19	1.78	0.30	0.00	0
MAB	202004094	40	31.87	72	52.01	2	0.16	0.10	0.00	0
MAB	202004095	40	31.78	72	49.96	5	0.44	0.10	0.00	0
MAB	202004096	40	34.39	72	47.13	0	0.00	0.00	0.00	0
MAB	202004097	40	31.89	72	45.54	58	4.93	0.80	0.01	0
MAB	202004098	40	30.99	72	41.15	34	3.26	0.50	0.01	13
MAB	202004099	40	27.69	72	39.46	79	6.03	0.90	0.02	0
MAB	202004100	40	27.34	72	33.22	81	6.10	1.00	0.02	0
MAB	202004101	40	26.52	72	30.36	202	14.54	2.25	0.04	0
MAB	202004102	40	29.16	72	27.60	110	7.60	1.25	0.02	13
MAB	202004103	40	24.75	72	24.38	114	9.52	1.50	0.02	0
MAB	202004104	40	29.68	72	19.44	8	0.70	0.10	0.00	0
MAB	202004105	40	30.68	72	17.46	60	5.85	1.00	0.01	20
MAB	202004106	40	30.98	72	20.03	34	2.92	0.50	0.01	7
MAB	202004107	40	32.63	72	21.33	7	0.60	0.10	0.00	0
MAB	202004108	40	31.91	72	24.53	30	2.12	0.10	0.01	0
MAB	202004109	40	31.72	72	30.32	77	6.14	1.00	0.01	0
MAB	202004110	40	32.35	72	34.21	76	6.47	1.00	0.01	0
MAB	202004111	40	37.03	72	29.60	15	1.35	0.20	0.00	0
MAB	202004112	40	37.31	72	34.65	3	0.30	0.10	0.00	0
MAB	202004113	40	39.64	72	38.22	0	0.00	0.00	0.00	0
MAB	202004114	40	40.82	72	42.41	0	0.00	0.00	0.00	0
MAB	202004115	40	43.27	72	36.53	0	0.00	0.00	0.00	0
MAB	202004116	40	42.55	72	33.93	0	0.00	0.00	0.00	0
MAB	202004117	40	43.97	72	30.96	0	0.00	0.00	0.00	0
MAB	202004118	40	44.15	72	26.99	0	0.00	0.00	0.00	0
MAB	202004119	40	43.51	72	13.45	6	0.56	0.10	0.00	0
MAB	202004120	40	42.25	72	11.41	7	0.61	0.10	0.00	0
MAB	202004121	40	42.53	72	7.19	64	5.35	0.90	0.01	0
MAB	202004122	40	42.27	72	6.04	80	6.95	1.10	0.02	0
MAB	202004124	40	43.86	72	2.53	332	22.11	3.30	0.06	0
MAB	202004125	40	40.84	72	1.47	207	15.06	2.60	0.04	0
MAB	202004126	40	40.40	71	52.56	145	10.14	1.60	0.03	0
MAB	202004127	40	44.02	71	53.32	137	10.01	1.60	0.03	0
MAB	202004128	40	47.40	71	54.79	242	18.04	2.90	0.05	0
MAB	202004129	40	49.65	72	0.31	169	11.30	1.70	0.03	0

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
MAB	202004130	40	49.17	72	4.29	380	26.93	3.90	0.07	0
MAB	202004131	40	51.06	72	10.02	1	0.07	0.10	0.00	0
MAB	202004132	40	52.94	72	6.79	0	0.00	0.00	0.00	0
MAB	202004133	40	53.55	72	3.01	0	0.00	0.00	0.00	0
MAB	202004134	40	58.54	71	53.25	0	0.00	0.00	0.00	0
MAB	202004135	40	58.48	71	48.66	20	1.31	0.10	0.00	0
MAB	202004136	40	58.09	71	43.59	78	5.34	0.80	0.01	0
MAB	202004137	41	2.62	71	39.72	39	2.93	0.40	0.01	0
MAB	202004138	41	3.60	71	33.54	70	5.41	1.00	0.01	0
MAB	202004140	40	59.91	71	18.33	28	2.77	0.40	0.01	0
MAB	202004141	40	57.46	71	20.69	69	5.85	1.00	0.01	0
MAB	202004142	40	57.89	71	24.03	64	5.49	0.80	0.01	0
MAB	202004143	40	56.49	71	28.18	274	22.51	4.00	0.05	0
MAB	202004144	40	44.62	71	40.11	2	0.14	0.10	0.00	0
MAB	202004145	40	36.31	71	36.94	2	0.10	0.10	0.00	0
MAB	202004146	40	33.53	71	31.13	0	0.00	0.00	0.00	0
MAB	202004148	40	28.70	71	26.34	0	0.00	0.00	0.00	0
MAB	202004149	40	31.67	71	43.16	0	0.00	0.00	0.00	0
MAB	202004150	40	28.94	71	45.04	0	0.00	0.00	0.00	0
MAB	202004151	40	26.41	71	54.48	0	0.00	0.00	0.00	0
MAB	202004152	40	29.29	72	0.20	289	19.85	3.20	0.06	0
MAB	202004153	40	32.10	72	4.37	211	17.12	2.50	0.04	0
MAB	202004154	40	33.14	72	8.76	79	7.30	1.20	0.02	7
MAB	202004155	40	35.12	72	9.08	57	5.58	0.80	0.01	0
MAB	202004156	40	37.24	72	5.72	127	11.80	1.75	0.03	0
MAB	202004157	40	35.72	72	12.23	10	0.87	0.10	0.00	0
MAB	202004158	40	32.48	72	14.00	23	2.21	0.50	0.00	7
MAB	202004159	40	30.52	72	10.65	33	3.08	0.40	0.01	0
MAB	202004160	40	28.63	72	5.01	356	30.60	5.00	0.07	0
MAB	202004161	40	23.21	72	7.19	87	6.88	1.25	0.02	0
MAB	202004162	40	20.68	72	10.97	35	2.78	0.50	0.01	0
MAB	202004164	40	18.32	71	50.66	1	0.04	0.01	0.00	0
MAB	202004165	40	13.74	71	56.29	1	0.02	0.01	0.00	0
MAB	202004166	40	13.49	72	1.38	92	5.76	1.25	0.02	0
MAB	202004167	40	10.38	72	3.31	100	6.17	1.10	0.02	0
MAB	202004168	40	5.98	72	4.12	0	0.00	0.00	0.00	0
MAB	202004169	40	7.01	72	9.05	0	0.00	0.00	0.00	0
MAB	202004170	40	7.82	72	15.20	0	0.00	0.00	0.00	0
MAB	202004171	40	3.39	72	19.48	0	0.00	0.00	0.00	0

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
MAB	202004172	40	6.41	72	23.32	0	0.00	1.50	0.00	0
MAB	202004173	40	8.96	72	26.91	128	9.85	1.60	0.03	0
MAB	202004174	40	15.25	72	28.63	135	10.22	1.50	0.03	0
MAB	202004175	40	17.09	72	28.74	131	10.02	1.60	0.03	0
MAB	202004176	40	20.30	72	25.78	217	16.12	2.40	0.04	0
MAB	202004177	40	19.69	72	30.07	218	15.34	2.30	0.04	0
MAB	202004178	40	12.69	72	38.80	9	0.75	0.10	0.00	0
MAB	202004179	40	10.81	72	40.99	42	3.76	0.75	0.01	0
MAB	202004180	40	9.80	72	47.47	92	7.37	1.30	0.02	0
MAB	202004181	40	7.86	72	43.50	161	12.21	2.10	0.03	0
MAB	202004182	40	6.16	72	36.08	301	24.58	3.50	0.06	0
MAB	202004183	40	4.92	72	33.45	80	6.27	1.10	0.02	0
MAB	202004184	40	4.18	72	37.72	118	9.34	1.50	0.02	7
MAB	202004185	40	3.35	72	44.27	57	4.41	0.75	0.01	0
MAB	202004186	40	2.84	72	49.44	86	7.32	1.10	0.02	0
MAB	202004187	40	4.33	72	55.13	77	6.23	1.00	0.02	0
MAB	202004188	40	5.20	73	0.73	126	10.43	1.50	0.02	0
MAB	202004189	40	2.70	73	1.88	86	7.42	1.10	0.02	0
MAB	202004190	40	0.70	72	58.42	49	4.04	0.60	0.01	0
MAB	202004191	39	59.23	72	54.37	96	6.97	1.10	0.02	0
MAB	202004192	39	59.98	72	45.67	77	6.57	1.10	0.02	0
MAB	202004193	39	57.70	72	48.02	77	6.14	1.10	0.01	0
MAB	202004194	39	56.60	72	45.96	62	5.24	0.80	0.01	0
MAB	202004195	39	55.57	72	37.81	111	9.26	1.50	0.02	0
MAB	202004196	39	54.84	72	34.04	87	6.29	1.00	0.02	0
MAB	202004197	39	56.50	72	25.97	15	0.86	0.20	0.00	0
MAB	202004198	39	53.78	72	29.88	119	7.22	1.30	0.02	0
MAB	202004199	39	53.09	72	45.07	112	8.64	1.40	0.02	0
MAB	202004200	39	52.94	72	54.56	72	6.32	1.00	0.01	7
MAB	202004201	39	56.55	72	59.27	106	8.30	1.20	0.02	0
MAB	202004202	39	52.98	73	1.16	119	10.53	1.80	0.02	20
MAB	202004203	39	51.00	73	3.75	20	1.64	0.40	0.00	6
MAB	202004204	39	50.51	73	0.43	6	0.51	0.10	0.00	43
MAB	202004205	39	48.99	73	1.16	4	0.29	0.10	0.00	0
MAB	202004206	39	48.71	72	44.70	87	7.14	1.20	0.02	7
MAB	202004207	39	47.31	72	29.62	2	0.12	0.10	0.00	0
MAB	202004208	39	44.69	72	33.73	9	0.57	0.10	0.00	15
MAB	202004209	39	42.21	72	44.17	121	7.18	1.50	0.02	0
MAB	202004210	39	43.75	72	48.02	13	0.86	0.10	0.00	0

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
MAB	202004211	39	46.72	72	55.27	4	0.32	0.01	0.00	0
MAB	202004212	39	45.72	73	0.04	684	30.27	9.50	0.14	0
MAB	202004213	39	46.24	73	2.71	275	13.88	4.00	0.05	0
MAB	202004214	39	46.64	73	6.15	246	14.24	3.50	0.05	0
MAB	202004215	39	49.19	73	11.01	155	10.63	1.80	0.03	0
MAB	202004216	39	46.61	73	9.89	254	18.15	2.75	0.05	0
MAB	202004217	39	43.34	73	6.04	105	7.76	2.00	0.02	0
MAB	202004218	39	40.26	73	3.21	71	5.65	1.00	0.01	0
MAB	202004219	39	40.19	72	56.52	154	10.49	1.80	0.03	0
MAB	202004220	39	41.52	72	52.70	165	10.16	2.00	0.03	0
MAB	202004221	39	39.11	72	52.14	161	10.47	2.00	0.03	0
MAB	202004222	39	37.12	72	50.25	130	8.72	1.50	0.02	0
MAB	202004223	39	36.93	72	44.34	209	12.52	4.00	0.04	0
MAB	202004224	39	33.41	72	44.10	113	7.26	1.30	0.02	13
MAB	202004225	39	32.35	72	50.42	155	9.81	1.70	0.03	0
MAB	202004226	39	35.12	72	53.51	152	9.90	1.80	0.03	7
MAB	202004227	39	33.72	72	56.27	265	19.59	3.00	0.05	0
MAB	202004228	39	37.41	72	58.73	0	0.00	0.00	0.00	0
MAB	202004229	39	37.28	73	2.05	82	6.01	1.00	0.02	7
MAB	202004230	39	35.27	73	5.81	141	11.46	1.70	0.03	7
MAB	202004231	39	37.43	73	9.39	110	9.32	1.30	0.02	7
MAB	202004232	39	33.81	73	9.70	47	3.88	0.50	0.01	0
MAB	202004233	39	32.35	73	5.19	37	2.95	0.50	0.01	0
CAI_II	202005002	40	31.45	67	59.12	0	0.00	0.00	0.00	0
CAI_II	202005003	40	35.78	67	57.52	42	3.07	0.90	0.01	0
CAI_II	202005004	40	40.68	67	51.78	38	3.14	0.60	0.01	0
CAI_II	202005006	40	37.87	67	47.65	75	5.89	1.25	0.01	0
CAI_II	202005009	40	40.60	67	39.83	67	4.72	1.00	0.01	0
CAI_II	202005011	40	38.52	67	36.52	179	12.29	3.00	0.04	0
CAI_II	202005012	40	36.08	67	42.05	11	0.71	0.01	0.00	0
CAI_II	202005013	40	35.41	67	39.78	2	0.09	0.01	0.00	0
CAI_II	202005014	40	36.10	67	33.31	0	0.00	0.00	0.00	0
CAI_II	202005016	40	39.83	67	25.61	0	0.03	0.01	0.00	0
CAI_II	202005018	40	35.72	67	18.10	0	0.00	0.00	0.00	0
CAI_II	202005019	40	37.05	67	16.32	0	0.00	0.00	0.00	0
CAI_II	202005020	40	39.29	67	21.33	0	0.00	0.00	0.00	0
CAI_II	202005021	40	41.01	67	24.26	0	0.00	0.00	0.00	0
CAI_II	202005023	40	41.09	67	17.75	0	0.00	0.00	0.00	0
CAI_II	202005024	40	47.63	67	20.63	173	10.54	2.75	0.04	0

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
CAI_II	202005025	40	49.52	67	23.63	115	7.36	1.90	0.02	0
CAI_II	202005026	40	46.81	67	28.32	63	3.90	1.00	0.01	0
CAI_II	202005027	40	46.81	67	32.30	70	4.88	1.25	0.01	0
CAI_II	202005028	40	46.46	67	35.84	93	6.83	1.40	0.02	0
CAI_II	202005029	40	52.36	67	31.82	100	5.55	1.40	0.02	0
CAI_II	202005031	40	51.92	67	26.92	207	11.06	3.00	0.04	0
CAI_II	202005032	40	51.16	67	20.38	229	15.42	3.50	0.04	0
CAI_II	202005033	40	54.23	67	19.58	808	46.84	12.50	0.17	0
CAI_II	202005035	40	48.61	67	15.67	180	13.19	2.75	0.04	0
CAI_II	202005036	40	50.40	67	9.95	236	19.10	4.00	0.05	0
CAI_II	202005037	40	50.45	67	4.36	127	8.95	2.25	0.03	0
CAI_II	202005038	40	49.93	67	1.60	67	4.48	1.10	0.01	0
CAI_II	202005039	40	43.82	67	3.24	3	0.15	0.01	0.00	0
CAI_II	202005040	40	45.67	66	59.46	1	0.03	0.01	0.00	0
CAI_II	202005041	40	47.93	66	54.13	0	0.00	0.00	0.00	0
CAI_II	202005042	40	50.97	66	47.00	1	0.05	0.01	0.00	0
CAI_II	202005043	40	53.46	66	49.65	33	1.68	0.60	0.01	0
CAI_II	202005044	40	54.77	66	53.70	125	9.33	2.20	0.03	0
CAI_II	202005045	40	54.94	67	3.88	69	5.51	1.25	0.01	0
CAI_II	202005047	40	57.24	67	7.20	244	17.51	6.00	0.05	0
CAI_II	202005048	40	58.14	67	12.43	657	40.88	12.00	0.13	0
CAI_II	202005049	40	58.12	67	6.76	171	12.99	3.10	0.04	0
CAI_II	202005051	40	56.60	67	0.88	103	7.92	2.20	0.02	0
CAI_II	202005054	40	57.64	66	57.87	97	8.15	1.75	0.02	0
CAI_II	202005055	40	58.35	66	56.73	37	3.06	0.60	0.01	0
CAI_II	202005056	40	58.05	66	50.62	109	8.70	1.75	0.02	0
CAI_II	202005057	40	56.61	66	44.91	19	1.25	0.25	0.00	0
CAI_II	202005058	40	56.71	66	40.15	1	0.05	0.01	0.00	0
CAI_II	202005059	40	58.55	66	41.90	17	1.19	0.25	0.00	0
CAI_II	202005060	40	59.61	66	36.75	2	0.14	0.04	0.00	0
CAI_II	202005061	41	0.82	66	31.69	1	0.09	0.02	0.00	0
CAI_II	202005062	41	3.32	66	32.08	1	0.08	0.03	0.00	0
CAI_II	202005064	41	4.64	66	36.64	243	17.69	4.75	0.05	0
CAI_II	202005067	41	2.81	66	52.61	2715	124.21	36.50	0.55	0
CAI_II	202005070	41	2.62	66	56.72	3747	197.38	58.00	0.78	0
CAI_II	202005071	41	2.64	67	4.42	94	10.01	2.00	0.02	0
CAI_II	202005072	41	4.95	67	7.19	21	2.68	0.40	0.00	0
CAI_II	202005073	41	6.58	67	10.02	11	1.39	0.10	0.00	0
CAI_II	202005074	41	5.98	67	13.31	3	0.45	0.01	0.00	0

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
CAI_II	202005075	41	6.91	67	17.75	2	0.31	0.01	0.00	0
CAI_II	202005076	41	9.97	67	18.28	1	0.12	0.01	0.00	0
CAI_II	202005078	41	10.57	67	13.38	0	0.00	0.00	0.00	0
CAI_II	202005079	41	13.14	67	12.60	0	0.00	0.00	0.00	0
CAI_II	202005080	41	11.61	67	6.39	6	0.66	0.01	0.00	0
CAI_II	202005081	41	13.00	67	2.67	10	1.25	0.01	0.00	0
CAI_II	202005082	41	10.12	66	58.69	38	5.37	0.75	0.01	0
CAI_II	202005083	41	7.13	66	54.28	112	10.74	2.00	0.02	0
CAI_II	202005084	41	7.44	66	42.65	96	9.41	2.00	0.02	0
CAI_II	202005085	41	6.75	66	39.13	76	7.09	1.40	0.02	0
CAI_II	202005086	41	6.80	66	30.96	5	0.37	0.01	0.00	0
CAI_II	202005089	41	9.17	66	30.13	919	58.04	15.80	0.18	0
CAI_II	202005090	41	9.34	66	34.24	66	4.68	1.00	0.01	0
CAI_II	202005092	41	10.05	66	40.68	63	5.91	1.00	0.01	0
CAI_II	202005093	41	12.36	66	46.95	45	5.60	1.00	0.01	0
CAI_II	202005095	41	16.84	66	54.91	27	3.57	0.75	0.01	0
CAI_II	202005097	41	18.28	67	0.81	2	0.17	0.03	0.00	0
CAI_II	202005098	41	20.45	67	2.99	0	0.03	0.01	0.00	0
CAI_II	202005099	41	21.58	66	55.05	3	0.42	0.05	0.00	0
CAI_II	202005100	41	24.79	66	52.52	8	0.93	0.10	0.00	0
CAI_II	202005102	41	23.37	66	46.51	41	4.88	1.00	0.01	0
CAI_II	202005104	41	15.81	66	42.00	44	5.41	0.90	0.01	0
CAI_II	202005105	41	14.46	66	39.25	64	6.63	1.25	0.01	0
CAI_II	202005106	41	15.19	66	32.74	100	8.03	1.90	0.02	0
CAI_II	202005107	41	17.63	66	30.29	59	4.44	1.10	0.01	0
CAI_II	202005108	41	16.25	66	26.09	193	11.57	3.50	0.04	0
CAI_II	202005109	41	20.09	66	27.92	756	52.99	18.00	0.15	0
CAI_II	202005110	41	21.04	66	30.46	53	4.27	1.00	0.01	0
CAI_II	202005111	41	22.24	66	36.60	46	4.25	0.90	0.01	0
CAI_II	202005112	41	24.13	66	35.48	30	2.65	0.60	0.01	0
CAI_II	202005113	41	25.91	66	37.58	28	2.98	0.75	0.01	0
CAI_II	202005118	41	28.85	68	29.93	52	5.98	1.25	0.01	0
CAI_II	202005119	41	26.34	68	32.15	46	5.49	1.10	0.01	0
CAI_II	202005120	41	27.60	68	34.69	44	3.99	0.90	0.01	0
CAI_II	202005121	41	27.48	68	37.62	140	10.71	2.50	0.03	0
CAI_II	202005122	41	26.34	68	40.89	255	16.95	4.30	0.05	0
CAI_II	202005123	41	24.19	68	43.09	68	4.76	1.15	0.01	0
CAI_II	202005125	41	23.86	68	34.79	57	6.54	1.15	0.01	0
CAI_II	202005126	41	20.66	68	39.12	52	5.96	1.05	0.01	0

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
CAI_II	202005127	41	20.10	68	43.45	29	2.58	0.60	0.01	0
CAI_II	202005128	41	18.74	68	47.33	164	14.17	3.00	0.03	0
CAI_II	202005130	41	15.55	68	45.67	21	2.55	0.35	0.00	0
CAI_II	202005131	41	15.37	68	50.53	100	8.60	2.10	0.02	0
CAI_II	202005132	41	12.42	68	52.61	6	0.50	0.01	0.00	0
CAI_II	202005133	41	9.37	68	55.52	47	4.96	1.00	0.01	0
CAI_II	202005134	41	7.33	69	0.87	51	4.33	1.20	0.01	0
CAI_II	202005135	41	10.43	69	5.33	35	3.36	0.80	0.01	0
CAI_II	202005136	41	10.76	69	2.14	112	9.15	2.20	0.02	0
CAI_II	202005137	41	13.99	68	56.93	83	6.49	1.80	0.02	0
CAI_II	202005138	41	13.98	68	58.30	56	4.09	1.20	0.01	0
CAI_II	202005139	41	14.14	69	7.02	171	14.10	3.00	0.03	0
CAI_II	202005141	41	18.22	69	11.10	643	36.55	17.00	0.12	0
CAI_II	202005143	41	21.89	69	14.86	36	2.39	0.90	0.01	0
CAI_II	202005144	41	24.73	69	17.60	61	5.09	1.25	0.01	0
CAI_II	202005145	41	27.44	69	19.23	43	5.04	1.00	0.01	0
CAI_II	202005146	41	28.93	69	20.26	99	10.88	2.50	0.02	0
NL	202006001	40	41.19	69	52.87	4	0.44	0.04	0.00	0
NL	202006002	40	38.22	69	53.65	30	3.63	0.40	0.01	0
NL	202006003	40	36.39	69	57.47	8	0.81	0.10	0.00	0
NL	202006004	40	35.01	69	55.33	17	1.48	0.25	0.00	0
NL	202006005	40	32.57	69	54.88	12	0.91	0.15	0.00	0
NL	202006006	40	32.73	69	57.82	0	0.00	0.00	0.00	0
NL	202006007	40	27.79	69	59.59	0	0.00	0.00	0.00	0
NL	202006008	40	28.90	69	57.80	0	0.00	0.00	0.00	0
NL	202006009	40	28.33	69	54.48	1	0.06	0.01	0.00	0
NL	202006010	40	29.36	69	52.83	2	0.12	0.01	0.00	0
NL	202006011	40	31.61	69	50.41	46	3.06	0.45	0.01	0
NL	202006012	40	35.29	69	50.26	25	1.94	0.30	0.01	0
NL	202006013	40	37.79	69	50.06	19	1.98	0.30	0.00	0
NL	202006014	40	37.31	69	47.32	15	1.32	0.25	0.00	0
NL	202006015	40	34.75	69	45.55	27	1.63	0.25	0.01	0
NL	202006016	40	32.99	69	46.80	19	1.08	0.30	0.00	0
NL	202006017	40	31.40	69	45.51	17	0.88	0.15	0.00	0
NL	202006018	40	29.45	69	46.26	13	0.78	0.20	0.00	0
NL	202006019	40	28.59	69	43.18	28	1.75	0.15	0.01	0
NL	202006020	40	26.51	69	42.41	7	0.58	0.10	0.00	0
NL	202006021	40	21.40	69	38.96	1	0.08	0.05	0.00	0
NL	202006022	40	26.36	69	39.93	31	2.32	0.30	0.01	0

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
NL	202006023	40	27.81	69	39.77	37	2.01	0.30	0.01	0
NL	202006024	40	29.88	69	40.81	10	0.45	0.10	0.00	0
NL	202006025	40	32.11	69	39.87	23	1.19	0.15	0.00	0
NL	202006026	40	33.05	69	42.42	17	0.98	0.10	0.00	0
NL	202006027	40	35.14	69	40.88	31	2.36	0.35	0.01	0
NL	202006028	40	36.64	69	43.62	19	1.62	0.25	0.00	0
NL	202006029	40	41.88	69	42.91	1	0.17	0.01	0.00	0
NL	202006030	40	39.02	69	40.13	12	0.87	0.10	0.00	0
NL	202006031	40	38.09	69	38.37	1	0.14	0.01	0.00	0
NL	202006032	40	39.77	69	35.42	0	0.00	0.00	0.00	0
NL	202006033	40	38.27	69	34.20	0	0.00	0.00	0.00	0
NL	202006034	40	35.48	69	35.18	1	0.06	0.01	0.00	0
NL	202006035	40	32.56	69	37.06	22	1.47	0.20	0.00	0
NL	202006036	40	31.53	69	35.29	41	3.41	0.40	0.01	0
NL	202006037	40	29.77	69	36.87	24	1.34	0.15	0.00	0
NL	202006038	40	26.11	69	35.66	44	3.16	0.40	0.01	0
NL	202006039	40	28.69	69	32.79	47	3.69	0.50	0.01	0
NL	202006040	40	31.01	69	31.56	23	2.37	0.25	0.00	0
NL	202006041	40	34.74	69	32.01	2	0.29	0.02	0.00	0
NL	202006042	40	35.11	69	26.48	7	0.96	0.10	0.00	0
NL	202006043	40	32.73	69	24.27	14	2.07	0.25	0.00	0
NL	202006044	40	31.30	69	25.57	64	8.88	1.00	0.01	0
NL	202006045	40	30.19	69	28.51	5	0.57	0.05	0.00	0
NL	202006046	40	29.17	69	29.90	49	4.67	0.70	0.01	0
NL	202006047	40	26.58	69	29.03	131	7.00	1.20	0.03	0
NL	202006048	40	24.32	69	26.11	7452	268.57	60.00	1.45	0
NL	202006049	40	23.34	69	29.44	4123	151.84	41.00	0.80	0
NL	202006050	40	22.69	69	26.88	6535	199.67	59.00	1.27	0
NL	202006051	40	23.42	69	24.29	4490	132.82	41.10	0.87	0
NL	202006052	40	20.82	69	28.41	4353	148.49	41.25	0.85	0
NL	202006053	40	20.73	69	25.85	3875	117.06	43.00	0.75	0
NL	202006054	40	21.32	69	22.54	927	34.09	8.70	0.18	0
NL	202006055	40	20.57	69	19.79	5	0.18	0.05	0.00	0
NL	202006056	40	21.37	69	16.82	1	0.04	0.05	0.00	0
NL	202006057	40	20.73	69	12.69	0	0.00	0.00	0.00	0
NL	202006058	40	20.53	69	9.78	0	0.00	0.00	0.00	0
NL	202006059	40	21.32	69	6.33	0	0.00	0.00	0.00	0
NL	202006060	40	20.28	69	3.49	0	0.00	0.00	0.00	0
NL	202006061	40	20.97	69	0.57	0	0.00	0.00	0.00	0

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
NL	202006062	40	22.12	69	3.20	1	0.03	0.01	0.00	0
NL	202006063	40	25.75	69	1.20	7	0.31	0.05	0.00	0
NL	202006064	40	24.36	69	4.94	90	3.92	0.90	0.02	0
NL	202006065	40	23.60	69	8.12	1349	45.68	12.50	0.26	0
NL	202006066	40	23.75	69	12.45	80	2.81	0.75	0.02	0
NL	202006067	40	24.16	69	15.67	4236	126.50	42.00	0.82	0
NL	202006068	40	24.19	69	19.41	4841	134.69	52.00	0.94	0
NL	202006069	40	26.48	69	19.87	185	6.71	1.75	0.04	0
NL	202006070	40	28.09	69	20.02	99	7.82	1.10	0.02	0
NL	202006071	40	27.09	69	16.70	55	2.31	0.50	0.01	0
NL	202006072	40	26.41	69	12.23	730	26.29	8.50	0.14	0
NL	202006073	40	26.40	69	9.70	6958	215.63	66.00	1.35	0
NL	202006074	40	27.86	69	5.99	6799	247.38	67.00	1.32	0
NL	202006075	40	28.57	68	58.02	15	1.18	0.15	0.00	0
NL	202006076	40	28.81	68	52.28	16	1.24	0.15	0.00	0
NL	202006077	40	32.44	68	48.99	5	0.52	0.05	0.00	0
NL	202006078	40	36.92	68	51.05	12	1.00	0.10	0.00	0
NL	202006079	40	32.77	68	55.90	6	0.47	0.05	0.00	0
NL	202006080	40	31.41	69	1.95	125	11.83	1.40	0.02	0
NL	202006081	40	30.09	69	3.10	68	5.06	0.80	0.01	0
NL	202006082	40	29.32	69	8.61	96	7.09	0.95	0.02	0
NL	202006083	40	29.14	69	11.12	60	4.86	0.75	0.01	0
NL	202006084	40	29.78	69	13.37	55	5.68	0.80	0.01	0
NL	202006085	40	30.14	69	19.17	16	2.11	0.20	0.00	0
NL	202006086	40	30.96	69	17.07	45	5.82	0.75	0.01	0
NL	202006087	40	33.34	69	15.21	263	39.68	4.25	0.05	0
NL	202006088	40	33.06	69	9.86	37	4.30	0.50	0.01	0
NL	202006089	40	32.03	69	8.68	34	3.71	0.35	0.01	0
NL	202006090	40	33.22	69	4.15	51	5.42	0.65	0.01	0
NL	202006091	40	34.51	69	6.62	147	16.01	2.20	0.03	0
NL	202006092	40	35.07	69	10.71	178	25.52	3.00	0.04	0
NL	202006093	40	34.92	69	14.30	42	6.19	0.80	0.01	0
NL	202006094	40	35.15	69	17.94	25	3.44	0.40	0.01	0
NL	202006095	40	35.13	69	21.30	36	5.37	0.60	0.01	0
NL	202006096	40	37.53	69	27.62	4	0.43	0.05	0.00	0
NL	202006097	40	38.52	69	24.23	2	0.26	0.01	0.00	0
NL	202006098	40	37.58	69	20.54	0	0.00	0.00	0.00	0
NL	202006099	40	37.20	69	15.84	4	0.48	0.03	0.00	0
NL	202006100	40	36.83	69	12.73	13	1.71	0.15	0.00	0

Table 2: continued

Survey	StationID	Latitude (degrees)	Latitude (minutes)	Longitude (degrees)	Longitude (minutes)	Scallops (number)	Scallops (lbs)	Scallops (baskets)	Scallop density (m2)	Nematode Prevalence
NL	202006101	40	36.72	69	10.03	118	15.88	1.75	0.02	0
NL	202006102	40	35.97	69	7.74	87	10.09	1.20	0.02	0
NL	202006103	40	36.42	69	4.61	93	11.03	1.30	0.02	0
NL	202006104	40	35.82	69	1.50	91	10.81	1.25	0.02	0
NL	202006105	40	38.04	69	2.76	133	15.22	1.80	0.03	0
NL	202006106	40	39.84	69	5.74	230	28.77	3.20	0.05	0
NL	202006107	40	41.68	69	10.30	93	10.95	1.25	0.02	0
NL	202006108	40	38.68	69	12.55	91	10.55	1.20	0.02	0
NL	202006109	40	39.43	69	15.48	106	13.20	1.50	0.02	0
NL	202006110	40	40.51	69	20.75	6	0.87	0.05	0.00	0
NL	202006111	40	39.84	69	26.51	0	0.00	0.00	0.00	0
NL	202006112	40	42.04	69	26.96	6	0.82	0.05	0.00	0
NL	202006113	40	41.58	69	22.95	2	0.22	0.01	0.00	0
NL	202006114	40	41.03	69	19.23	14	1.47	0.10	0.00	0
NL	202006115	40	42.29	69	17.75	17	1.96	0.25	0.00	0
NL	202006116	40	41.32	69	15.32	69	8.91	1.00	0.01	0
NL	202006117	40	43.11	69	13.81	190	24.74	2.75	0.04	0
NL	202006118	40	41.72	69	11.33	121	12.67	1.30	0.02	0
NL	202006119	40	42.86	69	7.93	147	20.45	2.20	0.03	0

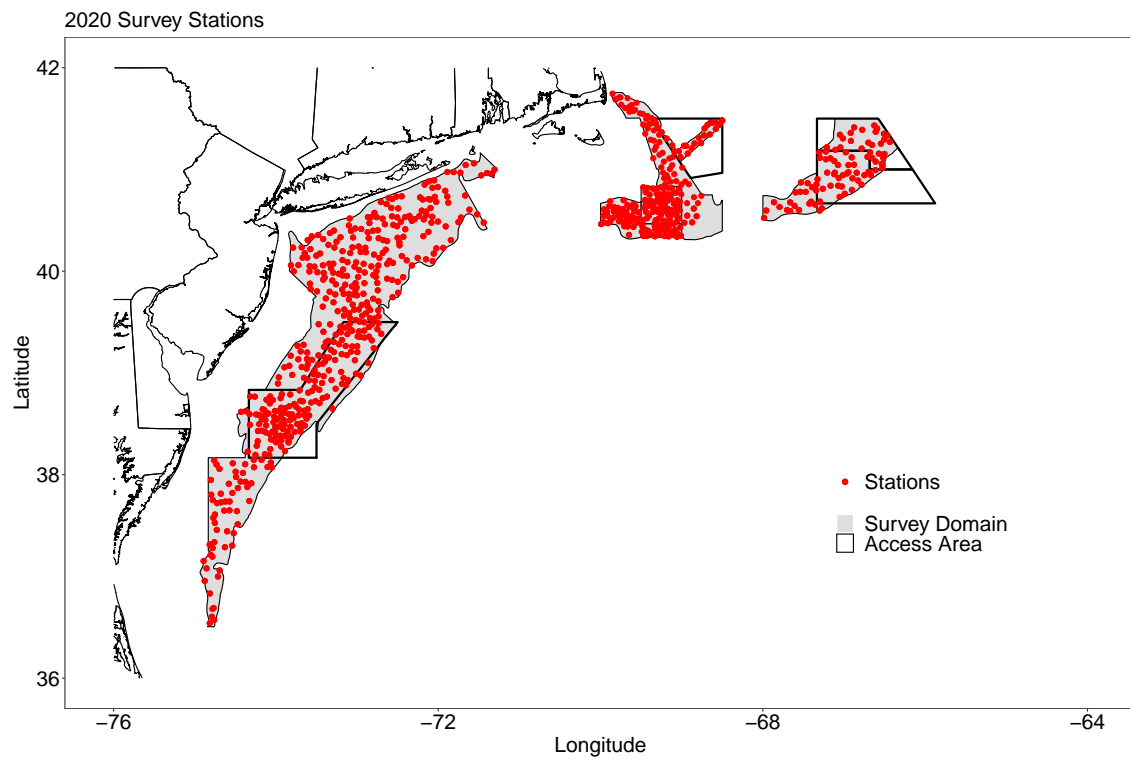


Figure 1: Survey domains with station locations for the VIMS/Industry cooperative surveys of the Mid-Atlantic sea scallop resource area, the Nantucket Lightship, Great South Channel, Closed Area I, and Closed Area II completed during July–September 2020.

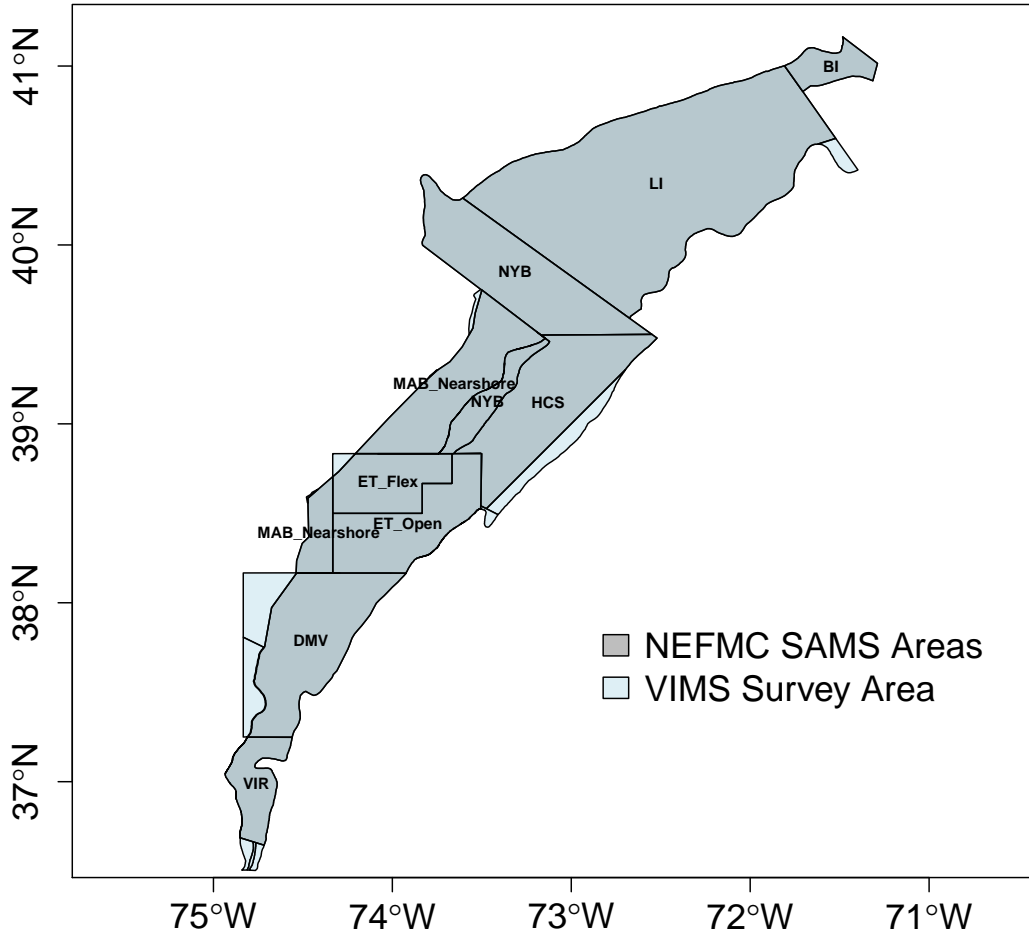


Figure 2: SAMS Areas used to calculate biomass estimates for the VIMS/Industry cooperative survey of the Mid-Atlantic sea scallop resource during July 2020.

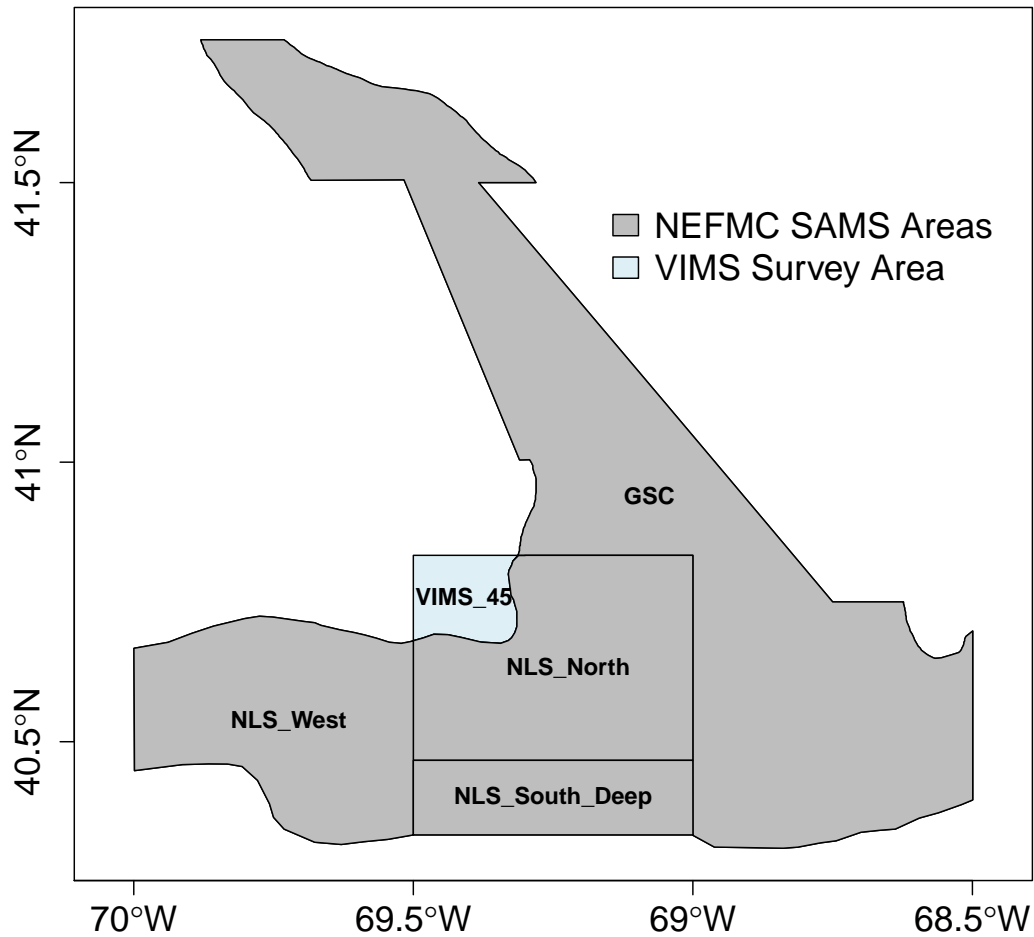


Figure 3: SAMS Areas used to calculate biomass estimates for the VIMS/Industry cooperative survey of the Nantucket Lightship and Great South Channel during September 2020.

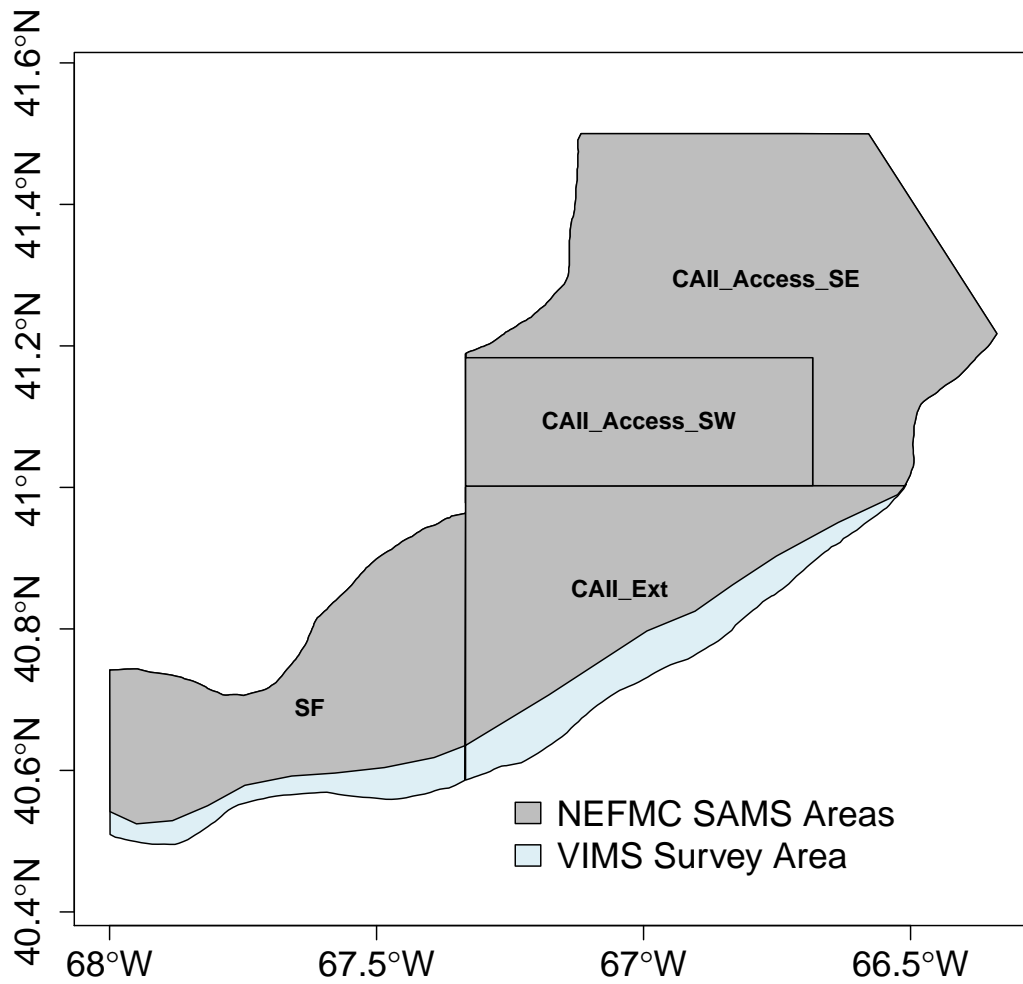


Figure 4: SAMS Areas used to calculate biomass estimates for the VIMS/Industry cooperative survey of the Closed Area II access area and open area along the southern flank during August 2020.

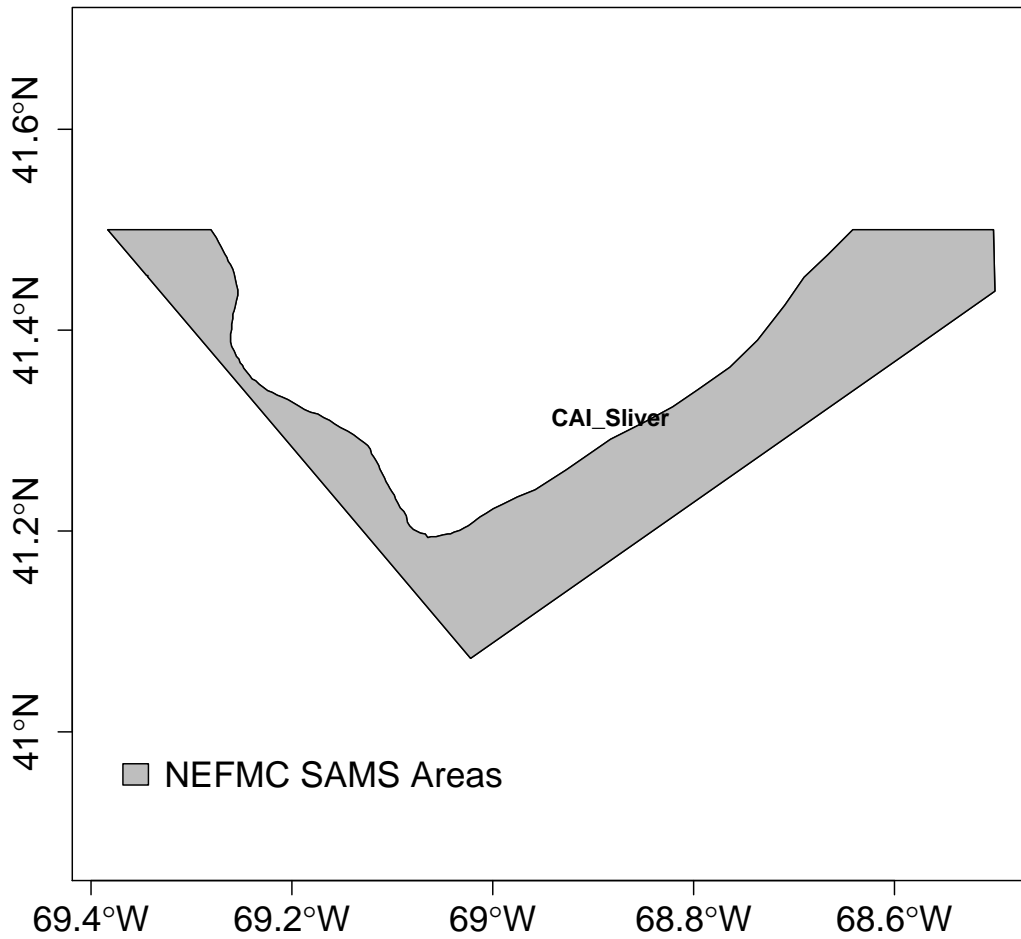


Figure 5: SAMS Areas used to calculate biomass estimates for the VIMS/Industry cooperative survey of the Closed Area I access area during August 2020.

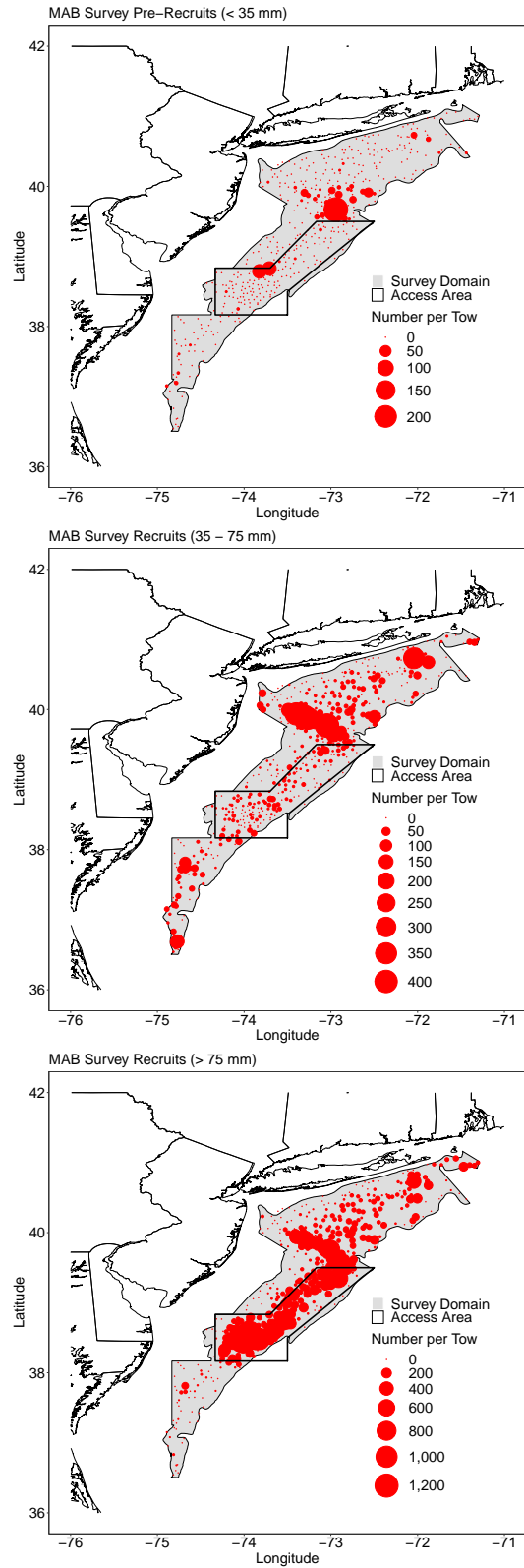


Figure 6: Number of scallops <35 mm, 35–75 mm, and >75 mm caught in the NMFS survey dredge during the VIMS/Industry cooperative survey of the Mid-Atlantic sea scallop resource during July 2020.

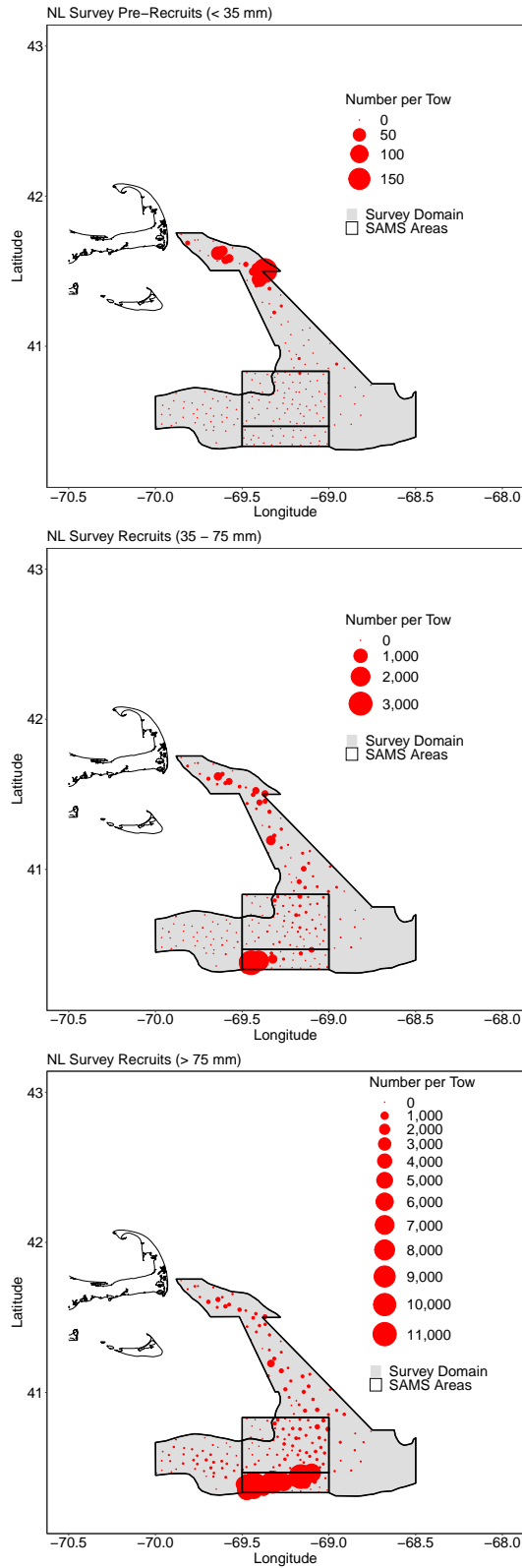


Figure 7: Number of scallops <35 mm, 35–75 mm, and >75 mm caught in the NMFS survey dredge during the VIMS/Industry cooperative survey of the Nantucket Lightship and Great South Channel during September 2020.

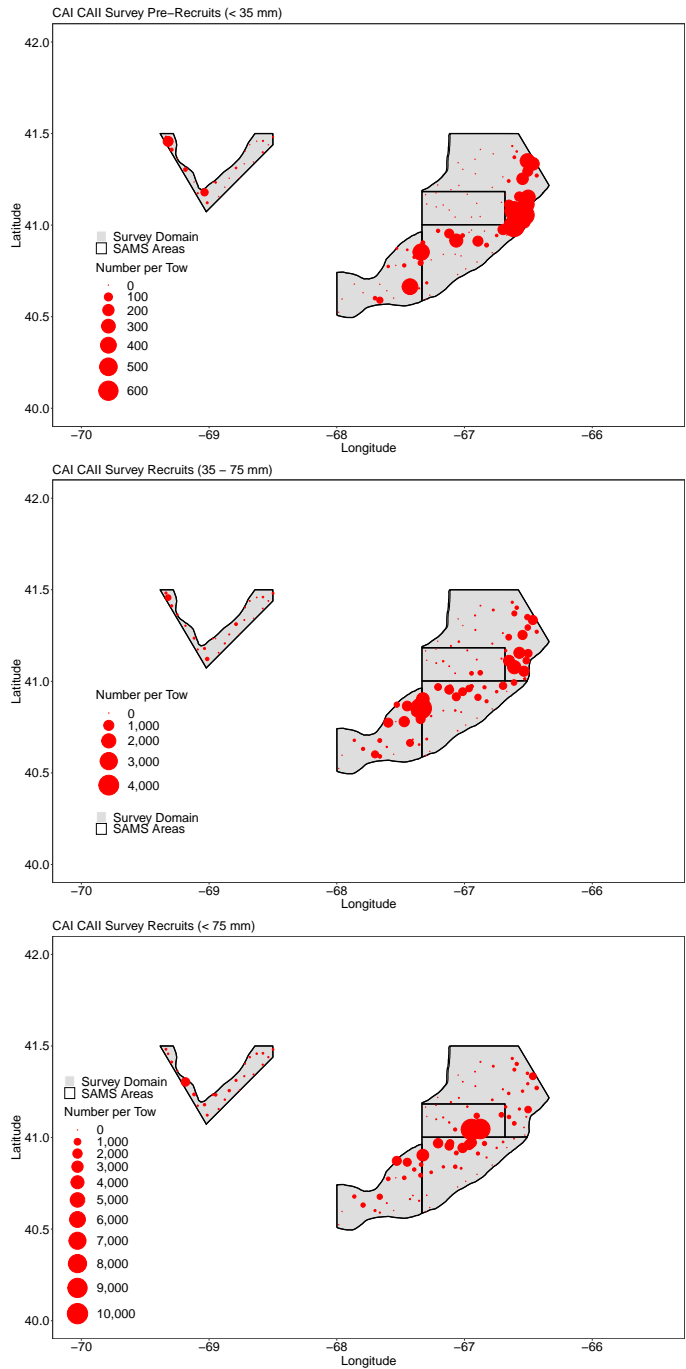


Figure 8: Number of scallops <35 mm, 35–75 mm, and >75 mm caught in the NMFS survey dredge during the VIMS/Industry cooperative survey of the Closed Area I and II access areas during August 2020.

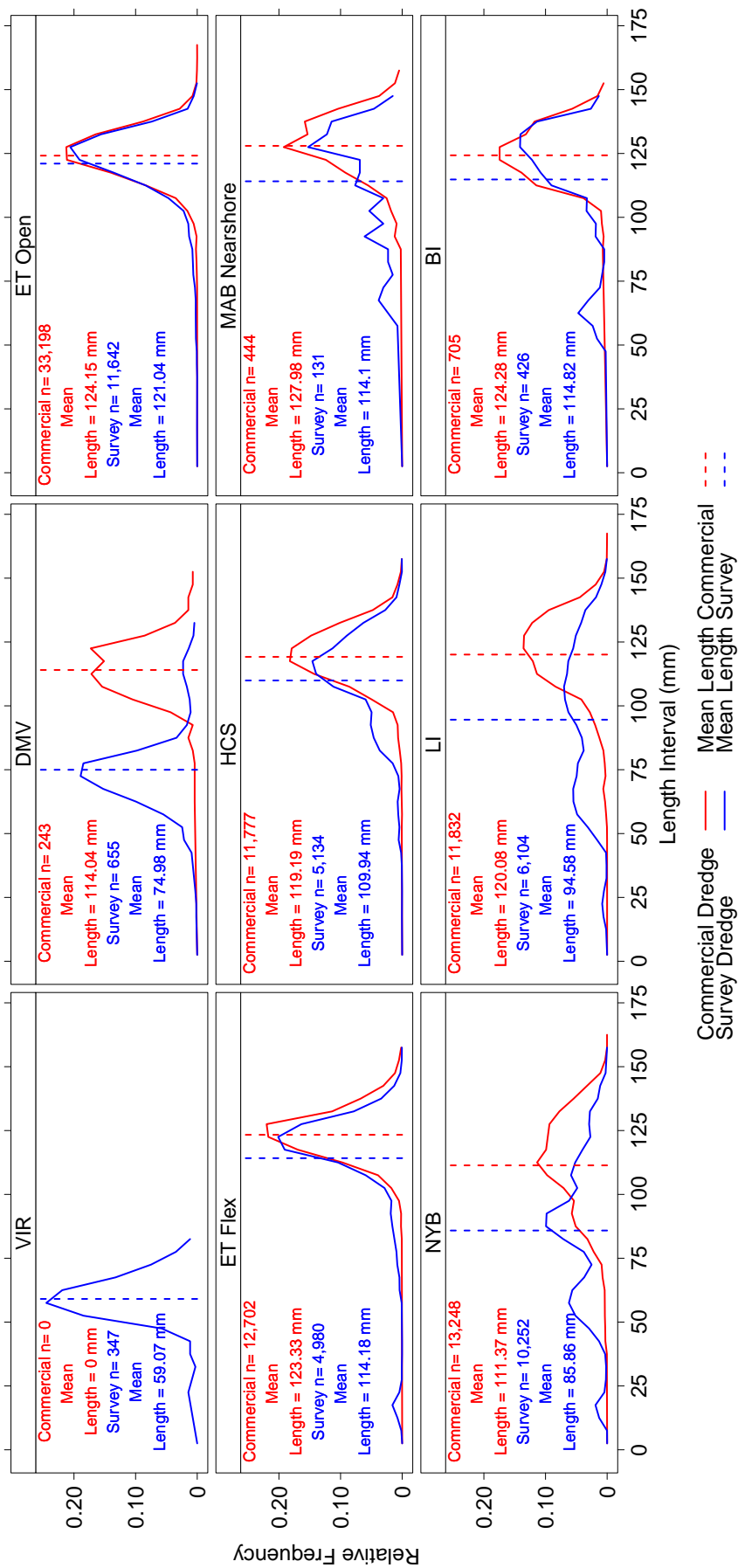


Figure 9: Scallop length frequency distributions generated from catch data obtained from both the survey and commercial dredges during the VIMS/Industry cooperative survey of the Mid-Atlantic sea scallop resource area in July 2020 by SAMS Area. Number of scallops (n) measured and mean length by gear are also included.

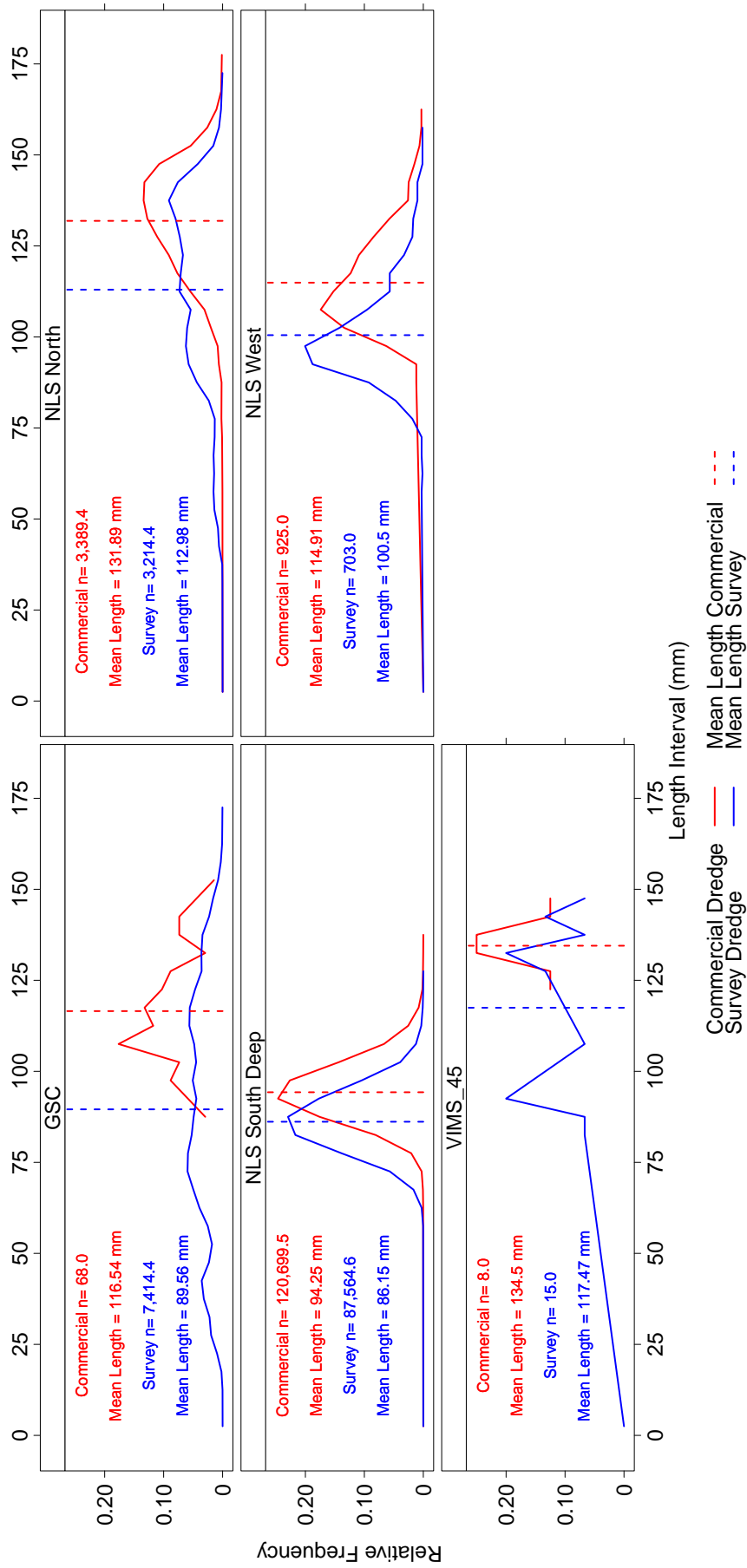


Figure 10: Scallop length frequency distributions generated from catch data obtained from both the survey and commercial dredges during the VIMS/Industry cooperative survey of the Nantucket Lightship access area and surrounds in September 2020 by SAMS Area. Number of scallops (n) measured and mean length by gear are also included.

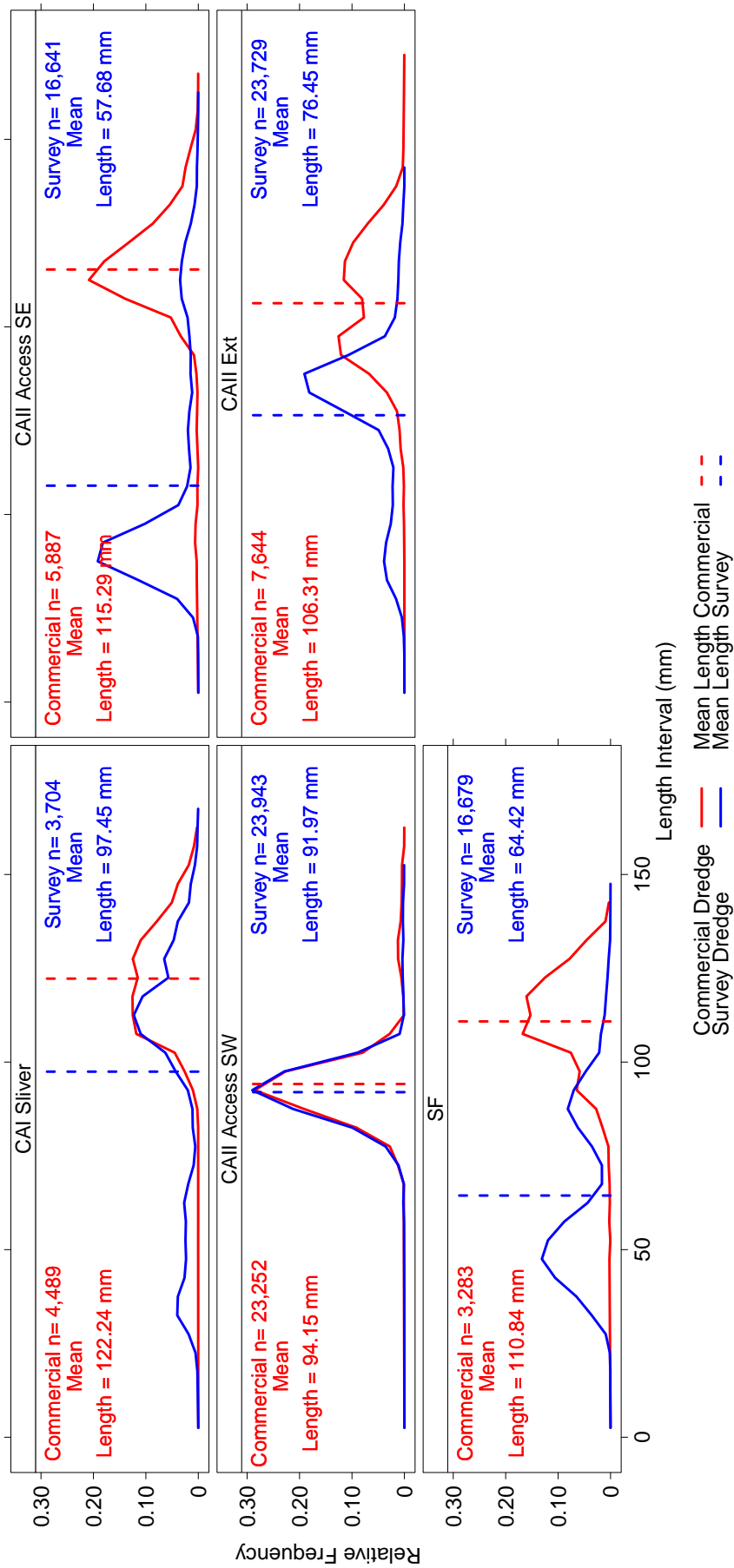


Figure 11: Scallop length frequency distributions generated from catch data obtained from both the survey and commercial dredges during the VIMS/Industry cooperative survey of Closed Area I (top row) and Closed Area II (middle and bottom rows) in August 2020 by SAMS Area. Number of scallops (n) measured and mean length by gear are also included.

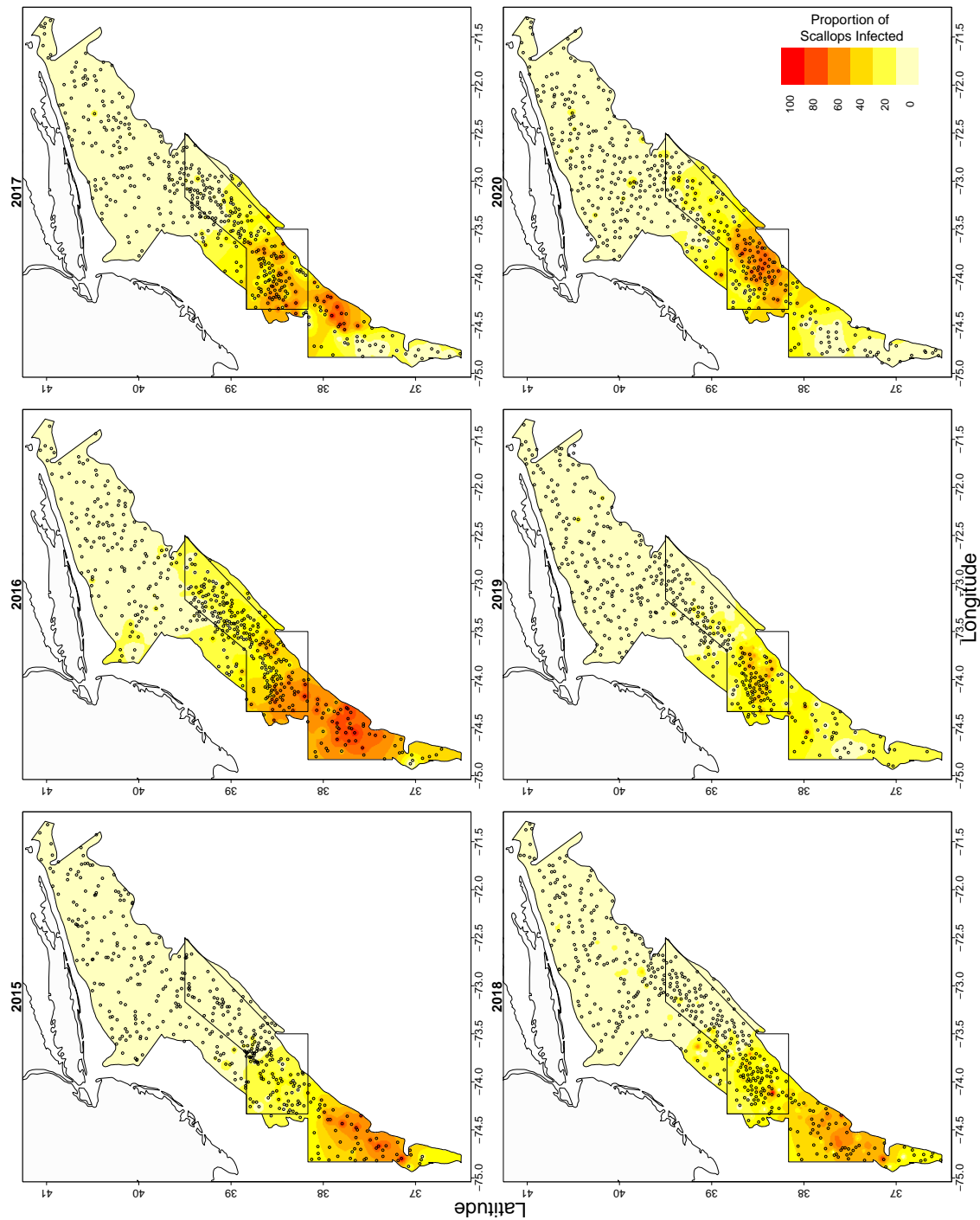


Figure 12: Proportion of scallops infected with nematodes for 2015-2020 in the VIMS/Industry cooperative survey of the Mid-Atlantic sea scallop resource area.