



New Hampshire Fish and Game Department

HEADQUARTERS: 11 Hazen Drive, Concord, NH 03301-6500
(603) 271-3421
FAX (603) 271-1438

www.WildNH.com
e-mail: info@wildlife.nh.gov
TDD Access: Relay NH 1-800-735-2964

April 17, 2024

Dear License Holder,

Since the fall of 2000, the states of New Hampshire and Maine have conducted an Inshore Bottom Trawl Survey in order to collect abundance and biological information on groundfish, lobsters, and other marine organisms from the shore out to the 12-nautical mile limit. We would like to ask for your cooperation with this year's spring survey.

On April 29th and April 30th the vessel is scheduled to survey off the coast of New Hampshire. Accompanying this letter are maps of the tow locations for the spring survey along with the Loran C coordinates (using the W and X chains) of the stations. An interactive chart will be available and can be found at the following website. Using a cell phone and clicking on the location button shows where you are in relation to the scheduled tows.

<https://www.maine.gov/dmr/science/fisheries-monitoring-assessment/maine-new-hampshire-inshore-trawl-survey/current>

In order to avoid any gear conflicts, we are asking for your cooperation by *temporarily* moving any fixed gear (lobster traps, gill nets, etc.) from an area roughly 1/8 mile on either side of the 1-nautical mile tow area before the above date(s). It is extremely important to the integrity of this long-term survey that we not have to move the trawl sites to avoid fixed gear.

In the event that adverse weather conditions cause delays or a postponement of the scheduled survey dates, there are several ways for you to get updates on the survey schedule. The best source of information is directly from the boat crew. The vessel will be monitoring channels 16 and 13 and be ready to move to a local working channel if you need to contact them the day of the survey. The survey vessel is the F/V Robert Michael out of Portland, ME, under Captain Rob Tetrault II. You can also contact the vessel via cell phone at 207-350-56561 (Chief Scientist Robyn Linner) or contact Lauren Staples at the Region 3 office in Durham; lauren.staples@wildlife.nh.gov or 603-868-1095.

Finally, I want to thank you all for the outstanding cooperation we have received over the past 24 years from the NH lobster fishing industry in moving gear out of the tow areas. The Department sees the inshore trawl survey as an opportunity to provide credible data to state managers, the New England Fisheries Management Council, the Atlantic States Marine Fisheries Commission, and National Oceanic and Atmospheric Administration (NOAA) for areas where there is currently minimal information on a variety of marine species that fisheries are reliant upon. Enclosed is a brief report that summarizes highlights and results from past surveys. We also have a more detailed report comparing the results of the survey through the fall of 2023. If you would like a copy of this report or have any questions about the survey in general, please contact Lauren Staples at our Durham Regional Office.

Thank you again for your cooperation.

Sincerely,



Cheri Patterson
Chief Marine Fisheries

Attachment

Cc:	Cheri Patterson Emerald Wright Robert Atwood	Joshua Carloni Matt Lee Cole Brakhage	Conor O'Donnell Renée Zobel Wendy Main	Lauren Staples District 6 Officers
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REGION 1

629B Main Street
Lancaster, NH 03584-3612
(603) 788-3164
FAX (603) 788-4823
email: reg1@wildlife.nh.gov

REGION 2

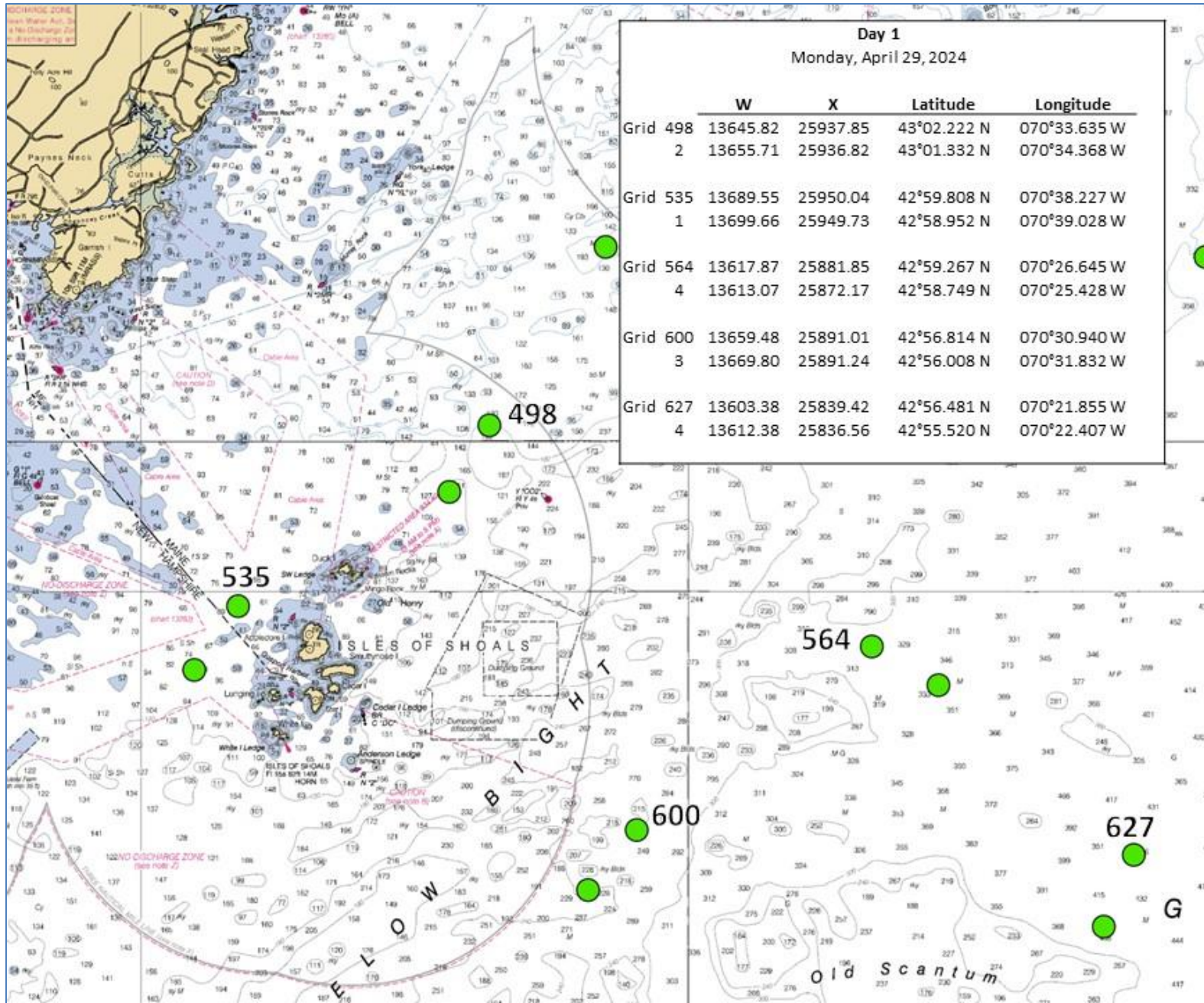
PO Box 417
New Hampton, NH 03256
(603) 744-5470
FAX (603) 744-6302
email: reg2@wildlife.nh.gov

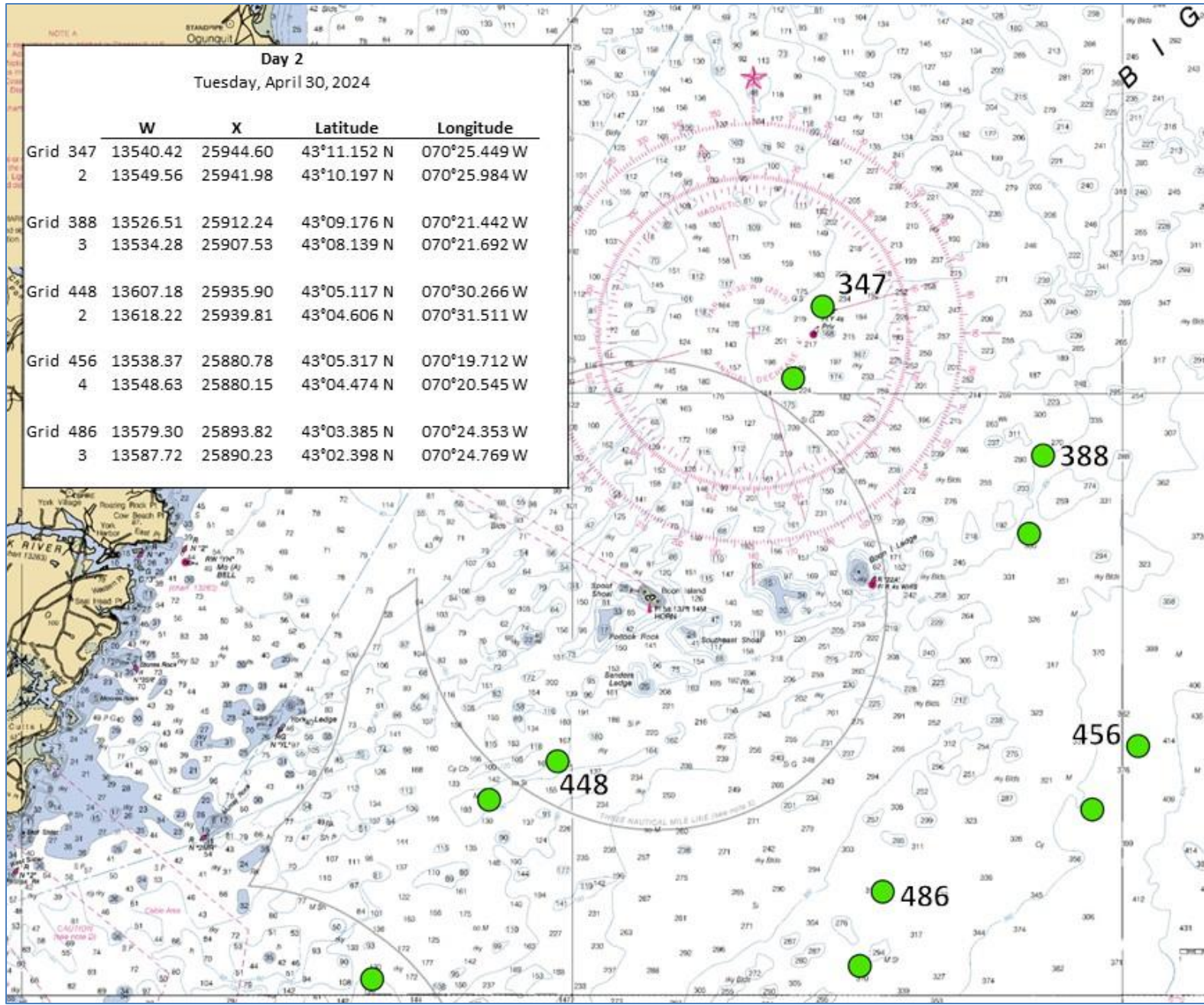
REGION 3

225 Main Street
Durham, NH 03824-4732
(603) 868-1095
FAX (603) 868-3305
email: reg3@wildlife.nh.gov

REGION 4

15 Ash Brook Court
Keene, NH 03431
(603) 352-9669
FAX (603) 352-8798
email: reg4@wildlife.nh.gov





Day 2
 Tuesday, April 30, 2024

	W	X	Latitude	Longitude
Grid 347	13540.42	25944.60	43°11.152 N	070°25.449 W
2	13549.56	25941.98	43°10.197 N	070°25.984 W
Grid 388	13526.51	25912.24	43°09.176 N	070°21.442 W
3	13534.28	25907.53	43°08.139 N	070°21.692 W
Grid 448	13607.18	25935.90	43°05.117 N	070°30.266 W
2	13618.22	25939.81	43°04.606 N	070°31.511 W
Grid 456	13538.37	25880.78	43°05.317 N	070°19.712 W
4	13548.63	25880.15	43°04.474 N	070°20.545 W
Grid 486	13579.30	25893.82	43°03.385 N	070°24.353 W
3	13587.72	25890.23	43°02.398 N	070°24.769 W

Table 1. Mean weight and number per tow of marine species captured in the ME/NH Inshore Trawl Survey in Region 1 (NH and southern ME), Spring 2019-2023.

Region 1 (NH to Cape Elizabeth)- Spring 2019-2023										
Species	Stratum 1 5-20 fathoms		Stratum 2 21-35 fathoms		Stratum 3 36-55 fathoms		Stratum 4 56-80+ fathoms		Region 1 all strata	
	kg/tow	#/tow	kg/tow	#/tow	kg/tow	#/tow	kg/tow	#/tow	kg/tow	#/tow
Acadian Redfish	0.159	4.423	0.355	13.597	0.301	9.376	9.948	154.503	2.691	45.475
Alewife	3.593	204.736	2.910	143.251	9.122	341.68	5.584	166.463	5.302	214.032
Alligatorfish			0.006	2.251	0.001	0.424			0.002	0.669
American lobster	16.457	66.538	42.437	160.329	24.953	94.144	5.734	13.145	22.395	83.539
American Plaice	0.012	0.248	0.899	11.290	5.597	53.174	8.899	39.962	3.852	26.169
American Sand Lance	0.010	0.625							0.002	0.156
American Shad	0.138	2.489	0.409	10.913	0.388	6.385	0.086	1.292	0.255	5.270
Atlantic Cod	0.160	0.681	0.277	0.984	0.071	0.044	0.384	0.167	0.223	0.469
Atlantic Halibut	0.080	0.311			0.056	0.083	0.348	0.042	0.121	0.109
Atlantic Herring	24.711	570.949	9.028	328.178	23.703	517.928	1.376	10.718	14.704	356.943
Atlantic Mackerel	0.377	6.229	0.355	4.201	0.109	0.888	0.003	0.083	0.211	2.850
Atlantic Menhaden							0.014	0.050	0.003	0.013
Atlantic rock crab	0.034	1.296	0.014	0.052	0.009	0.063			0.014	0.353
Atlantic Silverside							0.001	0.050	0.000	0.013
Atlantic Wolffish							0.411	0.050	0.103	0.013
Black Sea Bass					0.008	0.106			0.002	0.027
Blood star	0.083	0.063	0.001	0.656					0.021	0.180
Blueback Herring	3.006	183.286	3.509	173.967	7.116	307.314	1.148	32.562	3.695	174.282
Blue mussel	0.011	0.167	0.003	0.053	0.000	0.042			0.004	0.065
Bobtail squid							0.003	0.125	0.001	0.031
Brittle/Basket stars			0.009	0.046					0.002	0.012
Buckler Dory					0.001	0.042			0.000	0.010
Butterfish	0.375	15.454	0.754	16.986	0.651	8.083	0.004	0.0917	0.446	10.154
Comb jelly	0.694	9.271	0.421	8.143	0.073	3.860	0.004	0.796	0.298	5.517
Common star	0.000	0.063							0.000	0.016
Crangon shrimp	0.003	1.797	0.000	1.961	0.001	0.208	0.000	0.300	0.001	1.066
Cunner	0.546	9.093	0.515	7.282	0.011	0.167	0.003	0.050	0.269	4.148
Cusk							0.092	0.050	0.023	0.013
Daubed Shanny			0.001	0.050					0.000	0.013
Dichelo shrimp	0.003	2.531	0.137	89.767	1.318	595.464	0.845	412.393	0.576	275.039
Fourbeard Rockling			0.009	0.111	0.002	0.063	0.067	0.604	0.020	0.194
Fourspot Flounder	0.015	0.083	0.081	0.516	0.146	1.301	0.053	0.633	0.074	0.633
Gulf Stream Flounder					0.001	0.040			0.000	0.010
Haddock	0.001	0.250	0.074	1.177	1.110	4.824	23.406	34.94907407	6.148	10.300
Jonah crab	0.040	0.430	0.127	0.748	0.066	0.231	0.222	0.975	0.114	0.596
Little Skate	0.093	0.125	0.082	0.125	0.227	0.333	0.041	0.042	0.111	0.156
Longfin squid	0.099	3.519	0.120	3.684	0.017	1.082			0.059	2.071
Longhorn Sculpin	2.039	13.115	7.251	62.069	1.659	12.944	0.239	1.296	2.797	22.356
Lumpfish	0.011	0.052	0.118	0.206	0.498	0.952	0.496	0.850	0.281	0.515
Monkfish	0.017	0.385	0.338	1.341	0.294	1.100	1.651	1.688	0.575	1.128
Montagui shrimp	0.000	0.156			0.001	0.443	0.039	16.625	0.010	4.306
Moon jelly	0.004	0.000							0.001	0.000
Moon snail	0.005	0.042							0.001	0.010
Mysidacea							0.000	0.100	0.000	0.025
Northern Searobin	0.003	0.063							0.001	0.016
Northern shrimp					0.728	85.107	4.273	543.126	1.250	157.058
Ocean Pout	0.023	0.115	0.267	3.565	0.164	1.377	0.135	0.730	0.147	1.447
Pollock			0.018	0.198	0.050	0.102	0.399	0.804	0.116	0.276
Radiated Shanny			0.000	0.046					0.000	0.012
Rainbow Smelt	0.022	3.396							0.006	0.849
Rat-tail cucumber			0.000	0.050					0.000	0.013
Red crab							0.006	0.042	0.001	0.010
Red cushion star			0.007	0.105					0.002	0.026
Red Hake	0.148	5.815	0.299	7.623	3.170	24.531	9.086	57.168	3.176	23.784
Red jelly	0.020	0.167							0.005	0.042

Region 1 (NH to Cape Elizabeth)- Spring 2019-2023										
Species	Stratum 1 5-20 fathoms		Stratum 2 21-35 fathoms		Stratum 3 36-55 fathoms		Stratum 4 56-80+ fathoms		Region 1 all strata	
	kg/tow	#/tow	kg/tow	#/tow	kg/tow	#/tow	kg/tow	#/tow	kg/tow	#/tow
Sand dollar unclass	0.012	1.948	0.001	0.111	0.000	0.050			0.003	0.527
Sculptured shrimp					0.000	0.050			0.000	0.013
Scup			0.018	0.050					0.004	0.013
Sea anemone			0.000	0.056	0.047	0.169	0.044	0.533	0.023	0.189
Sea scallop	0.044	3.715	0.029	4.985	0.023	0.300	0.393	42.363	0.122	12.841
Sea Raven	0.155	1.031	0.089	0.564	0.055	0.083			0.075	0.419
Sea sponges			0.006	0.053					0.001	0.013
Sea urchin	0.000	0.125	0.000	0.050	0.000	0.044			0.000	0.055
Seaweed unclass	1.427	0.000	0.122	0.000					0.387	0.000
Shortfin squid					0.004	0.063	0.002	0.092	0.001	0.039
Shorthorn Sculpin	0.091	0.078							0.023	0.020
Silver Hake	20.528	913.186	8.787	168.322	44.548	757.996	104.962	1920.123	44.706	939.907
Smooth Skate					0.034	0.042	0.127	0.133	0.040	0.044
Snakeblenny	0.005	0.228	0.006	0.250	0.010	0.400			0.005	0.219
Spiny Dogfish							6.061	4.450	1.515	1.113
Spoonarm octopus					0.003	0.063	0.006	0.150	0.002	0.053
Thorny Skate	0.045	0.078			0.082	0.050	2.292	0.871	0.605	0.250
Toad crab	0.004	0.611	0.002	0.292	0.000	0.092			0.002	0.249
Unidentified catch	0.000	0.125							0.000	0.031
Waved astarte							0.001	0.125	0.000	0.031
White Hake	0.004	0.063	0.018	0.272	0.150	0.987	0.991	2.721	0.290	1.010
Windowpane	0.138	0.333	0.029	0.111	0.005	0.083			0.043	0.132
Winter Flounder	1.856	22.932	2.754	32.091	1.270	8.336	0.131	0.888	1.503	16.062
Witch Flounder			0.000	0.098	0.342	2.682	2.481	16.151	0.706	4.733
Yellowtail Flounder	0.093	0.831	1.364	8.684	3.843	23.272	0.971	5.440	1.568	9.557

Table 1-2. Mean weight and number per tow of marine species captured in the ME/NH Inshore Trawl Survey in Region 1 (NH and southern ME), Fall 2019-2023.

Species	Region 1 (NH to Cape Elizabeth)- Fall 2019-2023									
	Stratum 1		Stratum 2		Stratum 3		Stratum 4		Region 1 all strata	
	5-20 fathoms		21-35 fathoms		36-55 fathoms		56-80+ fathoms			
	kg/tow	#/tow	kg/tow	#/tow	kg/tow	#/tow	kg/tow	#/tow	kg/tow	#/tow
Acadian Redfish	0.257	6.656	0.432	17.572	0.861	25.351	9.432	151.934	2.745	50.378
Alewife	0.193	3.798	3.153	35.972	6.433	44.955	6.523	43.756	4.076	32.120
Alligatorfish			0.000	0.105	0.001	0.336			0.000	0.110
American lobster	56.205	267.463	45.836	214.990	21.211	71.529	1.307	3.321	31.140	139.326
American Plaice			0.290	3.822	3.059	38.907	13.509	69.825	4.214	28.139
American Shad	0.204	2.299	0.252	1.851	0.892	4.765	0.324	1.899	0.418	2.703
Atlantic Cod	0.217	0.372	0.023	0.078	0.313	0.140	0.482	0.140	0.258	0.183
Atlantic Hagfish					0.010	0.047			0.002	0.012
Atlantic Halibut	0.125	0.200			0.081	0.080			0.052	0.070
Atlantic Herring	0.444	26.370	5.233	116.905	27.737	226.929	0.220	1.662	8.408	92.966
Atlantic Mackerel	3.141	24.421	0.196	2.329	0.070	1.306	0.012	0.420	0.957	7.119
Atlantic Menhaden	0.012	0.120	0.062	0.158	0.279	0.988	0.323	0.993	0.169	0.565
Atlantic Moonfish	0.001	0.773	0.001	0.373			0.000	0.033	0.000	0.295
Atlantic rock crab	0.039	2.341	0.063	0.333	0.000	0.033			0.026	0.677
Atlantic Silverside	0.000	0.059							0.000	0.015
Atlantic Torpedo			0.760	0.050					0.190	0.013
Barndoor Skate					0.672	0.100	1.224	0.187	0.474	0.072
Blood star	0.001	0.543	0.000	0.168	0.000	0.000	0.000	0.033	0.000	0.186
Blueback Herring	0.063	0.937	0.088	0.793	1.257	8.255	1.024	6.568	0.608	4.138
Bluefish	0.010	0.299							0.003	0.075
Blue mussel			0.062	9.787					0.016	2.447
Brittle star							0.0012	0.000		
Butterfish	1.520	98.458	2.257	64.772	2.025	26.164	0.752	10.374	1.638	49.942
Common star					0.004	0.044			0.001	0.011
Crangon shrimp	0.002	1.673	0.000	0.078	0.000	0.080	0.000	0.133	0.001	0.491
Cunner	2.221	48.806	0.550	7.587	0.018	0.150	0.002	0.033	0.698	14.144
Dichelo shrimp	0.000	0.231	0.146	82.472	0.582	266.193	0.592	225.761	0.330	143.664
Fourbeard Rockling			0.006	0.177	0.068	0.626	0.156	3.048	0.058	0.963
Fourspot Flounder	0.007	0.059	0.092	0.795	0.317	1.768	0.098	0.420	0.129	0.760
Haddock	0.013	1.009	0.338	3.731	1.422	3.858	13.270	16.871	3.761	6.367
Jonah crab	0.041	0.655	0.393	2.226	0.214	1.666	0.158	1.582	0.202	1.532
Krill					0.000	0.120	7.333	0.073	0.000	0.048
Little Skate	0.362	0.501	0.175	0.180			0.109	0.073	0.161	0.189
Longfin squid	0.761	55.341	0.406	45.687	0.360	30.102	0.111	8.167	0.409	34.824
Longhorn Sculpin	0.518	3.769	2.541	22.336	0.337	2.309	0.034	0.200	0.857	7.153
Lumpfish			0.066	0.364	0.183	0.532	0.500	0.800	0.187	0.424
Mantis shrimp			0.000	0.053					0.000	0.013
Monkfish	0.020	0.166	1.324	2.649	6.301	5.897	7.999	6.589	3.911	3.825
Montagui shrimp					0.000	0.075	0.036	13.100	0.009	3.294
Moon jelly			0.051	0.067	0.007	0.118	0.100	0.433	0.039	0.154
Northern shrimp					0.075	9.550	0.273	26.544	0.087	9.023
Norwegian shrimp							0.003	2.713	0.001	0.678
Ocean Pout	0.001	0.033	0.023	0.454	0.021	0.240	0.017	0.067	0.016	0.199
Pearlsides					0.000	0.100	0.000	0.100	0.000	0.050
Pink glass shrimp							0.003	1.520	0.001	0.380
Pollock					0.026	0.193	0.138	0.213	0.041	0.102
Porbeagle							2.600	0.033	0.650	0.008
Rainbow Smelt	0.002	0.111							0.001	0.028
Rat-tail cucumber	0.000	0.042							0.000	0.011
Red Hake	0.067	1.333	4.546	67.831	20.672	124.494	45.692	242.459	17.744	109.030
Rock Gunnel	0.001	0.200							0.000	0.050
Rough Scad	0.004	0.162							0.001	0.040
Sand dollar unclass	0.009	1.024							0.002	0.256
Sculptured shrimp					0.000	0.147	0.000	0.033	0.000	0.045
Sea anemone			0.010	0.507	0.073	0.342	0.210	0.815	0.073	0.416
Sea pen							0.001	0.000		

Region 1 (NH to Cape Elizabeth)- Fall 2019-2023										
Species	Stratum 1 5-20 fathoms		Stratum 2 21-35 fathoms		Stratum 3 36-55 fathoms		Stratum 4 56-80+ fathoms		Region 1 all strata	
	kg/tow	#/tow	kg/tow	#/tow	kg/tow	#/tow	kg/tow	#/tow	kg/tow	#/tow
Sea Raven	0.063	0.267	0.108	0.211					0.043	0.119
Sea scallop	0.018	1.783	0.009	1.389	0.004	0.132	0.744	55.135	0.194	14.610
Sea sponges	0.006	0.000	0.010	0.212					0.004	0.053
Sea urchin	0.001	0.484							0.000	0.121
Seaweed unclass	0.382	0.000			0.034	0.000	0.005	0.000	0.105	0.000
Shrimp			0.000	0.040			0.001	0.320	0.000	0.090
Shortfin squid	0.012	0.167	0.294	2.217	1.114	6.663	4.476	21.359	1.474	7.601
Shorthorn Sculpin	0.003	0.053							0.001	0.013
Silver Hake	3.244	78.366	24.848	437.197	78.158	1397.918	125.282	1737.518	57.883	912.750
Silver Rag	0.001	0.120	0.003	0.200	0.002	0.067	0.018	0.033	0.006	0.105
Smooth Skate					0.000	0.033	0.179	0.213	0.045	0.062
Snakeblenny					0.002	0.040			0.000	0.010
Spiny Dogfish			0.314	0.150	3.710	2.294	58.893	41.122	15.729	10.892
Spiny lebbeid	0.000	0.042							0.000	0.011
Spoonarm octopus							0.077	0.350	0.019	0.088
Spotted Hake	0.003	0.037	0.015	0.137					0.004	0.044
Striped Bass	2.481	2.453			0.093	0.047			0.643	0.625
Striped Searobin	0.000	0.053							0.000	0.013
Thorny Skate					0.088	0.047	5.624	1.373	1.428	0.355
Toad crab	0.002	0.457	0.003	0.520			0.000	0.040	0.001	0.254
Trash species							0.006	0.068	0.002	0.017
Tunicate unclass			0.008	0.168	0.001	0.211			0.002	0.095
Waved astarte							0.001	0.067	0.000	0.017
White Hake	0.113	1.180	1.361	10.605	5.782	17.614	14.353	12.568	5.402	10.492
Windowpane	0.089	0.636	0.020	0.218			0.003	0.033	0.028	0.222
Winter Flounder	2.261	20.915	3.220	23.602	0.981	2.689	0.017	0.500	1.620	11.926
Witch Flounder			0.168	1.320	6.264	36.606	9.464	47.162	3.974	21.272
Wrymouth					0.009	0.109			0.002	0.027
Yellowtail Flounder	0.175	1.268	1.021	6.045	2.440	12.775	0.092	0.513	0.932	5.150

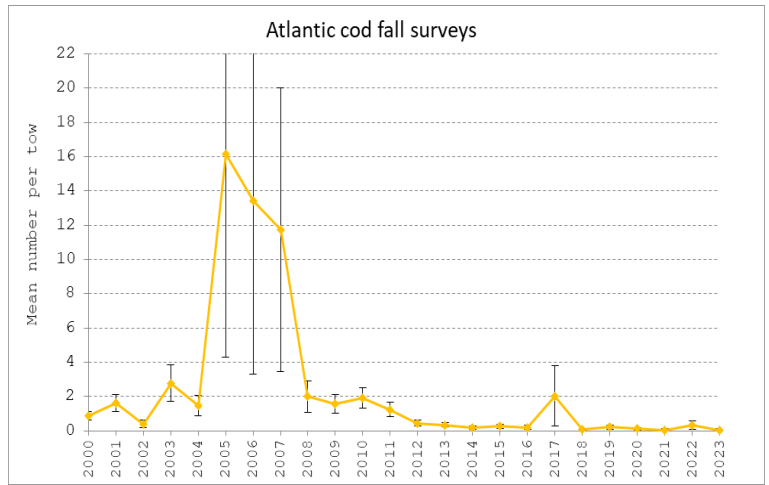
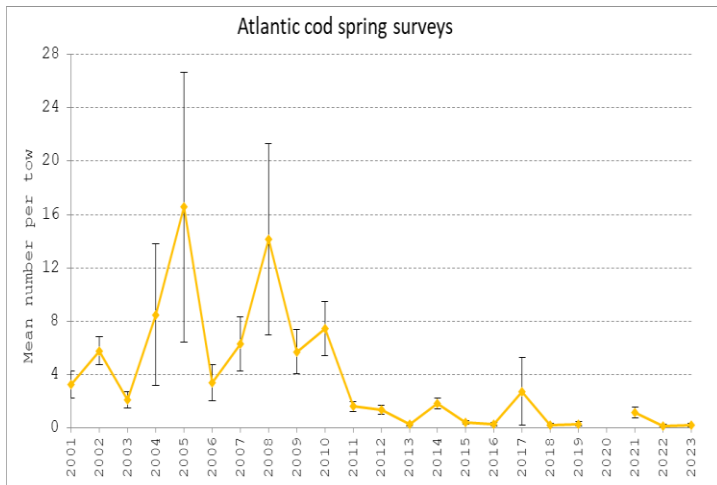


Figure 1-1. Mean number per tow of Atlantic Cod (*Gadus morhua*) from Region 1 of the ME/NH Inshore Trawl Survey during spring and fall, 2000-2023.

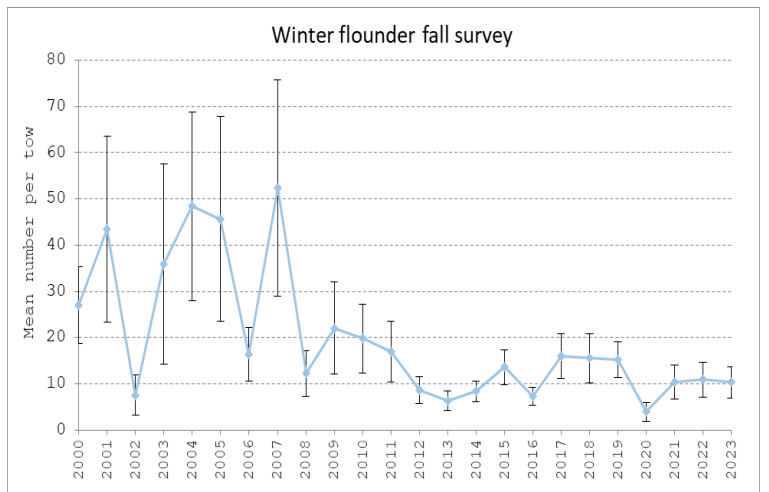
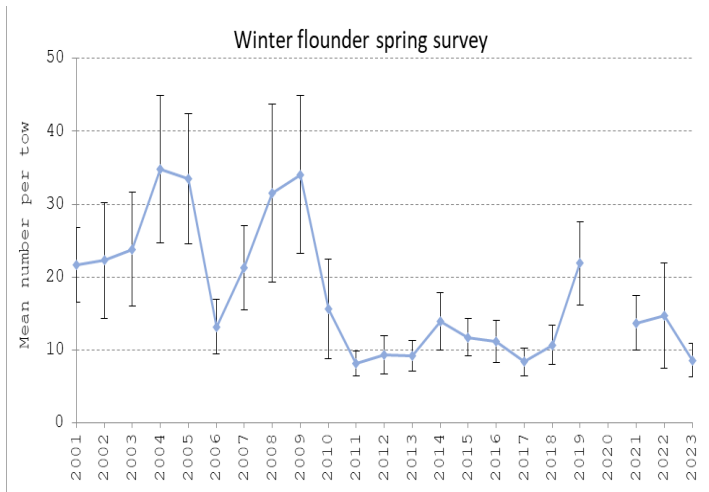


Figure 1-2. Mean number per tow of Winter Flounder (*Pseudopleuronectes americanus*) from Region 1 of the ME/NH Inshore Trawl Survey during spring and fall, 2000-2023.

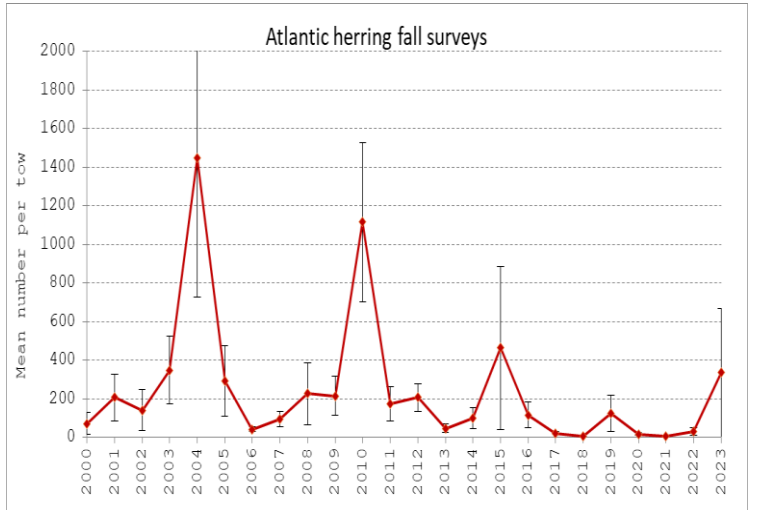
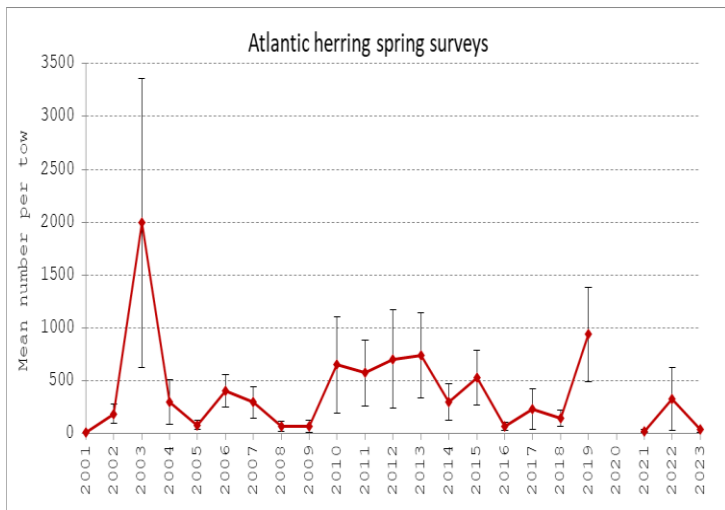


Figure 1-3. Mean number per tow of Atlantic Herring (*Clupea harengus*) from Region 1 of the ME/NH Inshore Trawl Survey during spring and fall, 2000-2023.

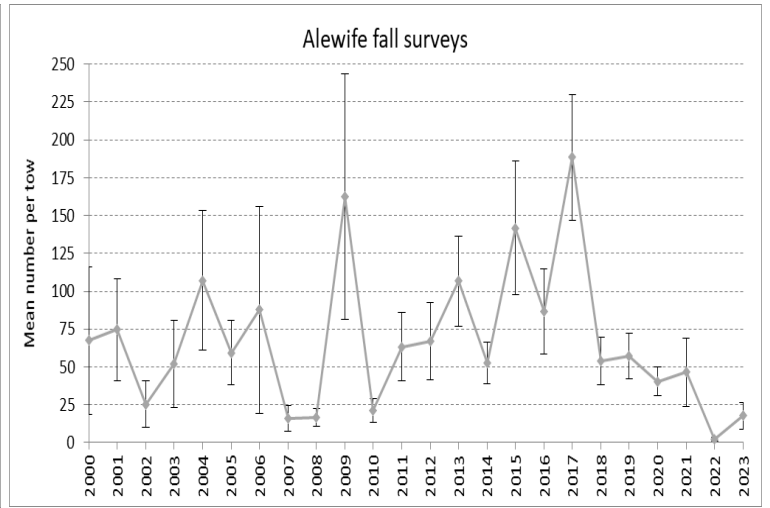
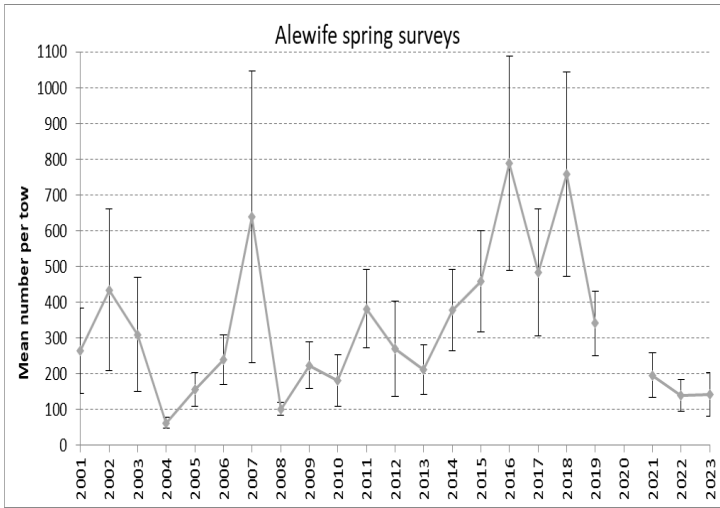


Figure 1-4. Mean number per tow of alewife (*Alosa pseudoharengus*) from Region 1 of the ME/NH Inshore Trawl Survey during spring and fall, 2000-2023.

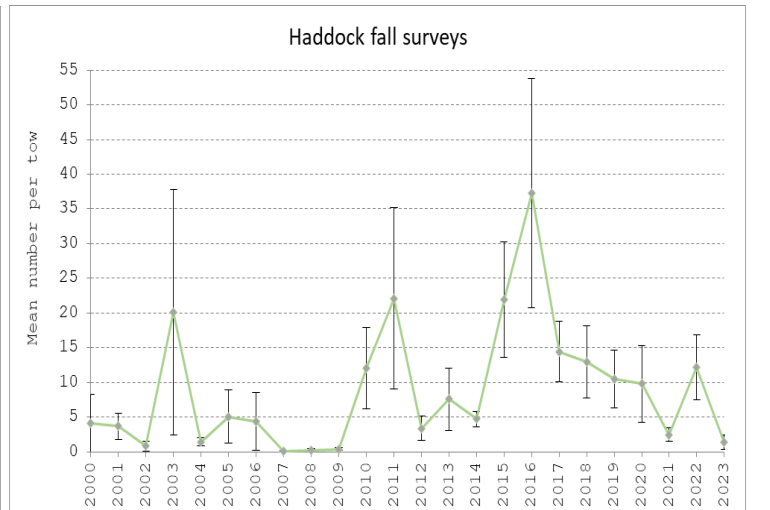
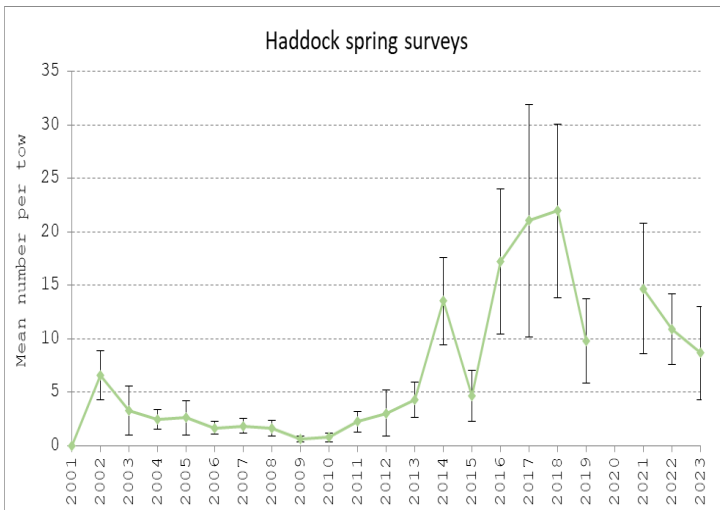


Figure 1-5. Mean number per tow of Haddock (*Melanogrammus aeglefinus*) from Region 1 of the ME/NH Inshore Trawl Survey during spring and fall, 2000-2023.

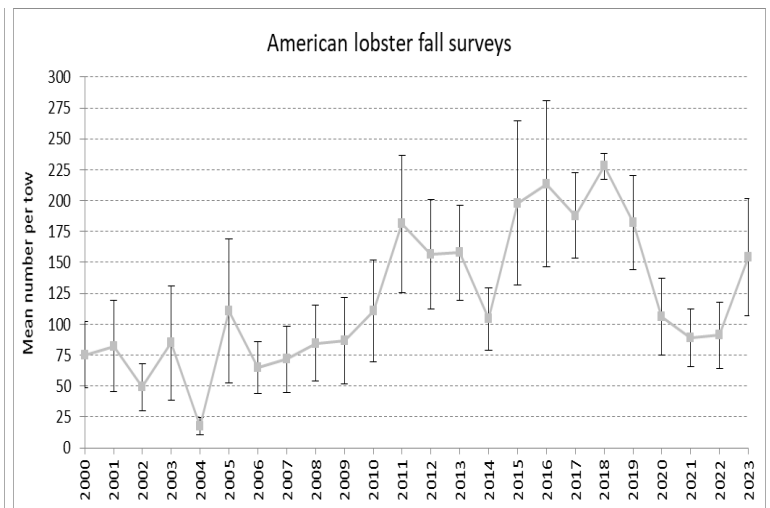
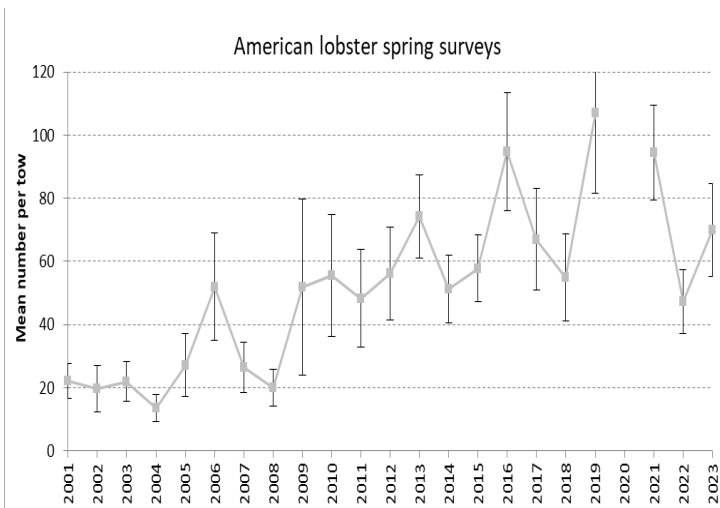


Figure 1-6. Mean number per tow of American lobster (*Homarus americanus*) from Region 1 of the ME/NH Inshore Trawl Survey during spring and fall, 2000-2023.