

**Age-specific differences in the seasonal spatial distribution of butterfish (*Peprilus triacanthus*), 1982–2013**

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**Supplementary material**

Table S1. NEFSC spring and fall survey dates, 1982–2013.

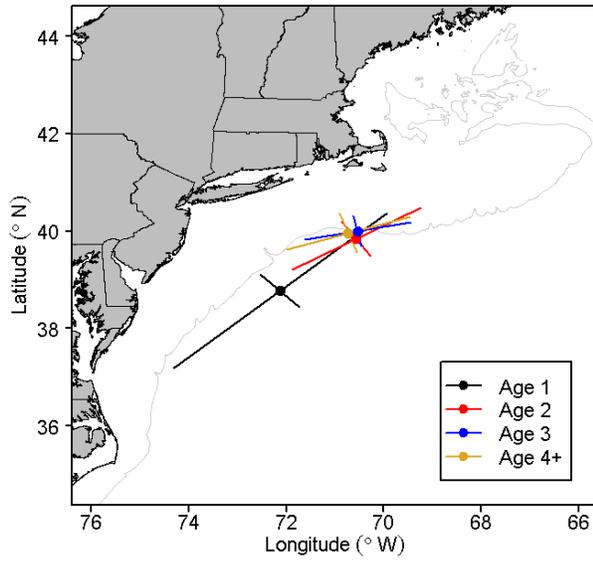
Spring		Fall	
Start	End	Start	End
8-Mar-82	8-May-82	13-Sep-82	12-Nov-82
7-Mar-83	6-May-83	12-Sep-83	10-Nov-83
29-Feb-84	27-Apr-84	10-Sep-84	9-Nov-84
25-Feb-85	13-Apr-85	9-Sep-85	16-Nov-85
3-Mar-86	27-Apr-86	13-Sep-86	6-Nov-86
23-Mar-87	5-May-87	10-Sep-87	6-Nov-87
5-Mar-88	21-Apr-88	12-Sep-88	28-Oct-88
27-Feb-89	13-Apr-89	11-Sep-89	2-Nov-89
5-Mar-90	18-Apr-90	11-Sep-90	26-Oct-90
5-Mar-91	16-Apr-91	9-Sep-91	24-Oct-91
2-Mar-92	16-Apr-92	8-Sep-92	28-Oct-92
8-Mar-93	30-Apr-93	7-Sep-93	27-Oct-93
28-Feb-94	27-Apr-94	6-Sep-94	27-Oct-94
7-Mar-95	27-Apr-95	5-Sep-95	27-Oct-95
6-Mar-96	29-Apr-96	9-Sep-96	31-Oct-96
3-Mar-97	23-Apr-97	8-Sep-97	30-Oct-97
2-Mar-98	20-Apr-98	22-Sep-98	10-Nov-98
1-Mar-99	22-Apr-99	20-Sep-99	10-Nov-99
16-Mar-00	3-May-00	5-Sep-00	21-Oct-00
26-Feb-01	30-Apr-01	4-Sep-01	26-Oct-01
4-Mar-02	26-Apr-02	3-Sep-02	25-Oct-02
5-Mar-03	27-Apr-03	2-Sep-03	3-Nov-03
2-Mar-04	22-Apr-04	9-Sep-04	28-Oct-04
1-Mar-05	21-Apr-05	6-Sep-05	4-Nov-05
6-Mar-06	20-Apr-06	5-Sep-06	3-Nov-06
5-Mar-07	27-Apr-07	4-Sep-07	16-Nov-07
6-Mar-08	3-May-08	2-Sep-08	13-Nov-08
27-Feb-09	11-May-09	8-Sep-09	18-Nov-09
22-Feb-10	4-May-10	8-Sep-10	3-Dec-10
1-Mar-11	12-May-11	7-Sep-11	14-Nov-11
27-Feb-12	10-May-12	4-Sep-12	11-Nov-12
4-Mar-13	11-May-13	3-Sep-13	19-Nov-13

Table S2. Comparison of the butterfish stock assessment offshore strata and the strata used in this spatial analysis.

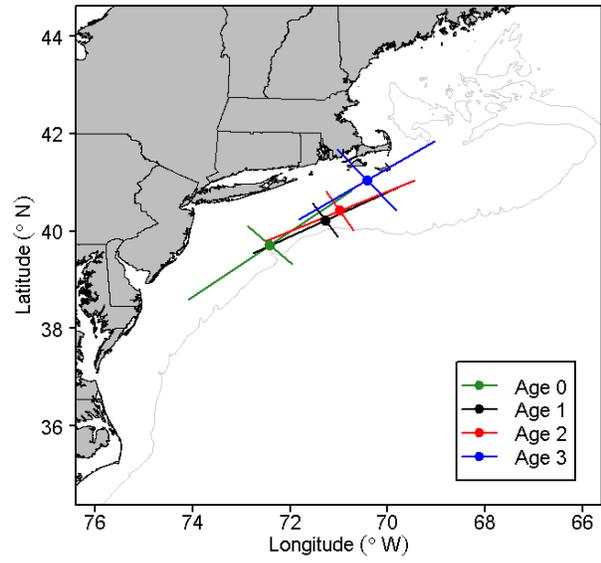
Assessment	Spatial	Assessment	Spatial
01010	01010	03020	03020
01020	01020	03050	03050
01030	01030	03080	03080
01040	01040	03110	03110
01050	01050	03140	03140
01060	01060	03170	03170
01070	01070	03200	03200
01080	01080	03230	03230
01090	01090	03260	03260
01100	01100	03290	03290
01110	01110	03320	03320
01120		03350	03350
01130	01130	03380	03380
01140	01140	03410	03410
	01150	03440	03440
01160	01160	03450	
	01170	03460	
01190	01190	03560	
01200	01200	03590	
	01210	03600	
	01220	03610	
01230	01230	03640	
	01240	03650	
01250	01250	03660	
	01260		
	01270		
	01280		
	01290		
	01300		
	01340		
	01360		
	01370		
	01380		
	01390		
	01400		
01610	01610		
01620	01620		
01630			
01640			
01650	01650		
01660	01660		
01670	01670		
01680			
01690	01690		
01700	01700		
01710	01710		
01720			
01730	01730		
01740	01740		
01750	01750		
01760			

Figure S1. Maps of centre of gravity and inertia for the spring ages 1 to 4+ and fall ages 0 to 4+, 1982–2013. Note that not all ages are present in all years. Isobath is 200 m.

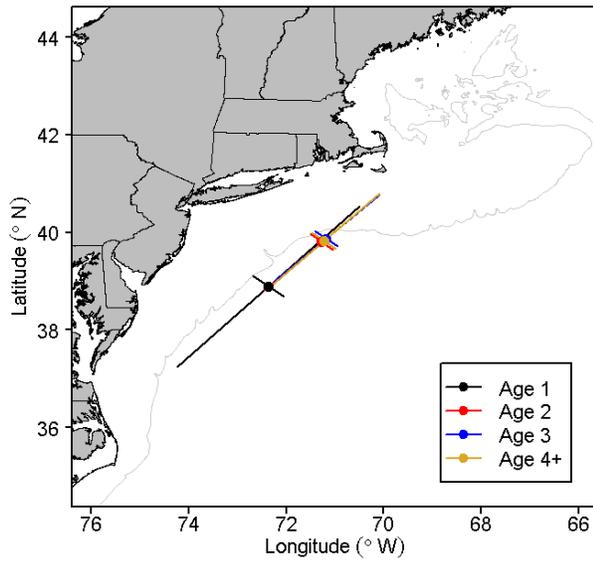
Spring 1982



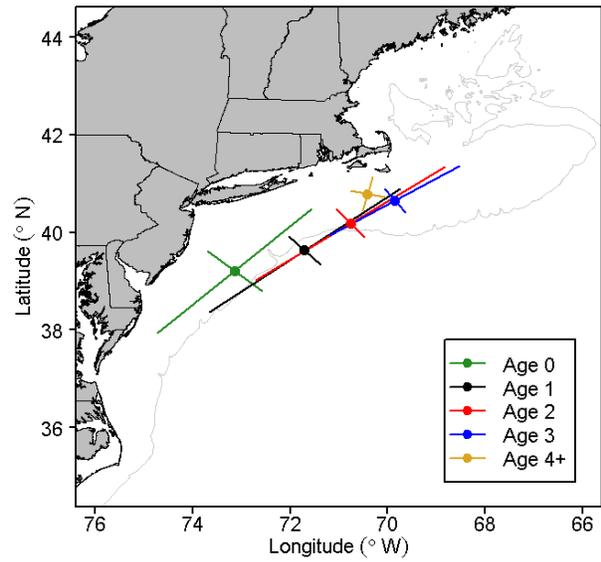
Fall 1982



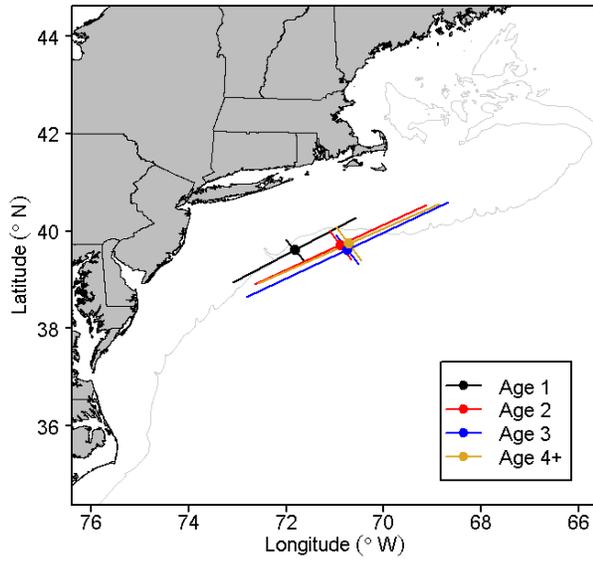
Spring 1983



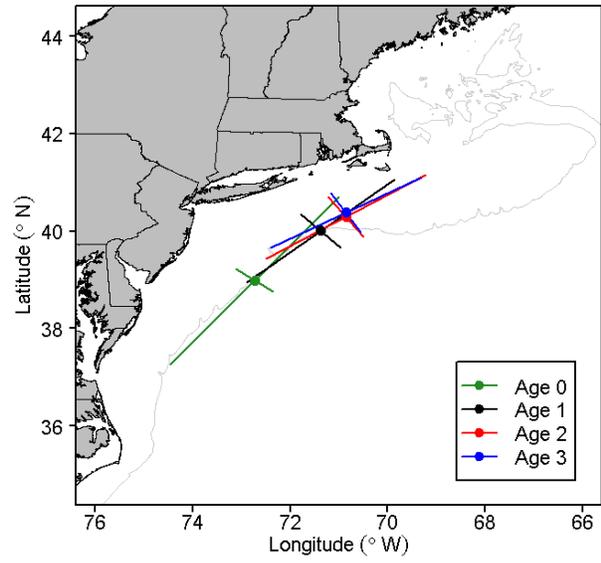
Fall 1983



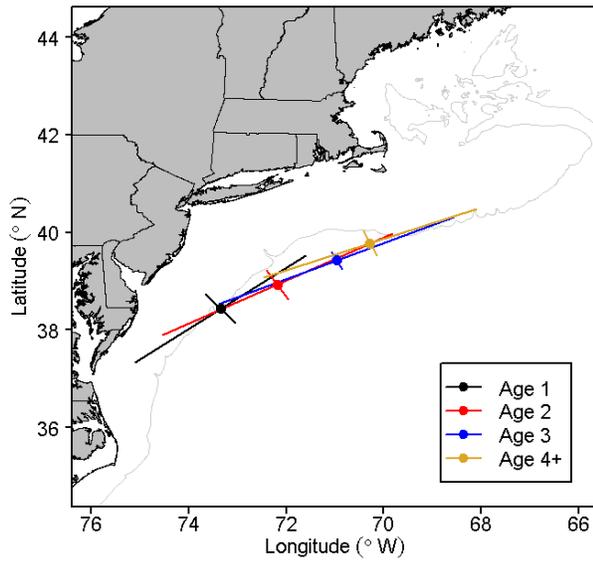
Spring 1984



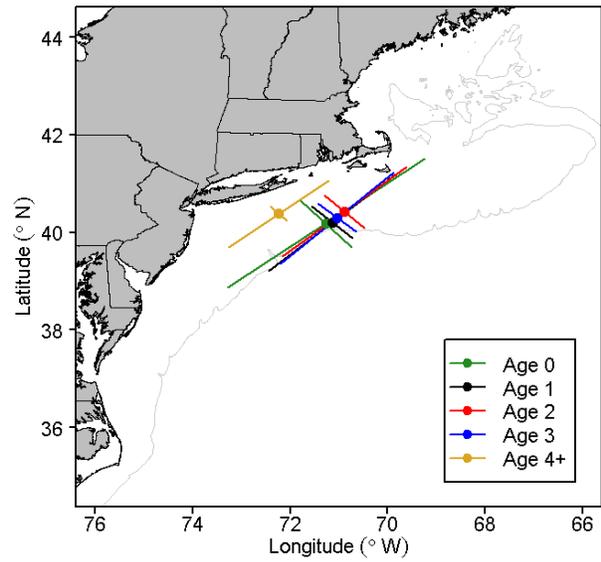
Fall 1984



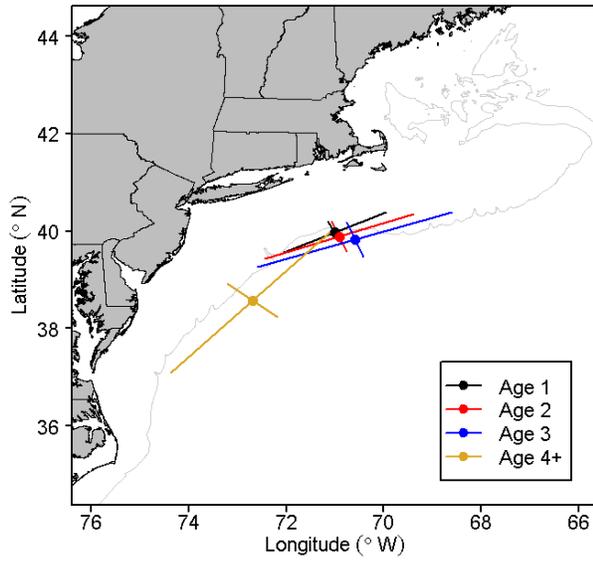
Spring 1985



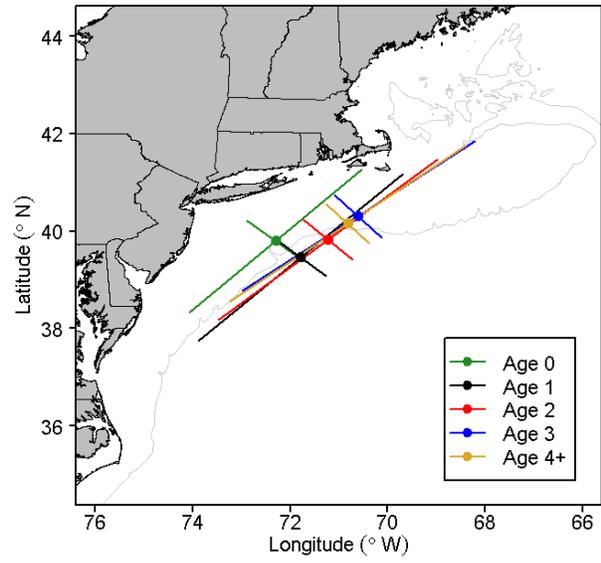
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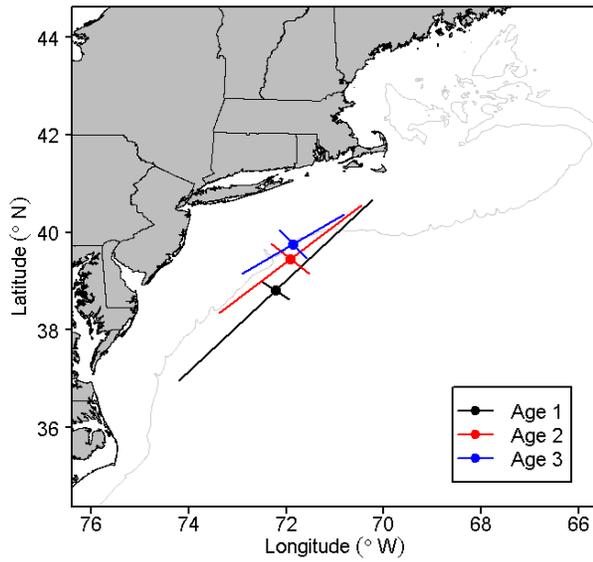
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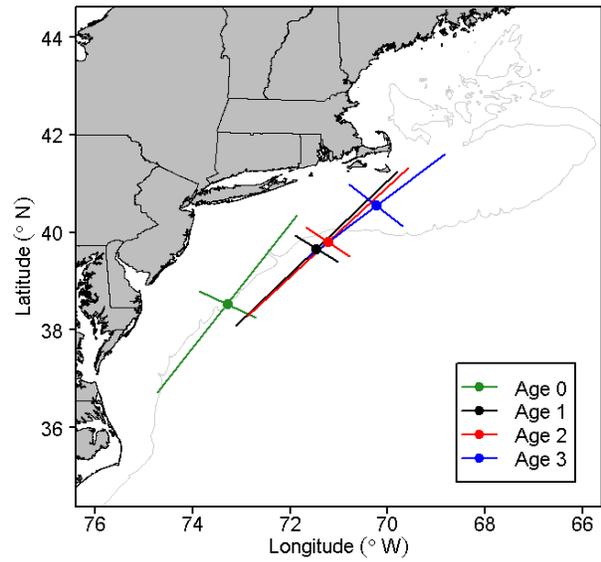
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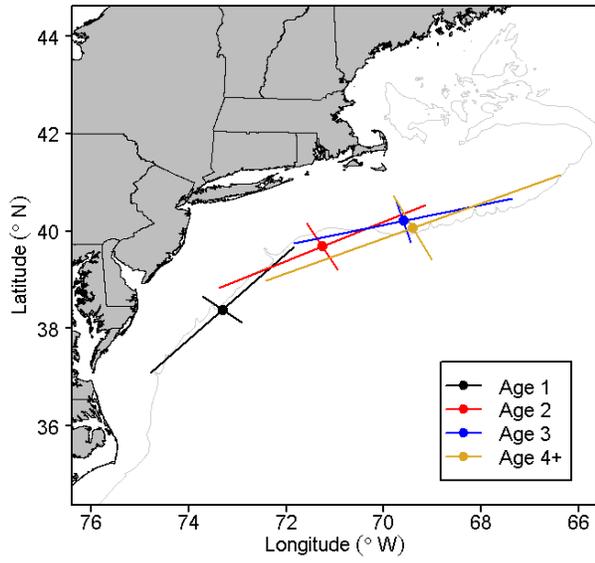
Spring 1987



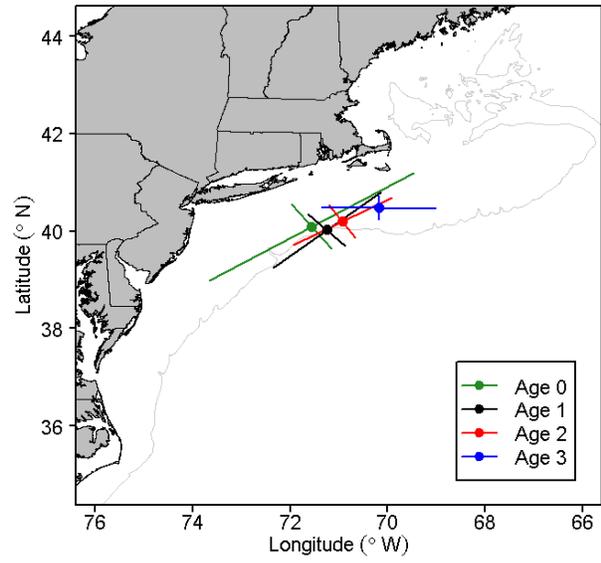
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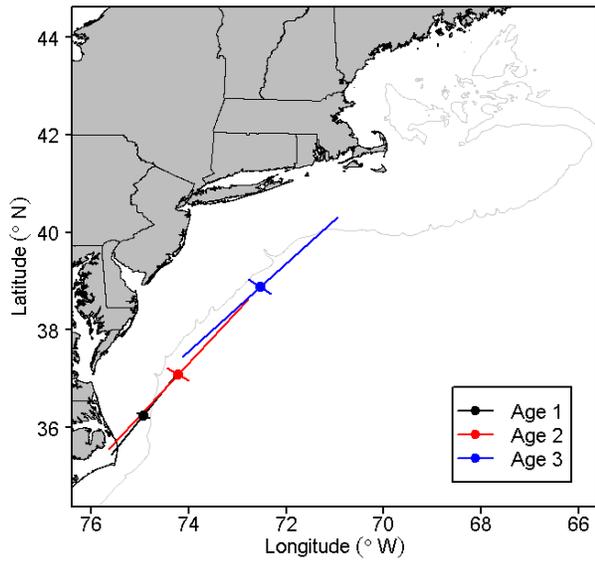
Spring 1988



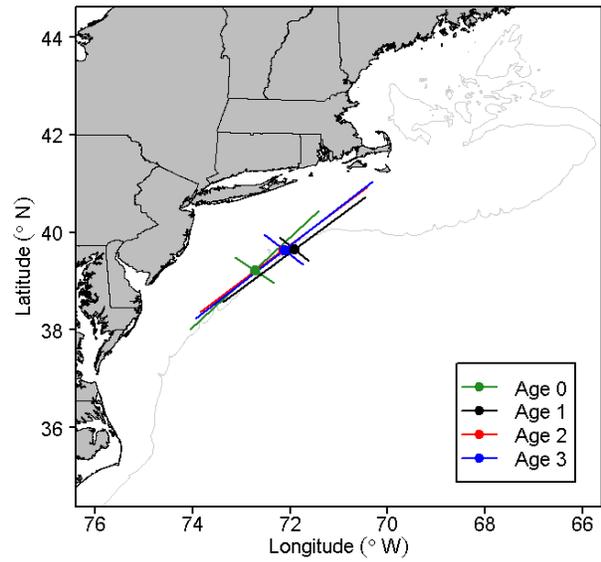
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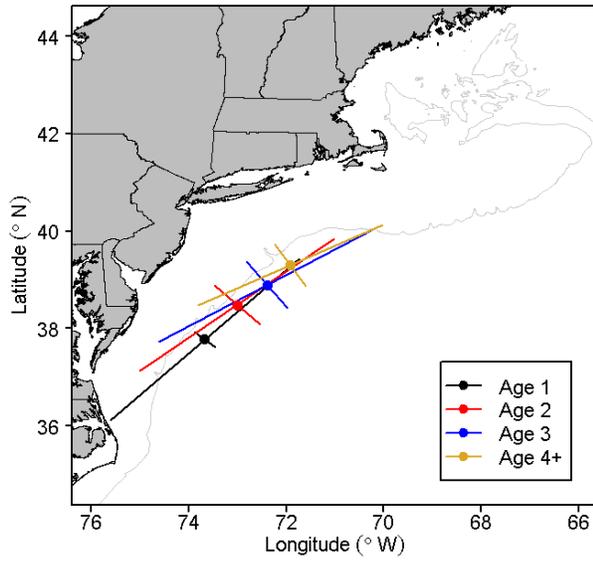
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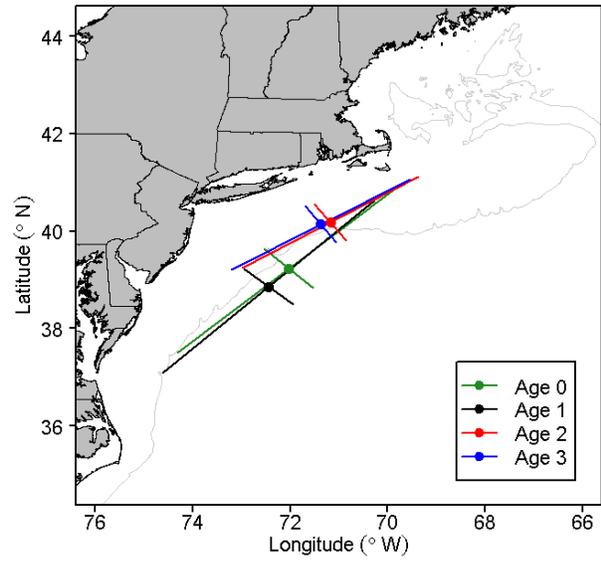
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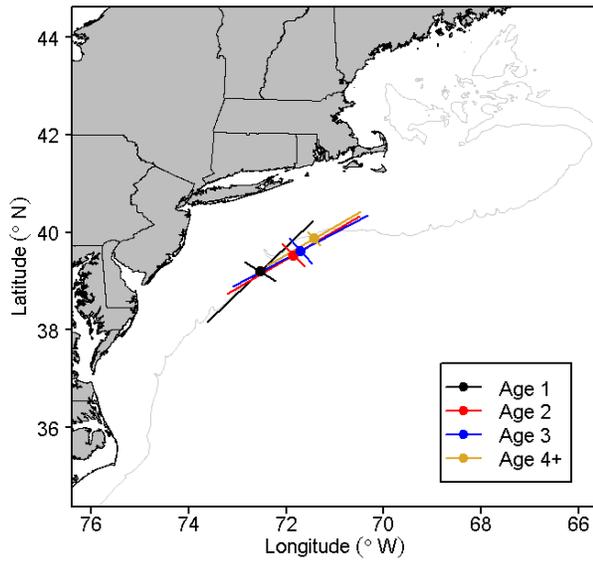
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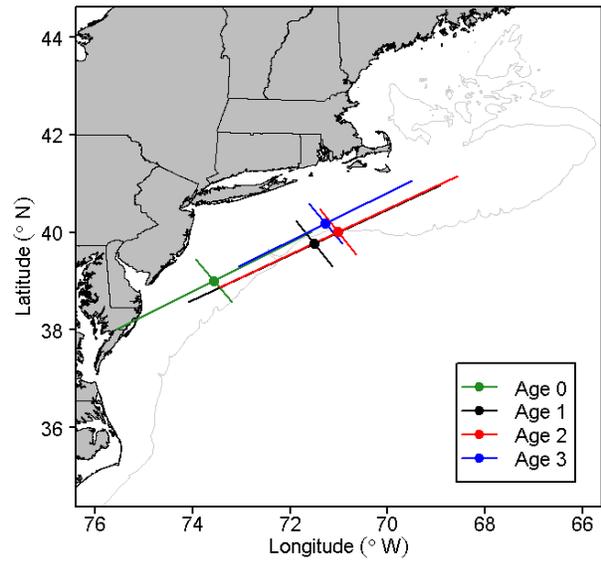
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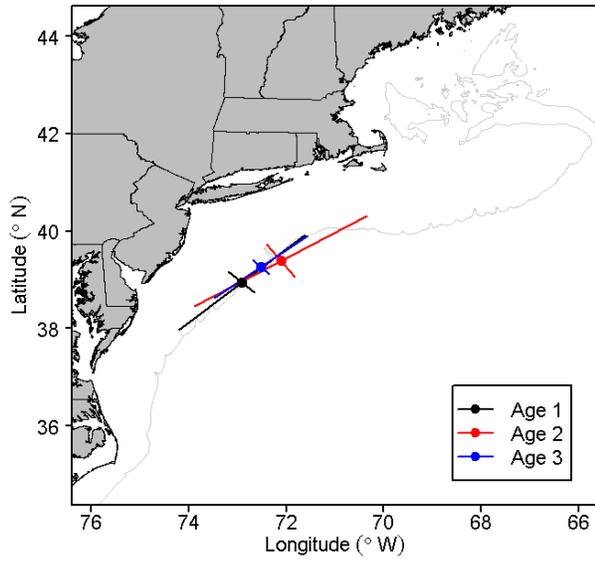
Spring 1991



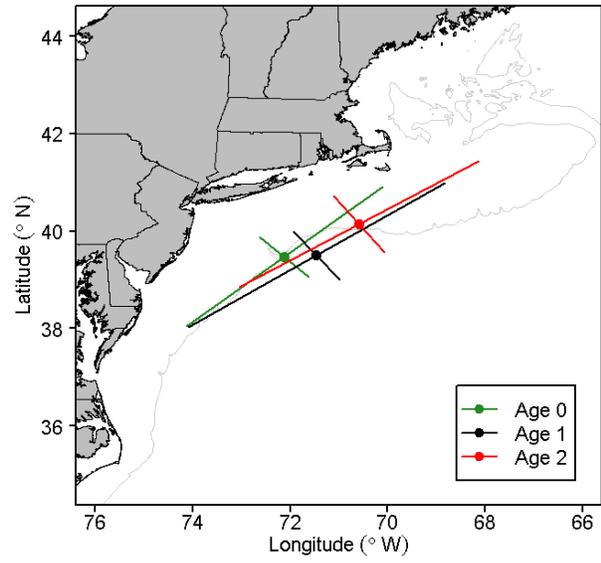
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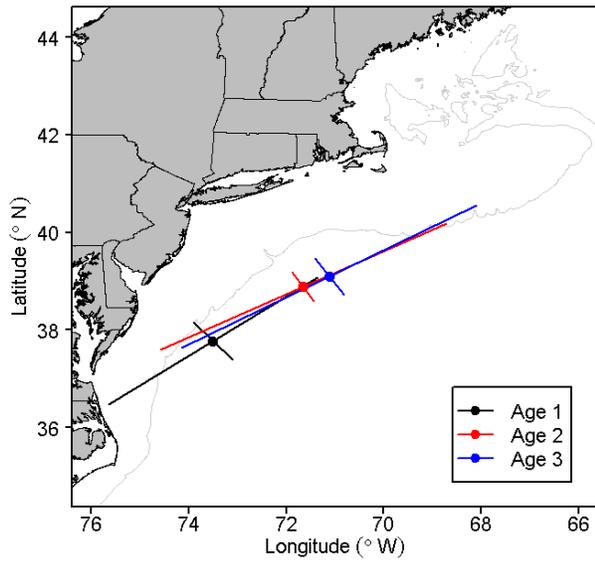
Spring 1992



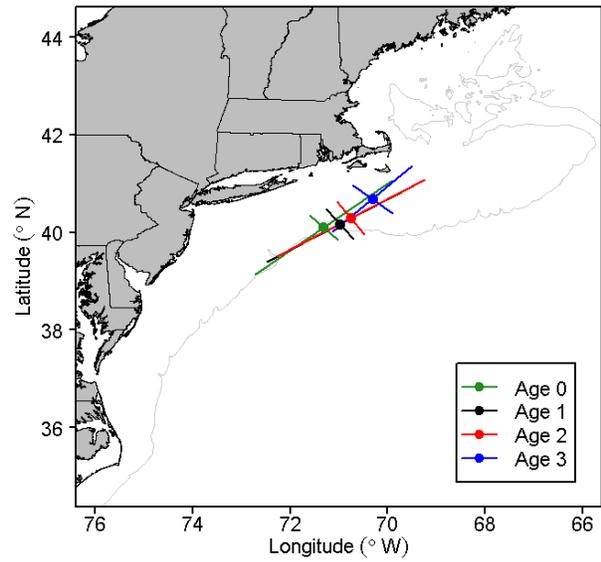
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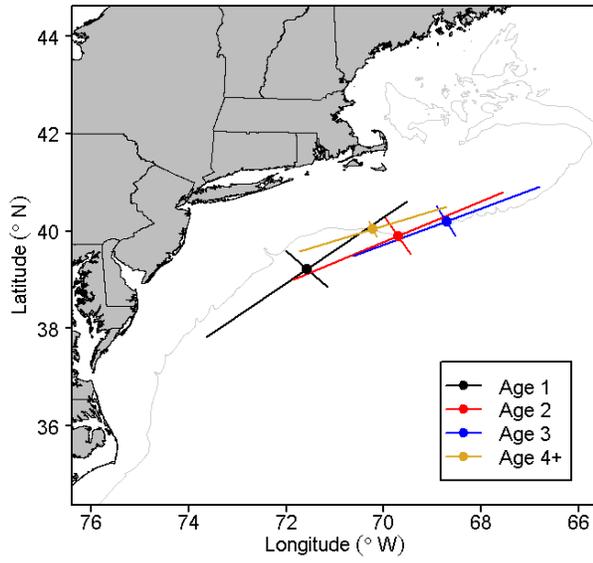
Spring 1993



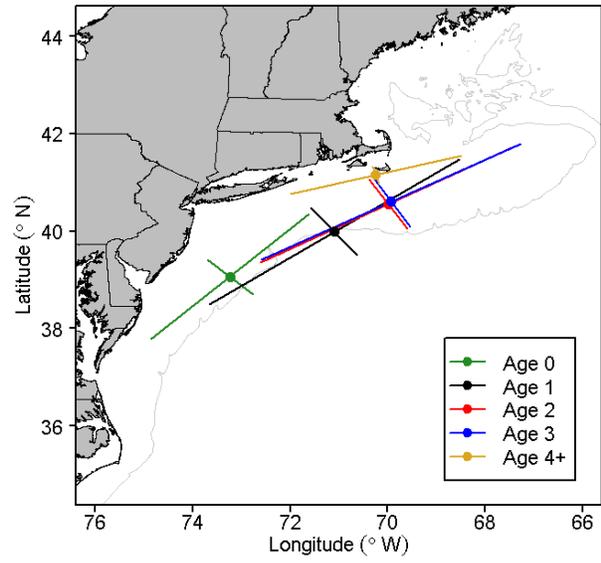
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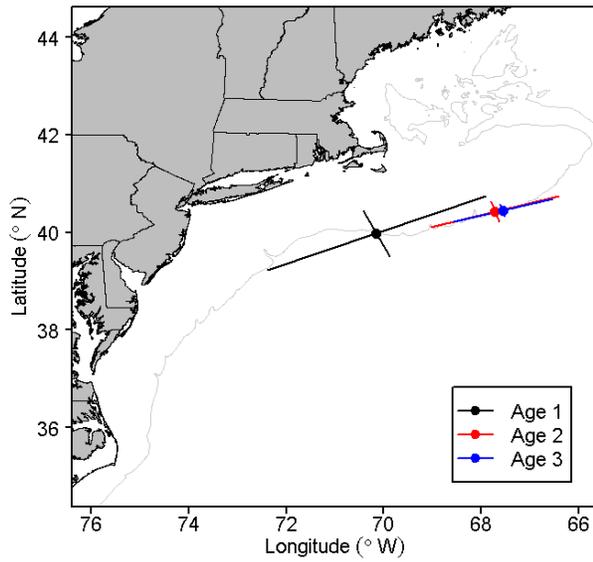
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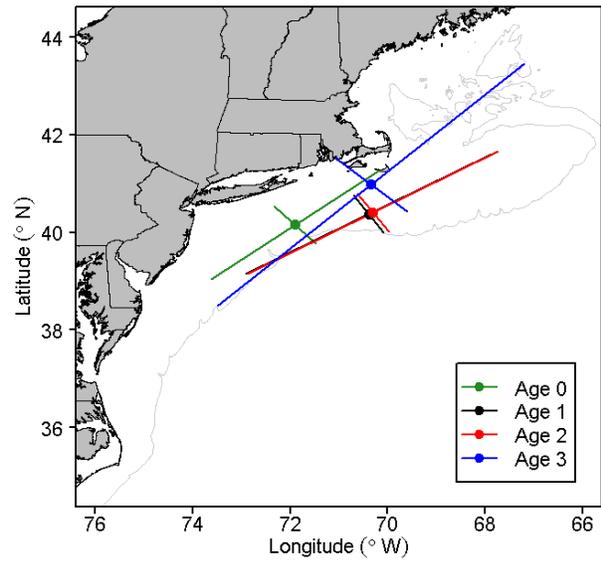
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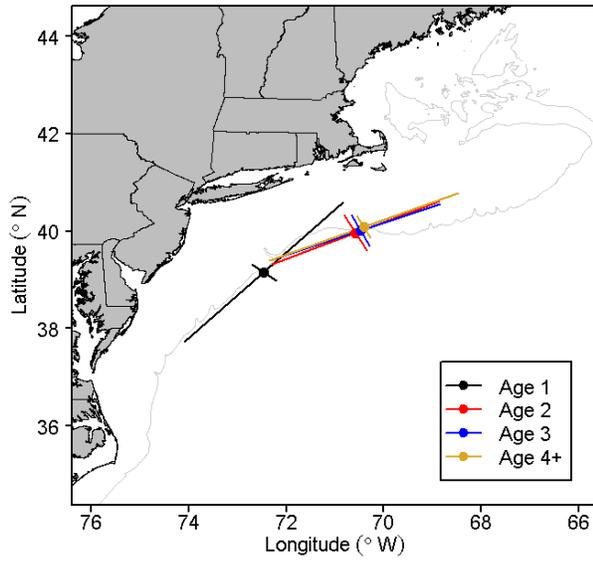
Spring 1995



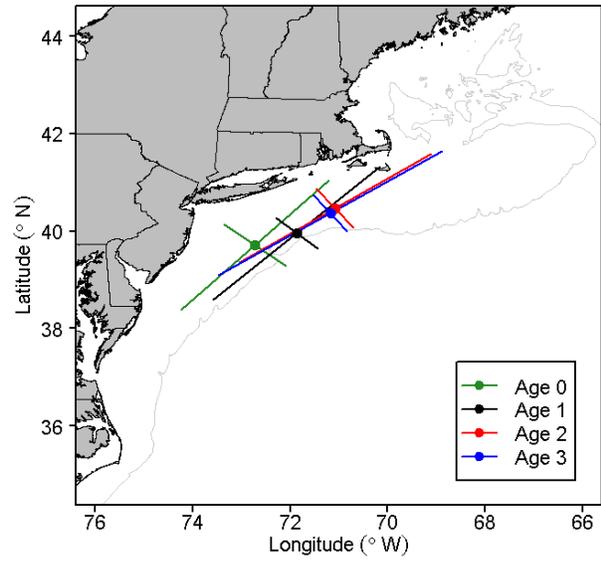
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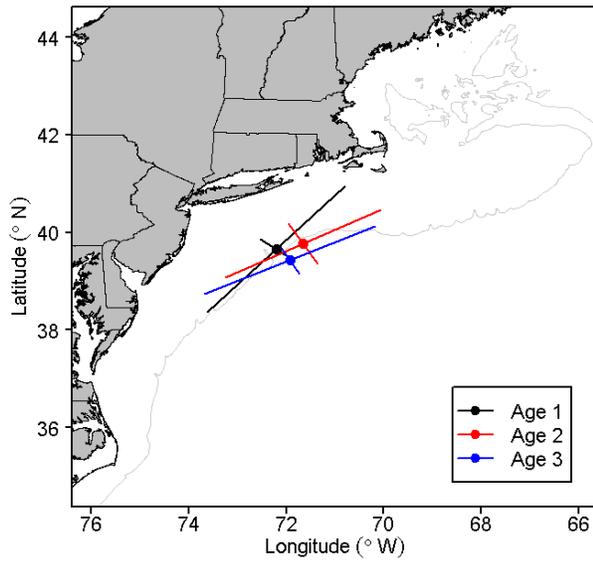
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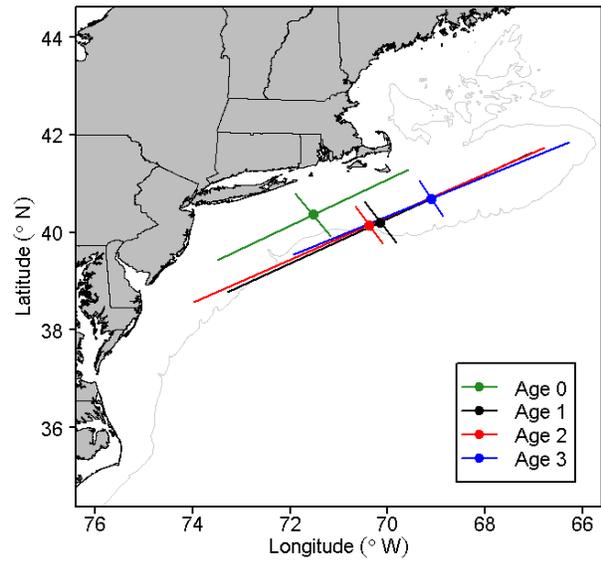
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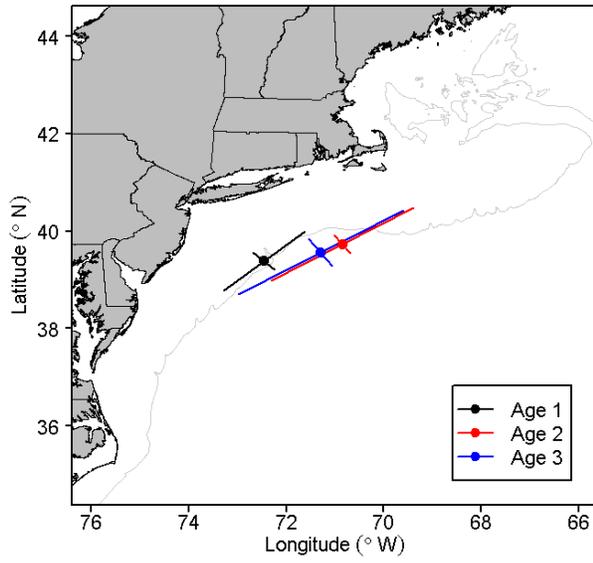
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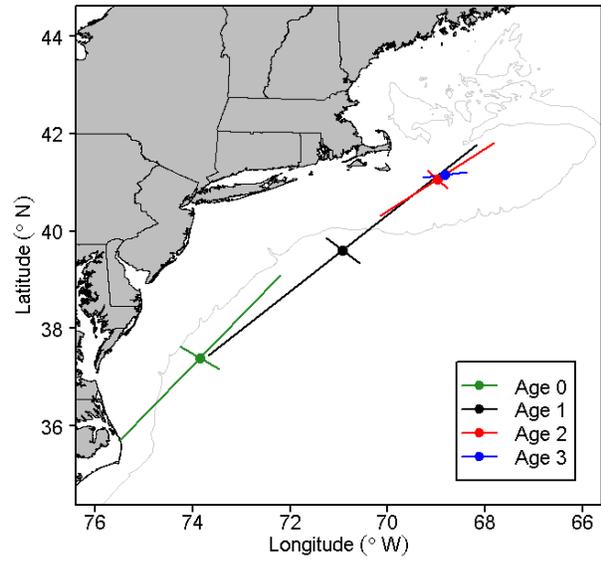
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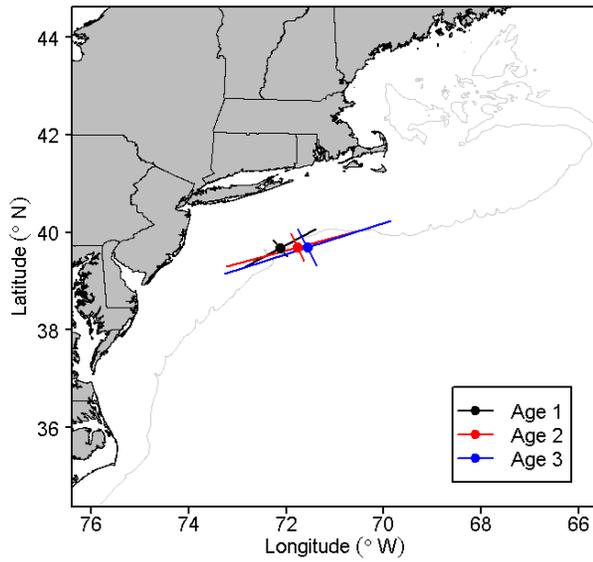
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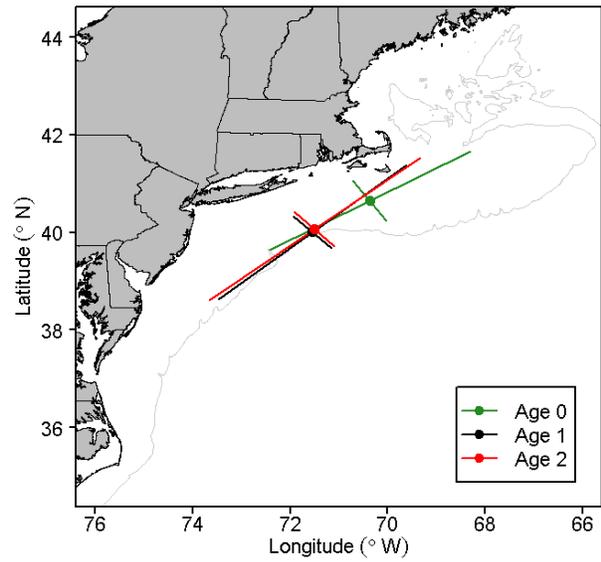
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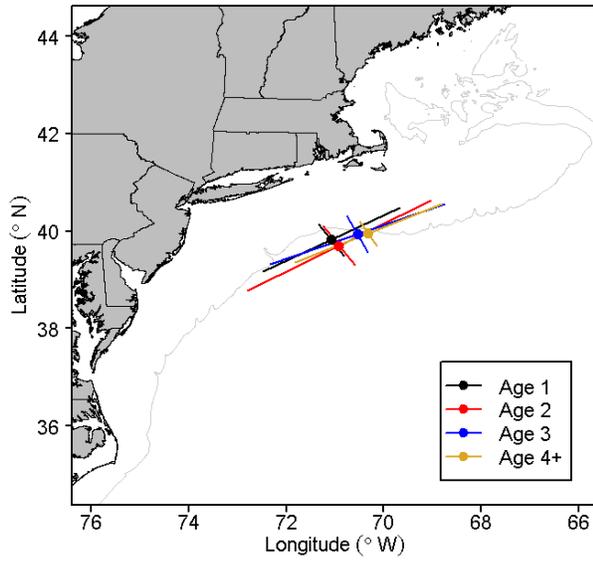
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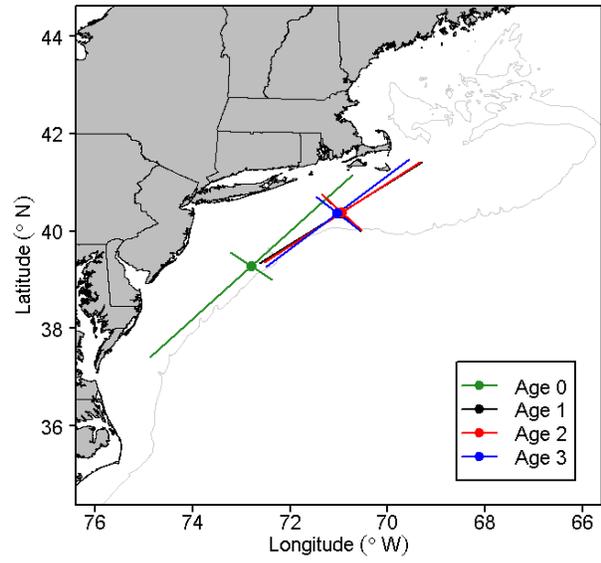
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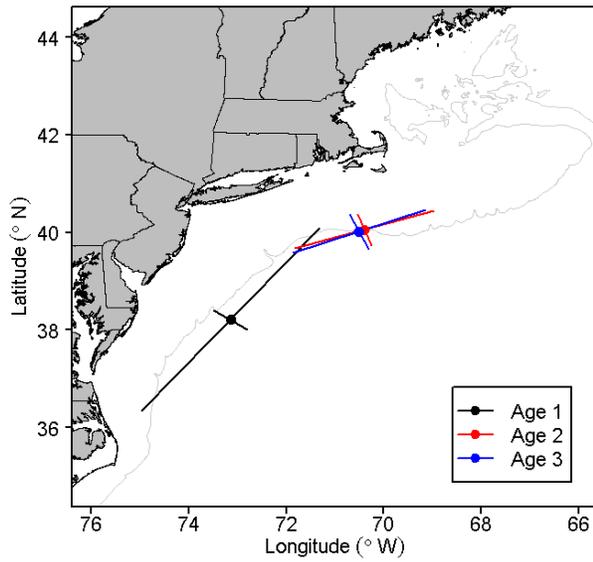
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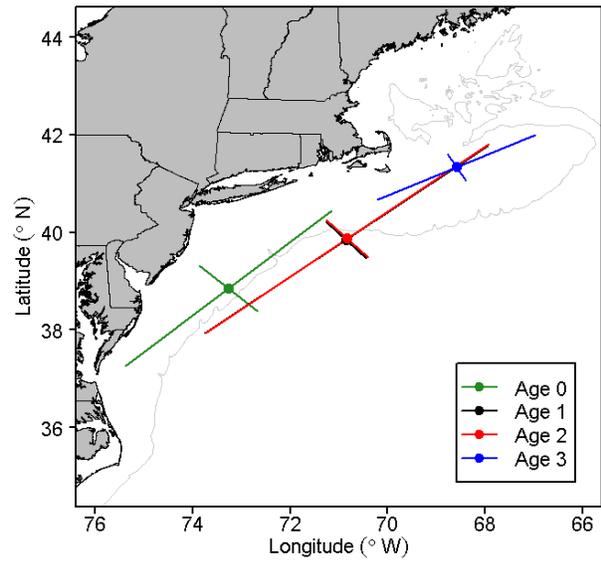
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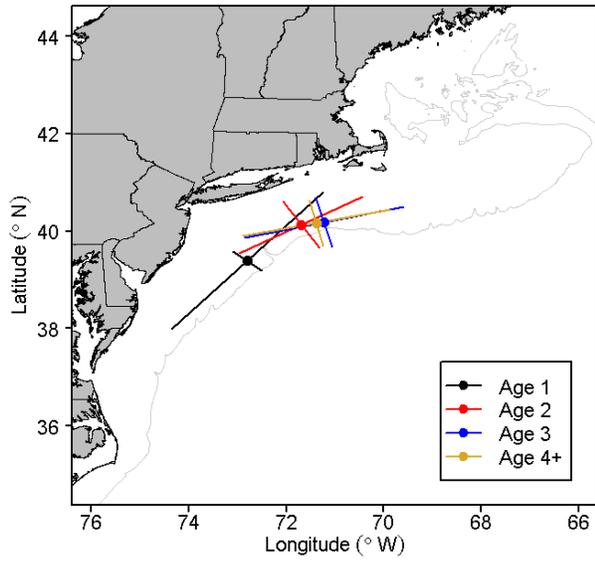
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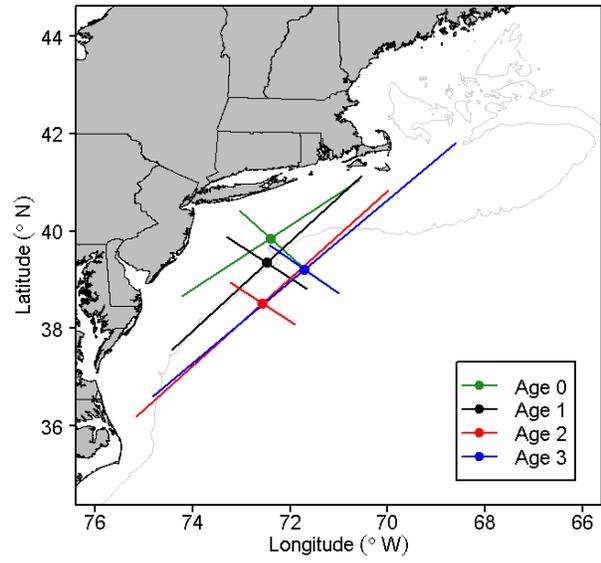
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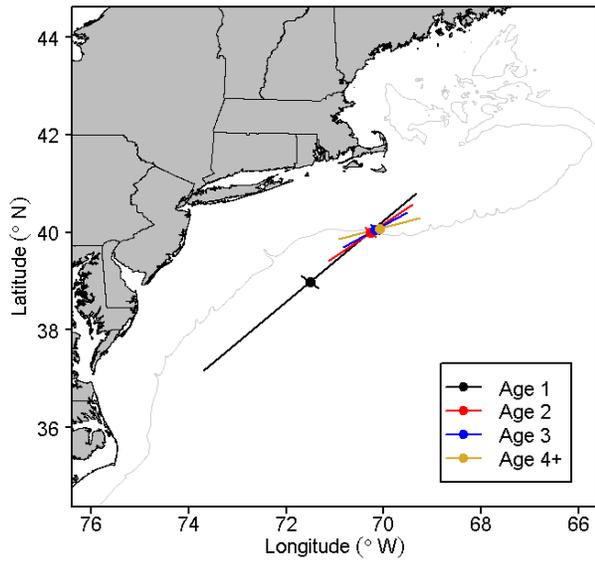
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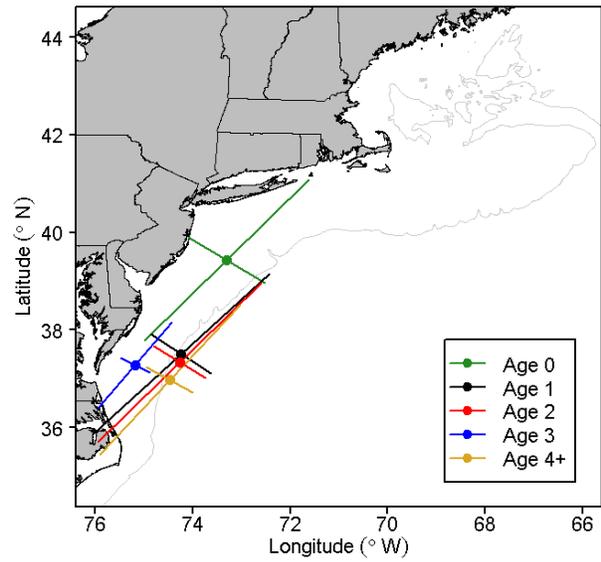
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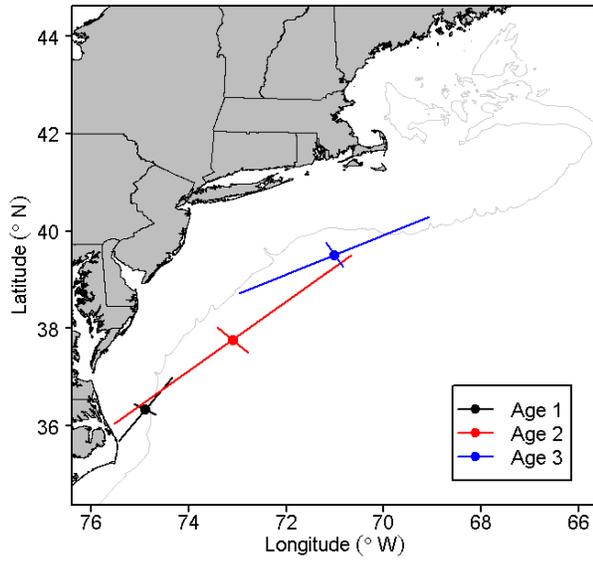
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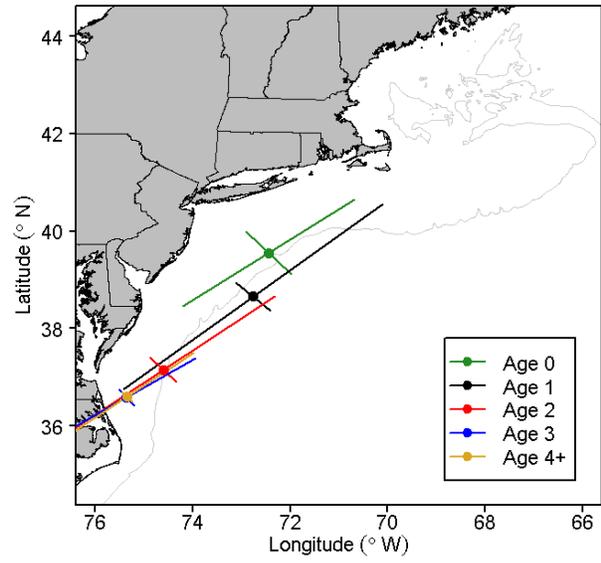
Fall 2003



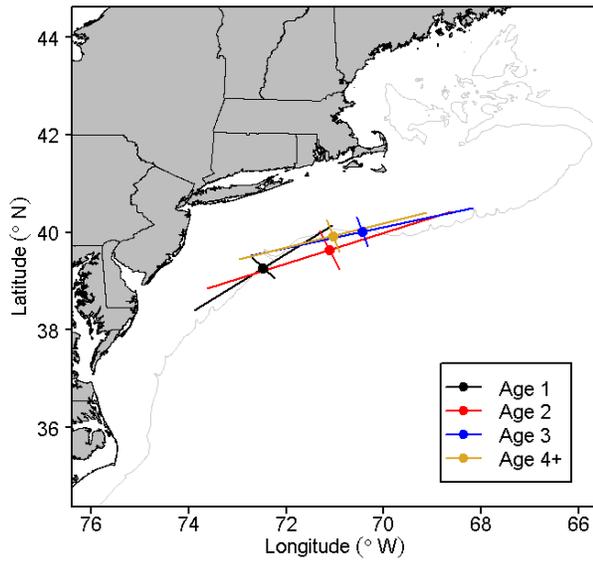
Spring 2004



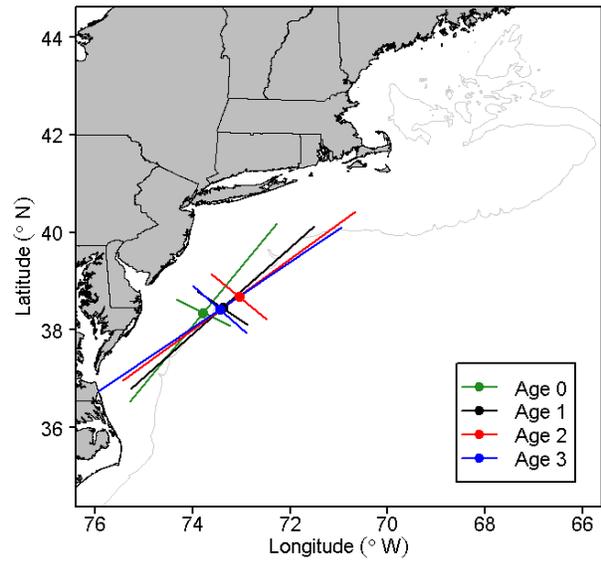
Fall 2004



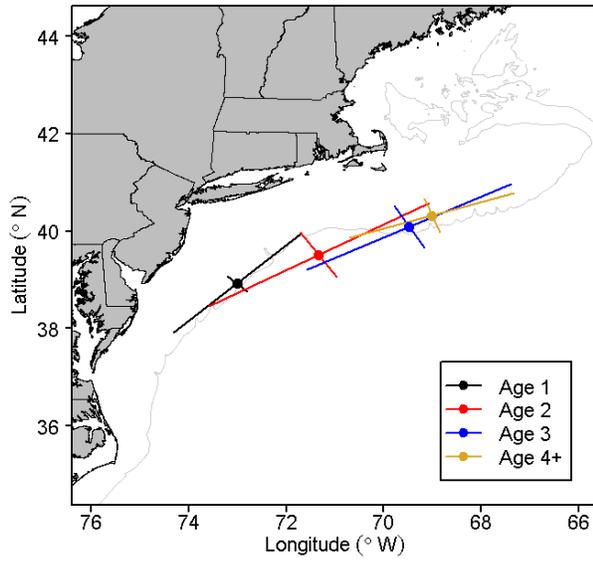
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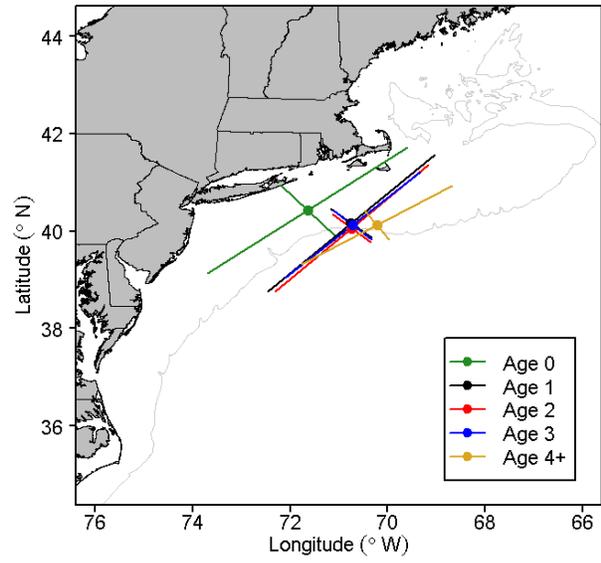
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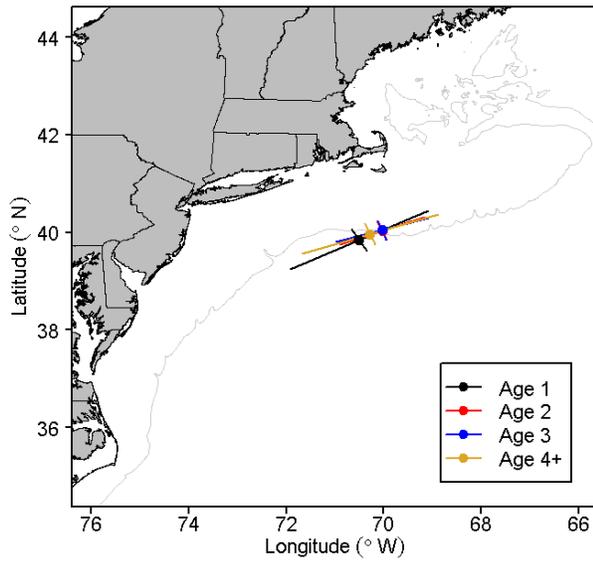
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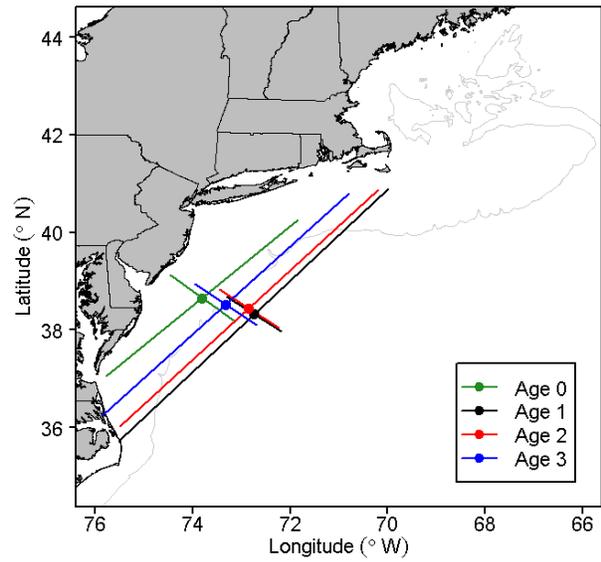
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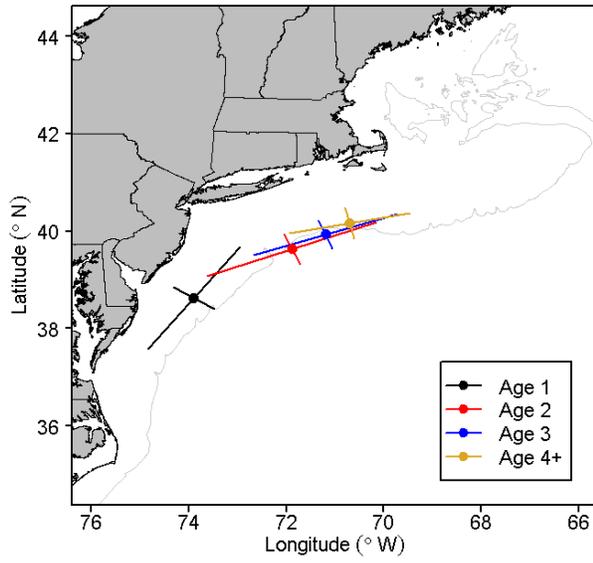
Spring 2007



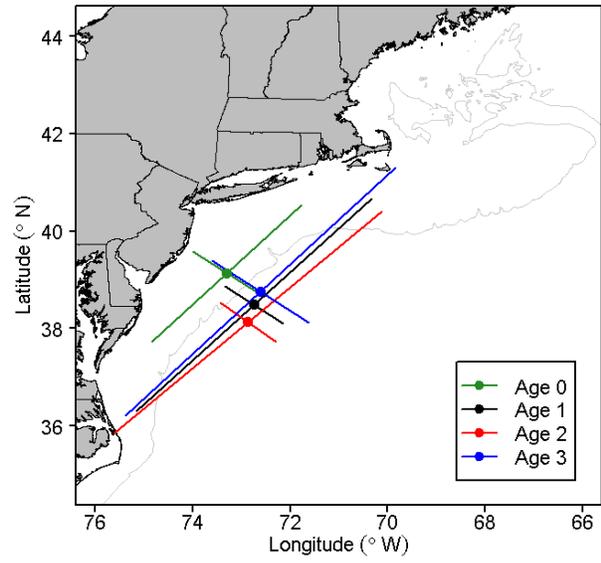
Fall 2007



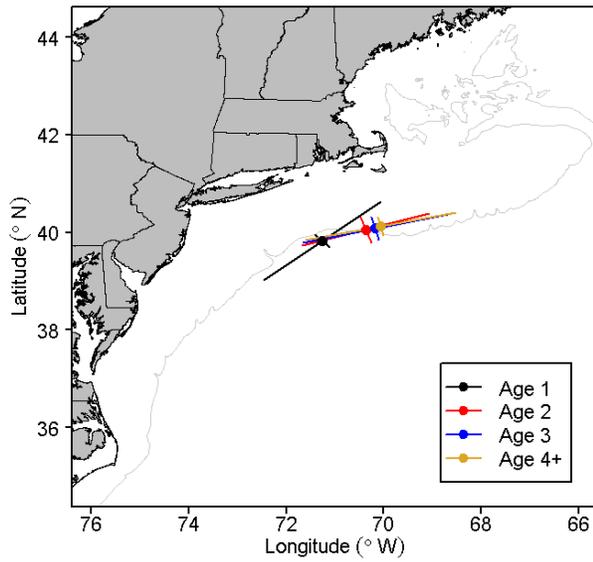
Spring 2008



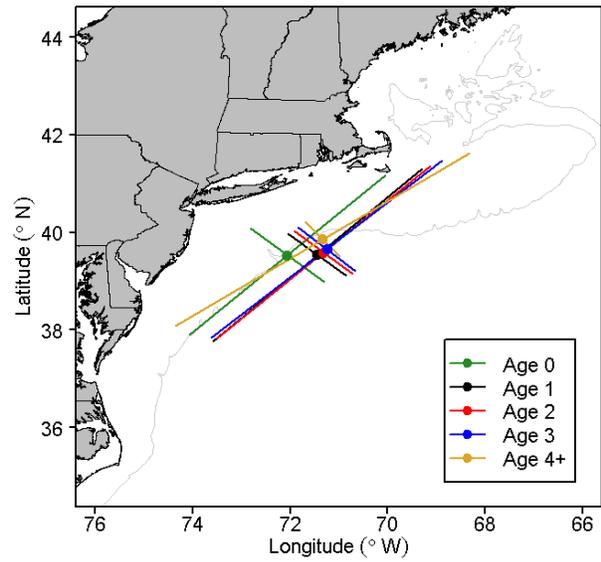
Fall 2008



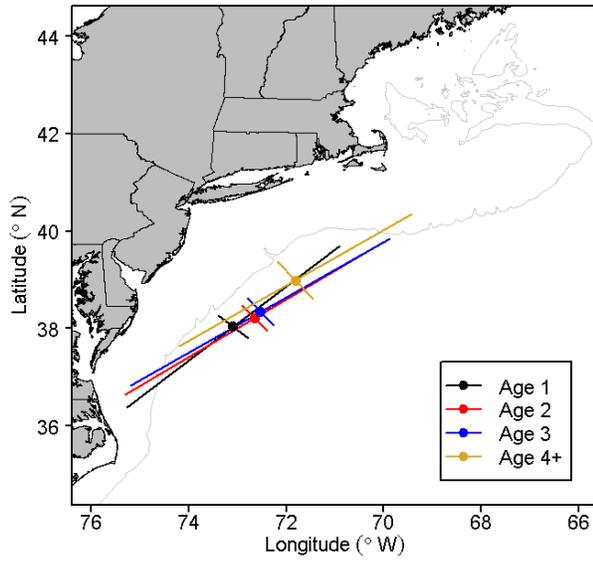
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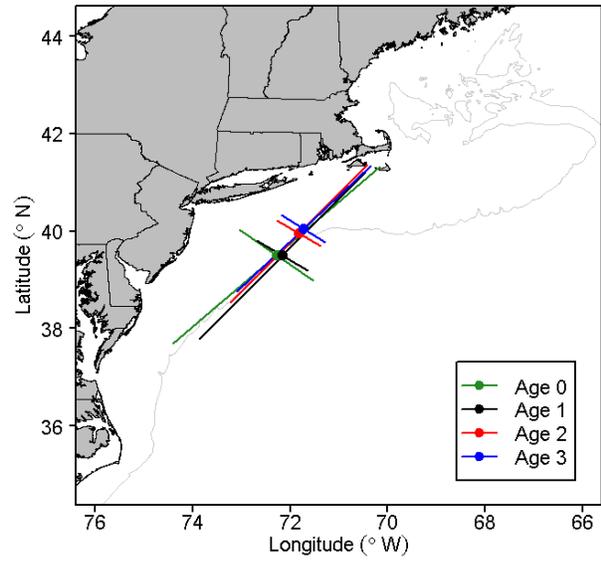
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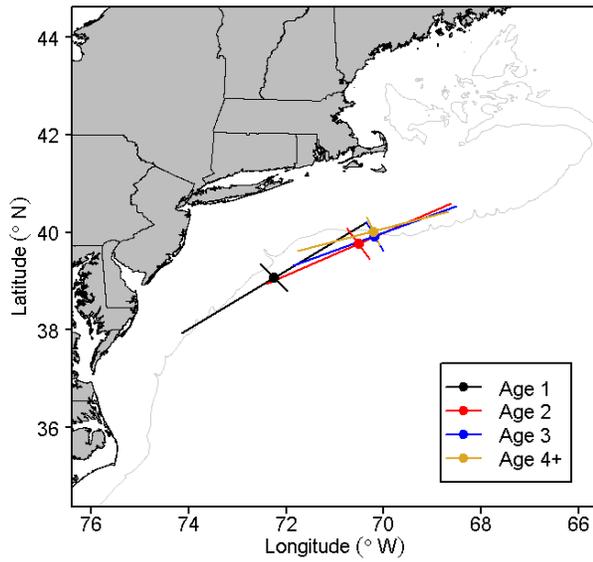
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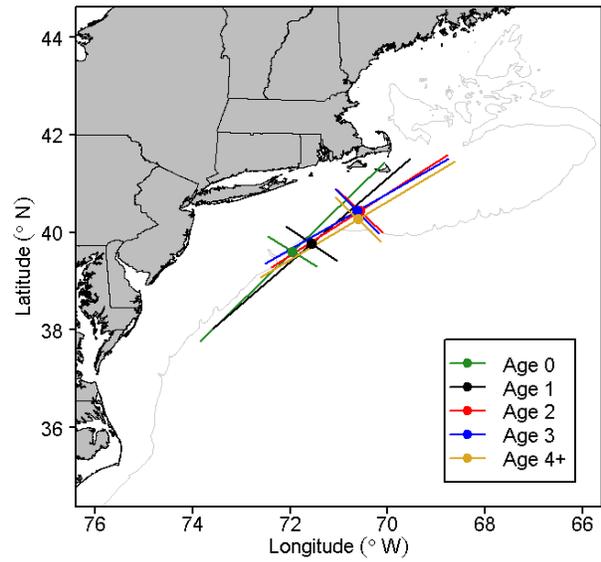
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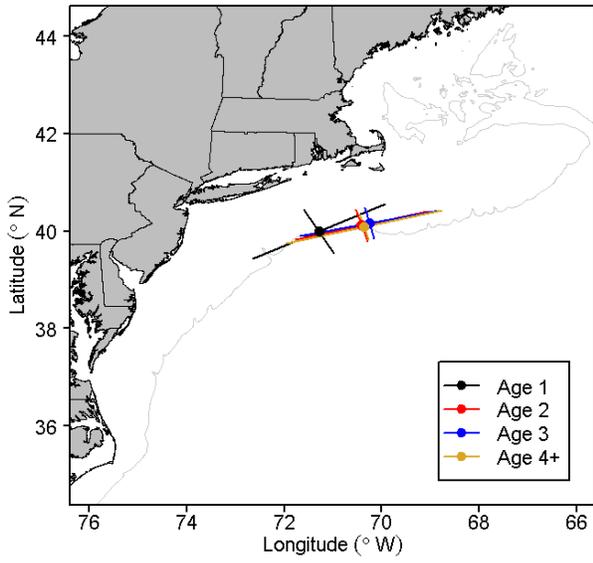
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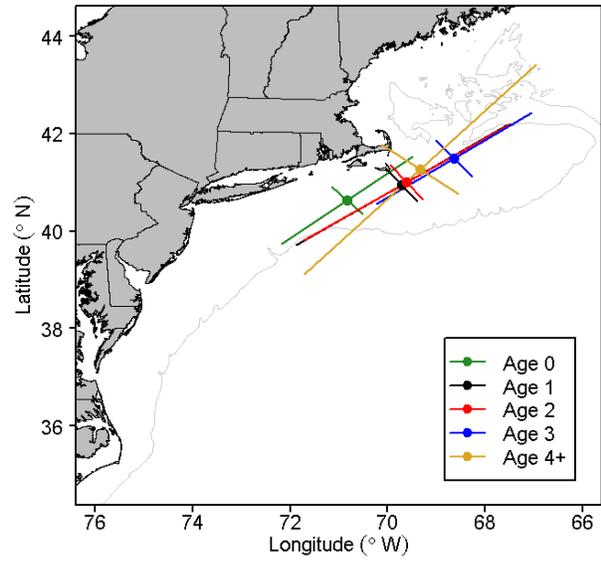
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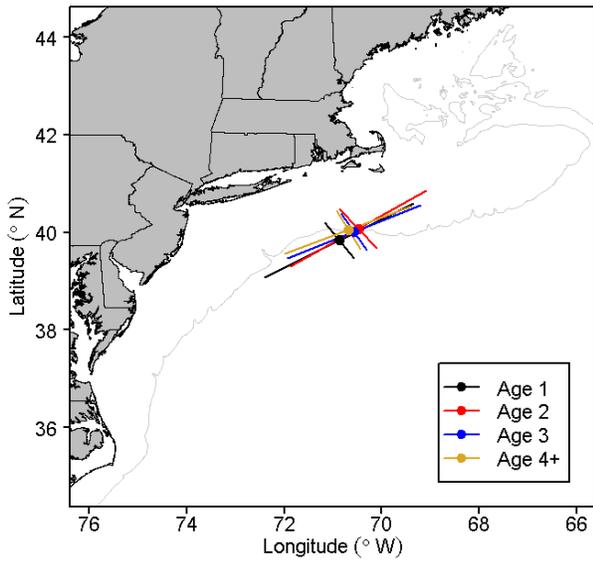
Spring 2012



Fall 2012



Spring 2013



Fall 2013

