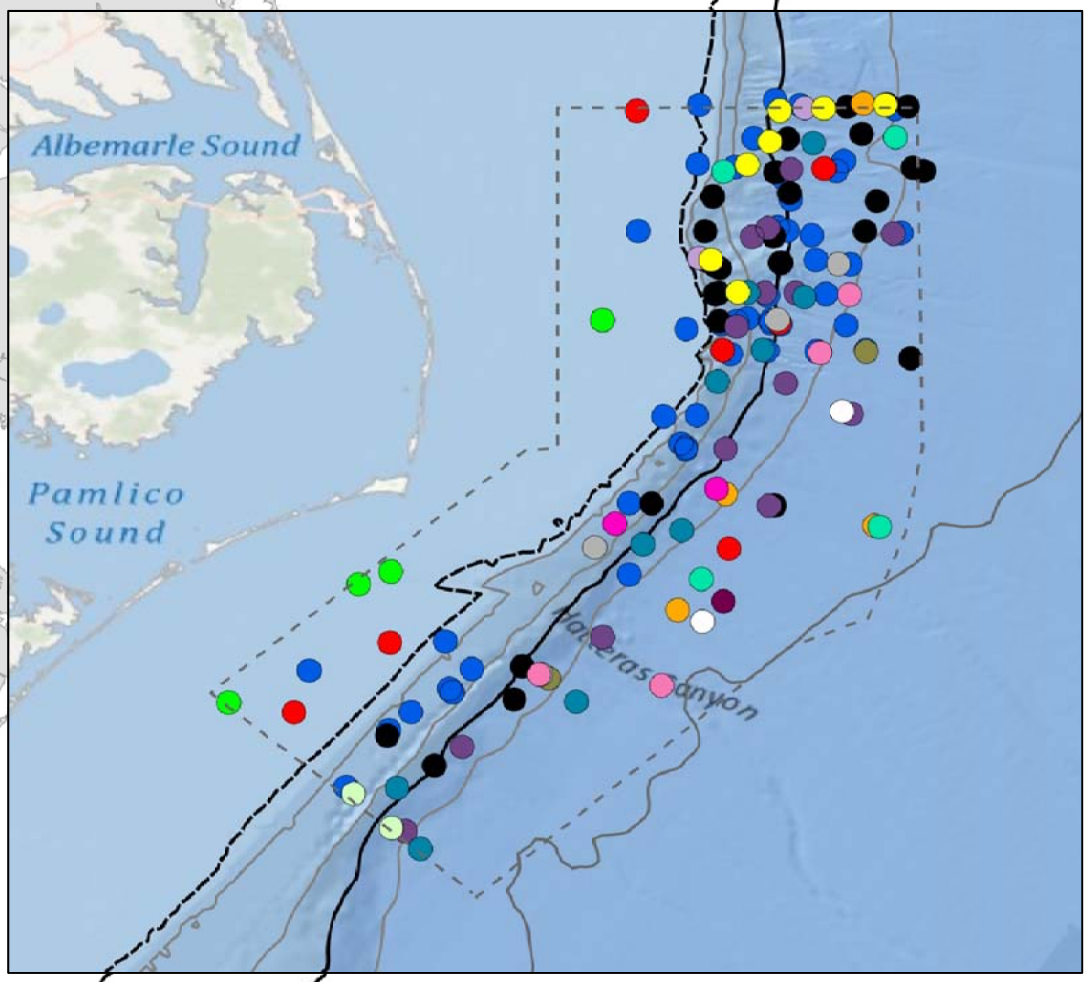
Hatteras Aerial Surveys
Annual Report to the US NAVY



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Summary of Cape Hatteras Aerial Surveys

This chapter describes the aerial surveys conducted in the Cape Hatteras, North Carolina, study area between January 2012 and December 2012. The aim was to conduct two days of effort each month, flying a subset of the 26 tracklines that cover the area. Survey effort occurred in nine of twelve months; unfavorable weather conditions precluded any effort during April, July, and October. Two or more survey days were achieved for five of the nine months, with a single day of effort occurring in the remaining four. A total of 134 tracklines (9186 km) were covered in the Cape Hatteras survey site during this reporting period. While survey conditions were dominated by Beaufort Sea State (BSS) 1-3, there was effort in both BSS 4 and 5. Other aerial surveys have demonstrated that the rate of cetacean sightings is negatively affected by an increase in the BSS (e.g. Gómez de Segura *et al*. 2006, DeMaster *et al.* 2001, McAlarney *et al.* 2012). This trend also was apparent in the present effort, as sightings dropped from 41.91 to 8.91 sightings per 1000 km as BSS increased from 1 to 5.

A total of 148 sightings of 3699 cetaceans were encountered while on effort during the 15days of aerial surveys in the study area (Table 1, Figure 1). Thirteen species of cetaceans were photo-documented, including bottlenose dolphins (*Tursiops truncatus*; 48 sightings of 943 individuals), short-finned pilot whales (*Globicephala macrorhynchus*; 30 sightings of 372 individuals), Cuvier's beaked whales (*Ziphius cavirostris*; 14 sightings of 40 individuals), mesoplodont beaked whales (*Mesoplodon* spp; ten sightings of 25 individuals), common dolphins (*Delphinus delphis*; seven sighting of 565 individuals), Atlantic spotted dolphins (*Stenella frontalis*; seven sightings of 348 individuals), humpback whales (*Megaptera novaeangliae*; four sightings for four individuals), Risso's dolphins (*Grampus griseus*; four sightings of 31 individuals), sperm whales (*Physeter macrocephalus*; four sightings of ten individuals), fin whales (*Balaenoptera physalus*; four sightings of seven individuals), striped dolphins (*Stenella coeruleoalba*; four sighting of 775 individuals), melon-headed whales (*Peponocephala electra*; two sightings of 395 individuals), Clymene dolphins (*Stenella clymene*; two sighting of 165 individuals), and minke whales (*Balaenoptera acutorostrata*; two sightings for four individuals). There were seven sightings (15 individuals) where species identity could not be established with 100% certainty. Five of these sightings were of animals of considerable size and are listed here as "unidentified cetaceans". One sighting of a single individual is listed

as an unidentified baleen whale as it could not be determined to species due to its depth in the water. The remaining sighting is listed as “unidentified delphinid”.

Eighty sea turtle sightings were recorded during this survey period. Seventy-one were identified as loggerhead sea turtles (*Caretta caretta*), and one as a leatherback sea turtle (*Dermochelys coriacea*). No species identification could be established for the remaining eight sightings, and they are listed here as “unidentified sea turtles”. (Tables 18-19, Figures 20a-c & 21).

In addition to cetaceans and sea turtles, other pelagic marine vertebrates (*e.g*. a small number of shark species, manta rays, cownose rays, whale shark and ocean sunfish) were observed (Tables 20-24, Figure 22). Commercial, military and recreational vessels were also encountered in the survey area (Tables 25-27, Figures 23-25).

Table 1. Total number of sightings and individuals for each species by month from January 2012 to December 2012 for the Hatteras survey area Species are arranged by number of sighitngs in descending order.

		2012												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Tursiops truncatus	Sightings	1	1	10		12	12		4			3	5	48
	# of individuals	3	9	198		323	277		71			34	28	943
Globicephala macrorhynchus	Sightings		2	4		2	9		5	1			7	30
	# of individuals		19	80		16	127		85	5			40	372
Ziphius cavirostris	Sightings	1				2	2		3	1		2	3	14
	# of individuals	1				5	3		6	2		9	14	40
Mesoplodon spp.	Sightings	2		1		3	1		1			1	1	10
	# of individuals	7		3		3	2		3			3	4	25
Delphinus delphis	Sightings		1	2		4								7
	# of individuals		18	200		347								565
Stenella frontalis	Sightings			1		2	1						3	7
	# of individuals			26		106	25						191	348
Megaptera novaeangliae	Sightings	1				1							2	4
	# of individuals	1				1							2	4
Grampus griseus	Sightings					1	1		2					4
	# of individuals					13	8		10					31
Physeter macrocephalus	Sightings	1		1		1						1		4
	# of individuals	1		1		2						6		10
Balaenoptera physalus	Sightings		2	2										4
	# of individuals		3	4										7
Stenella coeruleoalba	Sightings		2	1										3
	# of individuals		700	75										775
Peponocephala electra	Sightings			2										2
	# of individuals			395										395
Stenella clymene	Sightings						2							2
	# of individuals						165							165
Balaenoptera acutorostrata	Sightings	1		1										2
	# of individuals	2		2										4
Unidentified cetacean	Sightings			4										4
	# of individuals			5										5
Unidentified delphinid	Sightings	1					1							2
	# of individuals	1					8							9
Unidentified baleen whale	Sightings		1											1
	# of individuals		1											1
	Total sightings	8	9	29	0	28	29	0	15	2	0	7	21	148
	Total individuals	16	750	989	0	816	615	0	175	7	0	52	279	3699

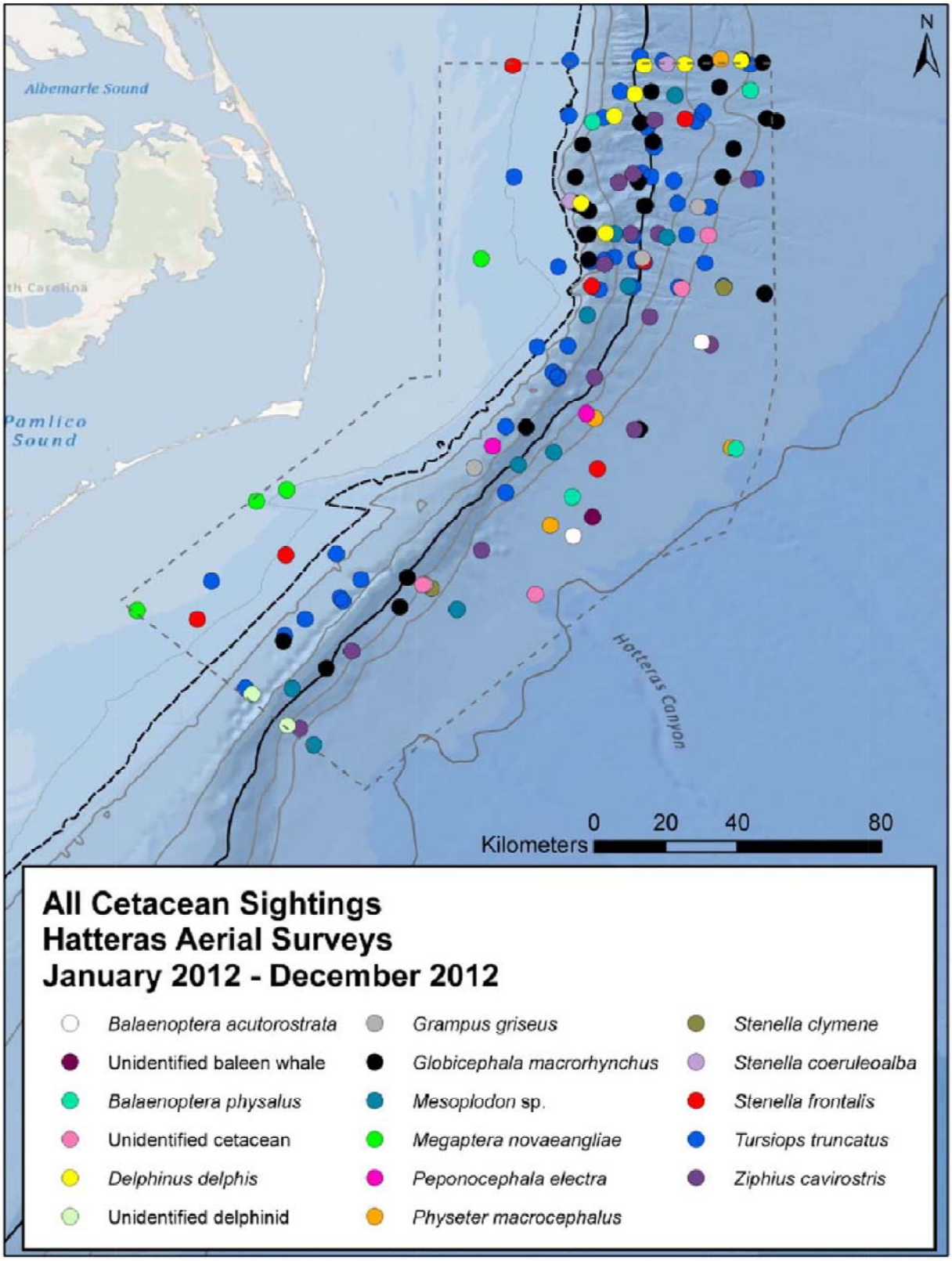


Figure 1. All cetacean sightings during aerial surveys of the Hatteras survey area from January 2012 to December 2012.

Methodology

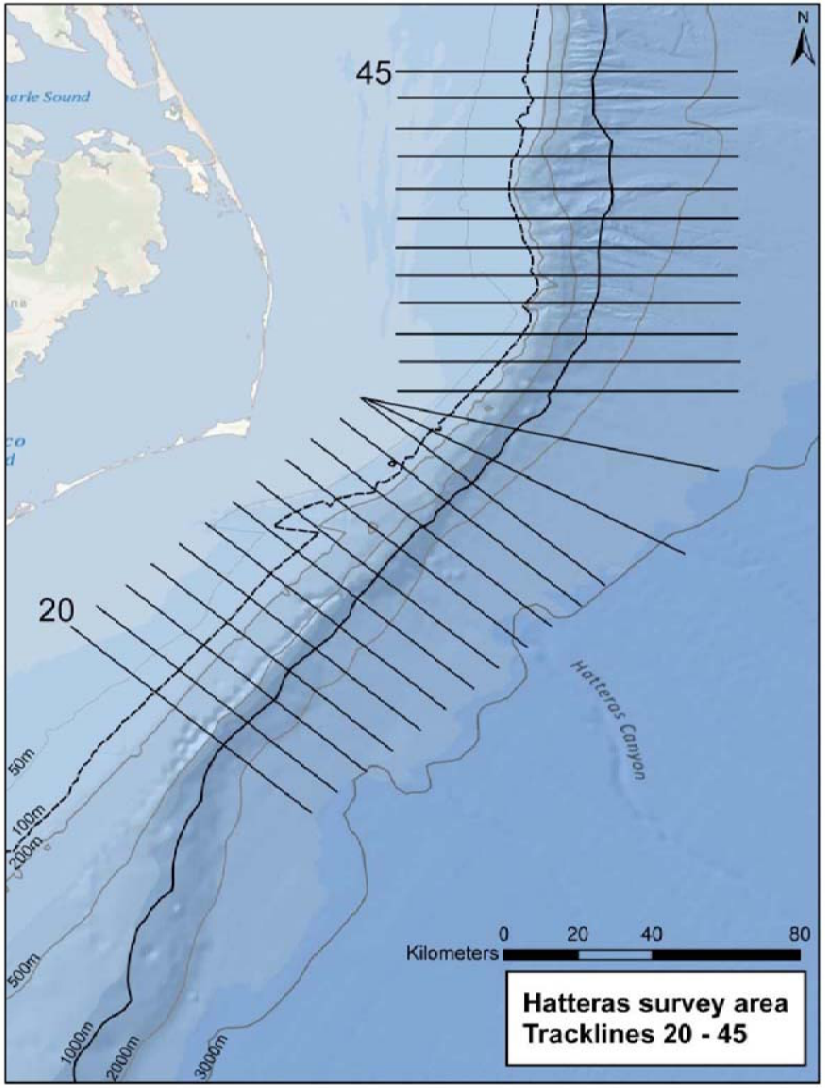
Survey Design and Logistics

Aerial survey effort was initiated in the waters off Cape Hatteras, North Carolina in May of 2011 to assess the distribution and abundance of offshore cetacean species and sea turtles. These surveys are included in the Navy's Atlantic Fleet Active Sonar Training (AFAST) Monitoring Program, established to document marine species that could potentially be impacted by naval activities. The approximately 16000 km² survey area covers continental shelf waters as well as deeper waters beyond the shelf break. Placement of the survey area was designed to incorporate a large portion of the Cape Hatteras Special Research Area (CHSRA) in support of current research assessing fishery interactions between short-finned pilot whales and the local fisheries. The survey area excludes coastal waters to minimize survey effort in areas where the spatial distribution and relative abundance of coastal bottlenose dolphins has previously been established (Torres *et al.* 2003; Torres *et al.* 2005). Twenty six tracklines, ranging from 73.5 to 81.5 km long and orientated perpendicular to the coastline were evenly placed across the survey site.

Survey flights originated from the Fixed-base Operator (FBO) in Wilmington, NC with additional effort being conducted from the Dare County Regional Airport in Manteo, NC. Utilizing both airports maximized "on effort" survey time by decreasing transit time to and from the tracklines surveyed. A complete description of survey methods can be found in the Methodology section in the JAX Aerial Survey chapter of this report.

Table 2. Coordinates for trackline end points for the Hatteras survey area.

Transect Line	Eastern Waypoint		Western Waypoint	
Line	Latitude	Longitude	Latitude	Longitude
20	34.770853	-75.954044	34.315878	-75.364928
21	34.819136	-75.891558	34.365250	-75.298656
22	34.870261	-75.824811	34.418267	-75.226703
23	34.919967	-75.760906	34.469392	-75.166111
24	34.972511	-75.691319	34.522408	-75.097944
25	35.023633	-75.625994	34.571642	-75.039247
26	35.073339	-75.562089	34.617083	-74.971081
27	35.118783	-75.502444	34.668208	-74.908594
28	35.169908	-75.435697	34.721228	-74.840431
29	35.219611	-75.371792	34.768564	-74.77605
30	35.270736	-75.303628	34.817794	-74.711672
31	35.319019	-75.242561	34.868919	-74.649186
32	35.319019	-75.242561	34.948447	-74.469303
33	35.319019	-75.242561	35.139689	-74.384097
34	35.340331	-75.161133	35.340331	-74.333672
35	35.410389	-75.161133	35.410389	-74.333672
36	35.48045	-75.161133	35.48045	-74.333672
37	35.550508	-75.161133	35.550508	-74.333672
38	35.620569	-75.161133	35.620569	-74.333672
39	35.690628	-75.161133	35.690628	-74.333672
40	35.762581	-75.161133	35.762581	-74.333672
41	35.832642	-75.161133	35.832642	-74.333672
42	35.906486	-75.161133	35.906486	-74.333672
43	35.978439	-75.161133	35.978439	-74.333672
44	36.048500	-75.161133	36.048500	-74.333672
45	36.122344	-75.161133	36.122344	-74.333672



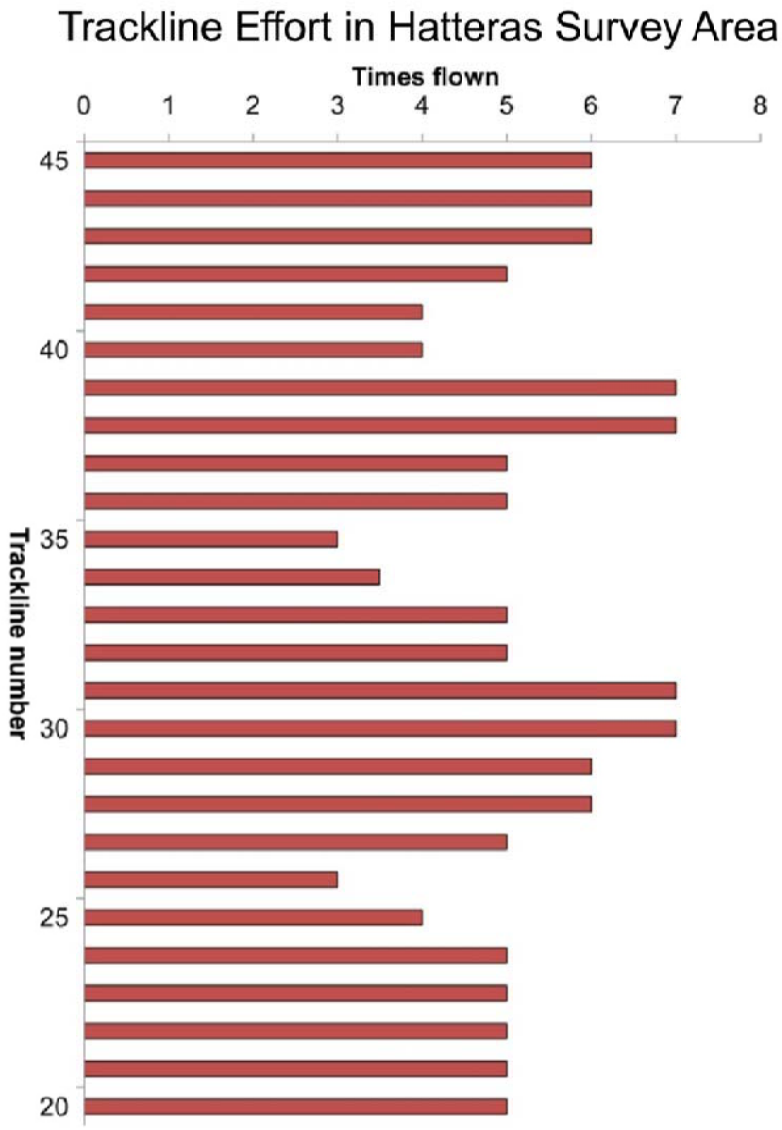


Figure 2. Survey tracklines in the Hatteras survey area.

Results

One hundred thirty four tracklines totaling 9186 km were surveyed from January 2012 to December 2012. Conditions during the 15 survey days ranged from a BSS 1 to 5 with 74% of effort in sea states < 3.

An average Beaufort Sea State (BSS) value was calculated each month as a way to compare conditions across time. This average was calculated by taking the distance flown at each sea state multiplied by the BSS number (*i.e.* BSS 1 x distances would be multiplied by 1). These values were summed and then divided by the total distance flown that month. Weather patterns during the first two months of the year forced effort to be focused in unfavorable "weather windows" with higher sea state conditions. In subsequent months, periods of more suitable survey conditions were increasingly available except in April, July and October when there were no favorable weather windows. Despite the higher sea states in January, February and September, days with suitable forecasted conditions were flown to ensure coverage of the survey area. Although these days were dominated by BSS 4 or 5, a number of cetacean sightings were still recorded. Survey conditions for this reporting period ranged from a BSS 1 to 5, with the majority of the surveys flown in a BSS 3 [BSS 1: 668 km (7%), BSS 2: 1716 km (19%), BSS 3: 4410 km (48%), BSS 4: 1494 km (16%), BSS 5: 898 km (10%)(Fig. 3a-c)]. Cetacean sighting rates dropped off as BSS increased, with 41.91 sightings/1000 km surveyed in BSS 1, 21.56 sightings/1000 km surveyed in BSS 2, 14.06 sightings/1000 km surveyed in BSS 3, 8.70 sightings/1000 km surveyed in BSS 4, and 8.91 sightings/1000 km surveyed in BSS 5(Fig. 4a-c).

Mean sighting distance for all cetacean sightings was 0.84 km (SD=0.51). Sighting distances across sea states varied by less than 0.25km (Fig.5a-b). Examining the number and composition of sightings made in a BSS 5 helps clarify its high average sighting distance. The six sightings for which a sighting distance could be calculated included three sightings of large baleen whales and a sighting of a group of 250 striped dolphins. The nature of these sightings increased the likelihood that they would be detected despite the higher sea state. Average sighting distances are normally calculated after removing outliers, defined as any value in excess of three standard deviations from the mean (Mean=0.9 km, SD=0.72*3=2.16, Outlier >3.06). Two of the sighting distances were identified as outliers during this reporting period. In addition nine sightings did not have sighting distances collected and are excluded from these calculations.

Table 3. Tracklines, km flown and Hobbs hours during aerial surveys of the Hatteras survey area from January 2012 to December 2012. Trackline numbers are listed in the order in which they were flown. Asterisk denotes hours included in transit from Hatteras, NC to Jacksonville, FL.

Date	Tracklines Flown AM	Tracklines Flown PM	Total km Flown	Hobbs Hours
30-Jan-2012	20 to 25	26 to 29	733.76	7.8
31-Jan-2012	39 to 36	35 to 32	599.96	7.5
1-Feb-2012	45 to 42	41, 40, 31, 30	584.52	7.2
14-Mar-2012	20 to 25	26 to 31	868.40	7.6
15-Mar-2012	32, 33, 27, 38	45, 44, 43, 39	570.35	7.4
3-May-2012	28 to 31	32 to 35	622.25	6.9
4-May-2012	45 to 42	41 to 38	544.60	7.4
8-Jun-2012	20 to 23	24 to 27	584.85	7.0
9-Jun-2012	32 to 35	45 to 42	591.40	7.1
10-Jun-2012	31 to 28, 41, 40	39 to 36	731.10	7.4
30-Aug-2012	20 to 25	38 to 41	704.45	7.9
21-Sep-2012	20 to 24, 27	31 to 28	739.10	9.4*
30-Nov-2012	30 to 34	31 to 28	321.45	4.7
1-Dec-2012	36 to 39	45 to 42	584.10	5.5
2-Dec-2012	36 to 39	45 to 42	405.50	6.7
		Total	9185.79	107.5

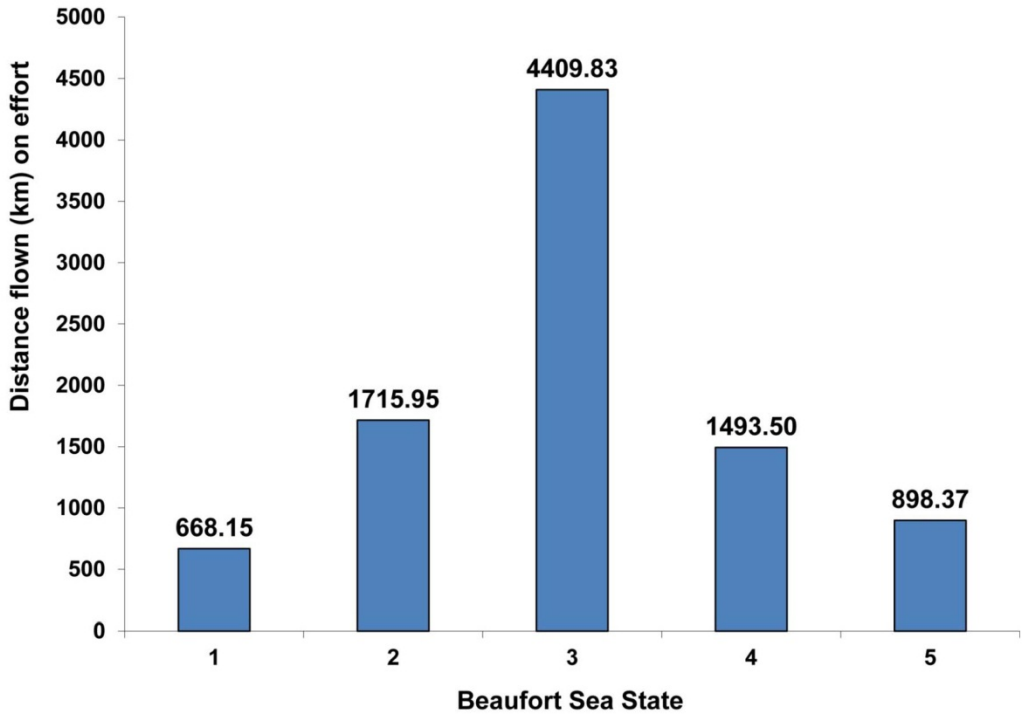


Figure 3a. Total distance surveyed per Beaufort Sea State from January 2012 to December 2012 during aerial surveys in the Hatteras survey area.

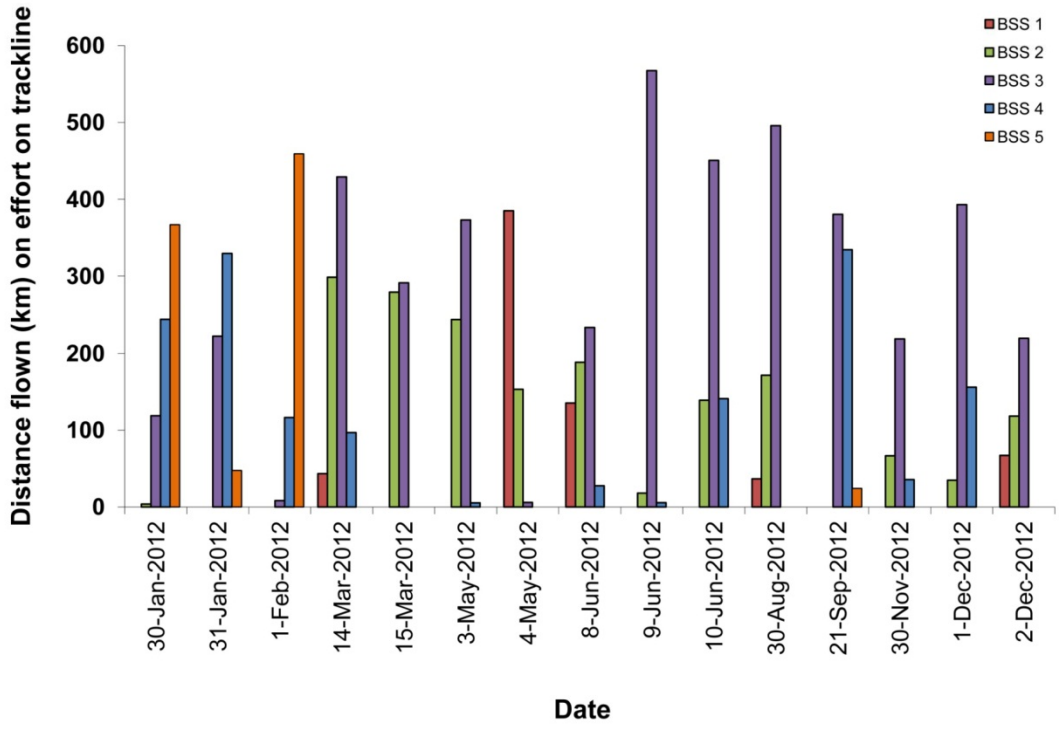


Figure 3b. Effort by Beaufort Sea State for each day from January 2012 to December 2012 during aerial surveys in the Hatteras survey area.

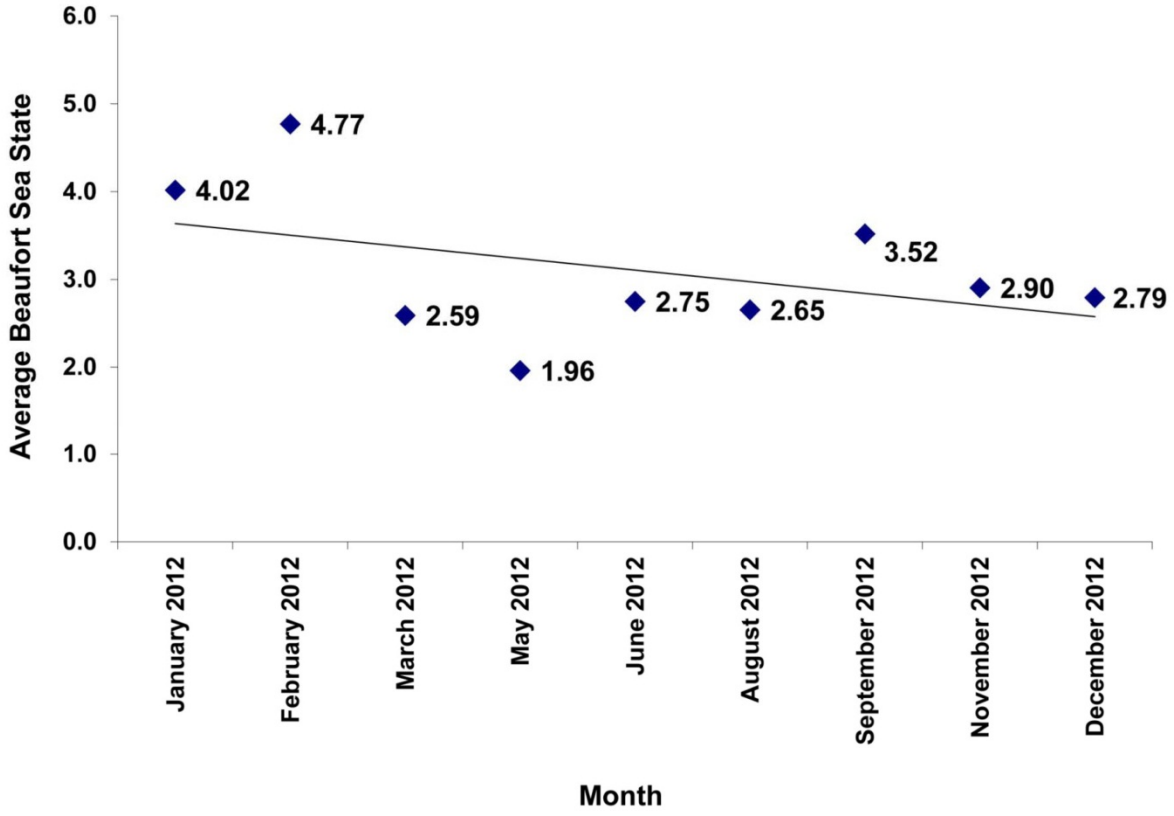


Figure 3c. Average Beaufort Sea State for each month from January 2012 to December 2012 during aerial surveys in the Hatteras survey area. Values were calculated using the formula:
AvgBSS = [(Distance @ BSS 1*1)+…/Total distance flown that day].

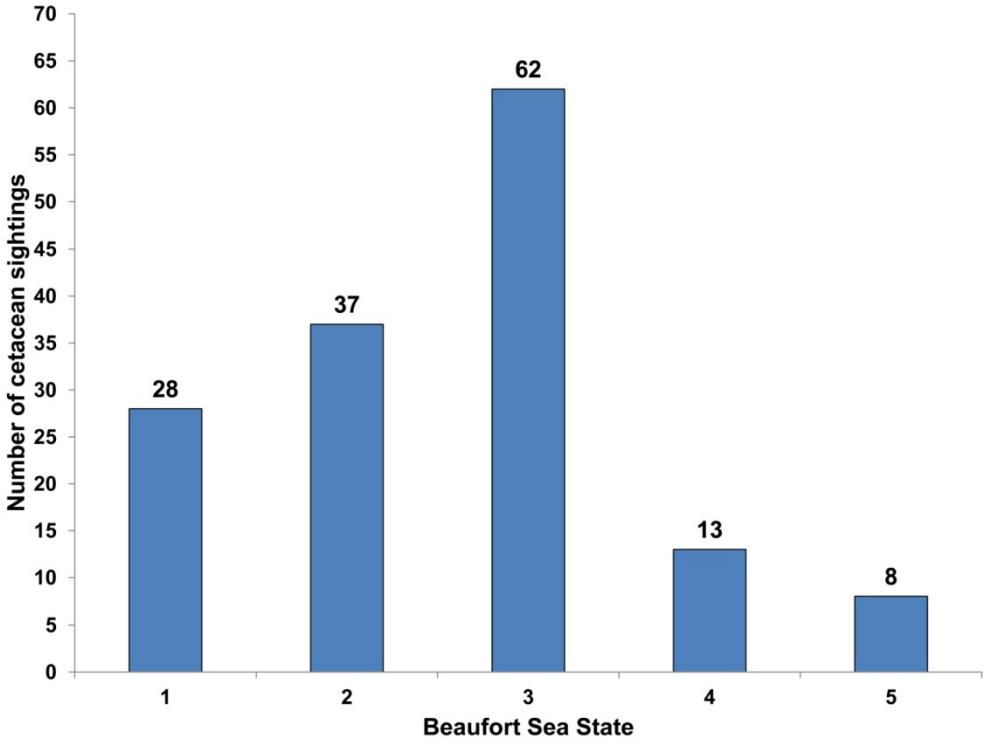


Figure 4a. Number of cetacean sightings per Beaufort Sea State from January 2012 to December 2012 during aerial surveys in the Hatteras survey area.

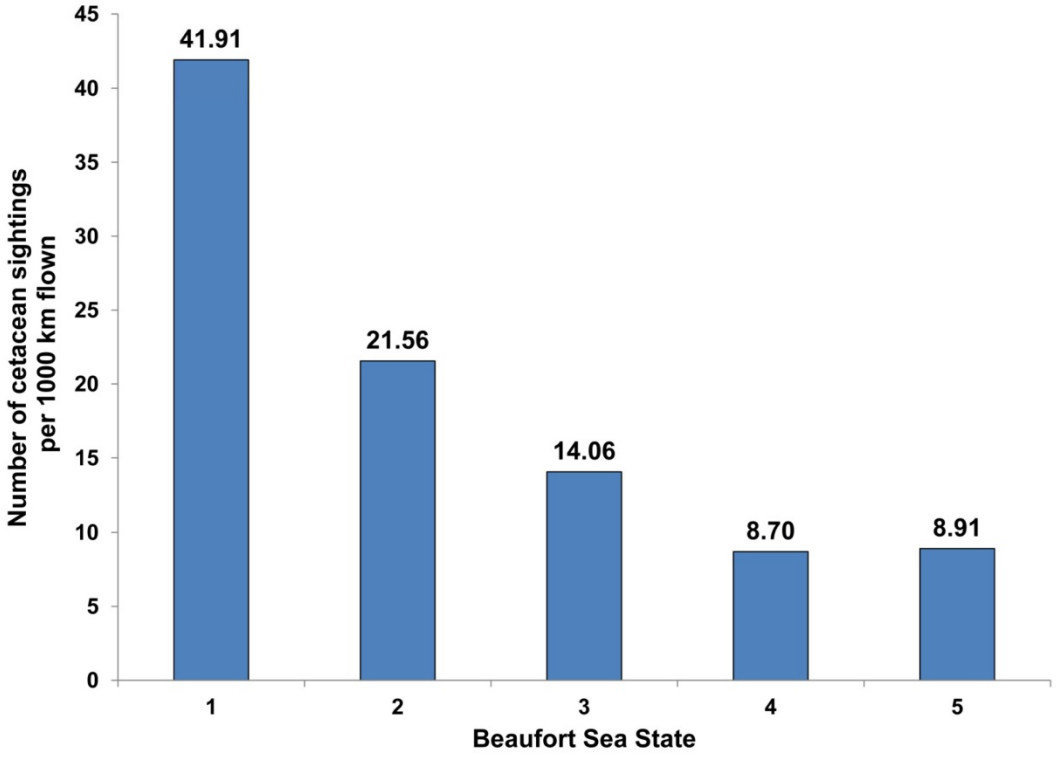


Figure 4b. Cetacean sightings per 1000 km flown by Beaufort Sea State from January 2012 to December 2012 during aerial surveys in the Hatteras survey area.

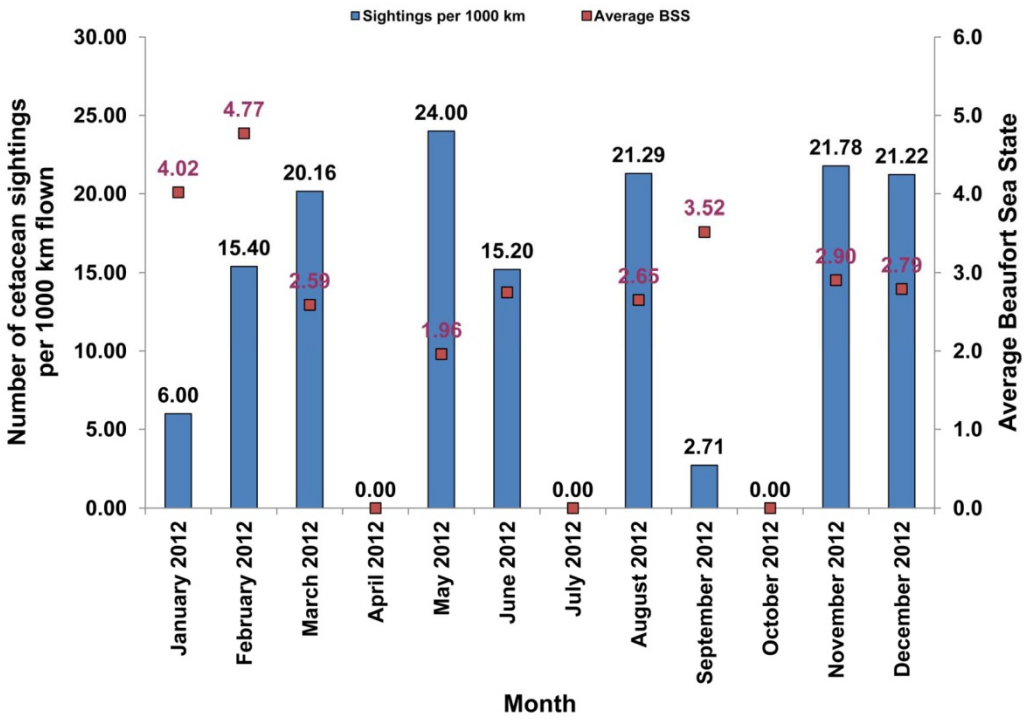


Figure 4c. Cetacean sightings per 1000 km surveyed and the average Beaufort Sea State per month from January 2012 to December 2012 during aerial surveys in the Hatteras survey area.

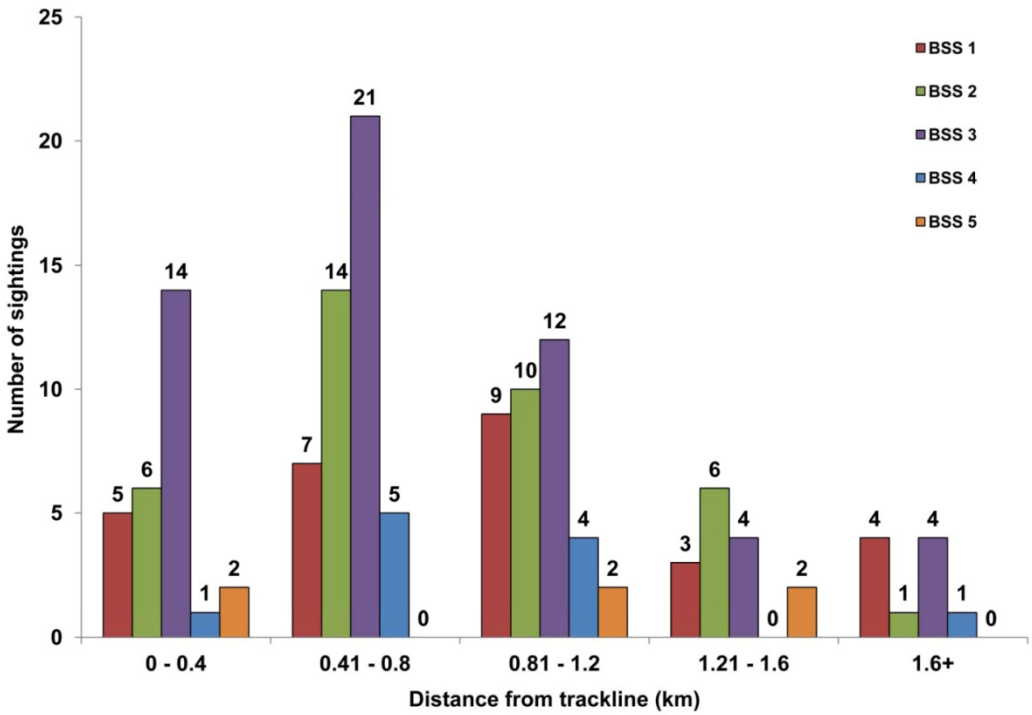


Figure 5a. Sighting distances from trackline by Beaufort Sea State for 137 of 148 cetacean sightings from January 2012 to December 2012 during aerial surveys in the Hatteras survey area. Omitted sightings: 9 without sighting distances and 2 outliers.

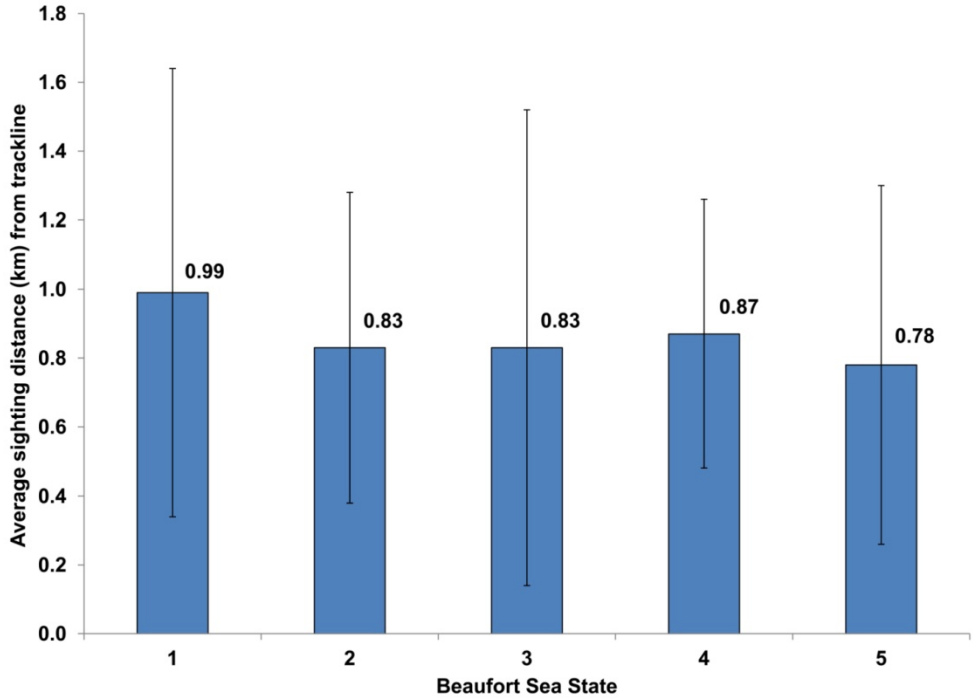


Figure 5b. Sighting distances from trackline by Beaufort Sea State for cetacean sightings from January 2012 to December 2012 during aerial surveys in the Hatteras survey area. Error bars denote standard deviation for each category.

Marine Mammal Sightings

A total of 148 sightings of 3699 individual cetaceans representing thirteen species were observed while on effort during the reporting period. Three endangered species – humpback *(Megaptera noaeangliae*), sperm (*Physeter macrocephalus*) and fin *(Balaenoptera physalus*) whales – were encountered in the survey area. All identified species sighted are listed below in order of decreasing number of sightings (*i.e*. most commonly sighted species first). Eight cetacean species had additional sightings that were recorded while off effort. These sightings are included in the below tables and maps for each species but are excluded from any calculations. A sighting was considered off effort if it occurred while transiting to or from the survey area or between tracklines. Any cetaceans the survey team encountered while investigating a separate sighting queue were also labeled off effort. Total number of individuals is based upon the best estimate of group size. Information on individual sighting summaries are in Appendix B and C. Daily sightings are summarized in Appendix D.

Bottlenose dolphin (*Tursiops truncatus*) (Table 4, Figure 6)

This species was the most commonly observed cetacean species based both on number of sightings (48) and number of individuals (943). This species was observed during eight of the nine survey months of this reporting period. Group size ranged between two to 50 individuals (mean=20). Three additional off effort sightings inside the range were recorded, with group sizes between six and eight individuals. The majority of sightings occurred greater than 37 km from shore and in waters beyond the 100 m isobath. Based on the distance from shore (*i.e.* greater than 34 km), these bottlenose dolphins were most likely the offshore ecotype (Torres *et al*. 2003). The current best estimate of offshore bottlenose dolphin in the western Atlantic, between central Florida and Canada, is 81588 (CV=0.17) (Waring *et al.* 2008). The status of the offshore bottlenose dolphins stock in the Northwest Atlantic is unknown.

Table 4. Bottlenose dolphin (*Tursiops truncatus*) sightings in the Hatteras survey area from January 2012 to December 2012. Asterisk denotes off effort sightings.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #	
30-Jan-12	11:45	25	34.887330	-75.433136	NW	25	1	90°	3	
31-Jan-12	12:21	86	35.487627	-74.803840	W	36	1	90°	6	*
1-Feb-12	12:12	36	35.768284	-74.819007	W	40	1	90°	9	
14-Mar-12	12:08	34	34.823642	-75.371893	NW	25	3	90°	14	
15-Mar-12	11:21	35	35.550984	-74.773731	E	37	1	90°	28	
15-Mar-12	11:31	39	35.558571	-74.689945	E	37	3	90°	8	
15-Mar-12	12:10	49	35.628645	-74.682070	W	38	1	90°	35	
15-Mar-12	12:18	53	35.633265	-74.735229	W	38	1	90°	40	
15-Mar-12	14:18	64	36.126358	-74.845911	E	45	1	100°	8	
15-Mar-12	14:28	69	36.136306	-74.671118	E	45	2	90°	4	
15-Mar-12	14:33	73	36.125825	-74.614163	E	45	1	90°	26	
15-Mar-12	15:42	94	35.989608	-74.849415	E	43	3	90	20	
15-Mar-12	15:48	97	35.982781	-74.763415	E	43	2	100°	15	
3-May-12	16:11	43	35.406789	-74.929029	W	37	1	90°	4	
4-May-12	10:25	21	36.126969	-74.460064	E	45	1	90°	7	*
4-May-12	10:32	26	36.116379	-74.394527	E	45	2	90°	39	
4-May-12	10:42	30	36.125553	-74.342572	E	45	2	90°	8	*
4-May-12	11:53	61	35.973742	-74.529780	E	43	2	90°	13	
4-May-12	12:14	68	35.907999	-74.635989	W	42	1	60°	23	
4-May-12	14:00	85	35.843667	-74.666141	W	41	3	110°	32	
4-May-12	14:06	89	35.825246	-74.586393	W	41	2	45°	40	
4-May-12	14:23	94	35.758378	-74.497698	E	40	1	90°	34	
4-May-12	14:28	100	35.767991	-74.577045	E	40	2	90°	50	
4-May-12	15:22	126	35.685520	-74.688836	W	39	2	90°	30	
4-May-12	15:45	137	35.621951	-74.681484	E	38	2	90°	48	
4-May-12	15:53	141	35.625957	-74.760278	E	38	2	90°	8	
4-May-12	16:03	145	35.620312	-74.795580	E	38	2	90°	2	
8-Jun-12	11:49	21	34.723967	-75.511635	NW	23	2	90°	25	
8-Jun-12	14:39	35	34.769632	-75.416677	SE	24	1	90°	15	
9-Jun-12	10:24	18	35.343964	-74.889252	E	34	2	110°	11	
9-Jun-12	10:39	22	35.335487	-74.876690	E	34	2	90°	34	
9-Jun-12	11:20	34	35.409601	-74.851604	W	35	2	90°	2	
9-Jun-12	14:33	63	36.049014	-74.720814	W	44	1	110°	29	
9-Jun-12	15:04	72	35.958967	-74.654650	W	43	3	90°	21	
9-Jun-12	15:16	76	35.996854	-74.512985	W	43	2	90°	22	
10-Jun-12	10:55	89	35.834870	-74.987720	E	41	1	90°	8	
10-Jun-12	11:21	100	35.830699	-74.380440	E	41	3	11°	40	
10-Jun-12	14:09	124	35.689615	-74.553820	E	39	1	90°	35	
10-Jun-12	15:27	145	35.557147	-74.574964	E	37	2	90°	35	
30-Aug-12	13:45	29	35.608416	-74.876626	E	38	2	45°	33	
30-Aug-12	13:59	37	35.619762	-74.659026	E	38	2	90°	11	
30-Aug-12	14:08	42	35.617731	-74.507810	E	38	2	90°	9	
30-Aug-12	15:34	84	35.835182	-74.643173	W	41	1	90°	18	
30-Nov-12	12:46	6	35.041624	-75.008259	SE	30	1	90°	13	
30-Nov-12	13:54	22	35.206940	-75.008217	SE	32	1	90°	4	
30-Nov-12	15:22	41	35.330792	-74.878582	SE	34	1	90°	17	
1-Dec-12	10:59	26	35.559542	-74.461530	E	38	3	90°	2	
2-Dec-12	9:23	9	34.550714	-75.661606	SE	20	1	90°	6	
2-Dec-12	10:28	34	34.819990	-75.746810	SE	22	3	90°	6	
2-Dec-12	10:38	40	34.682574	-75.562758	SE	22	2	90°	4	
2-Dec-12	13:28	66	34.777744	-75.423560	SE	24	2	60°	10	

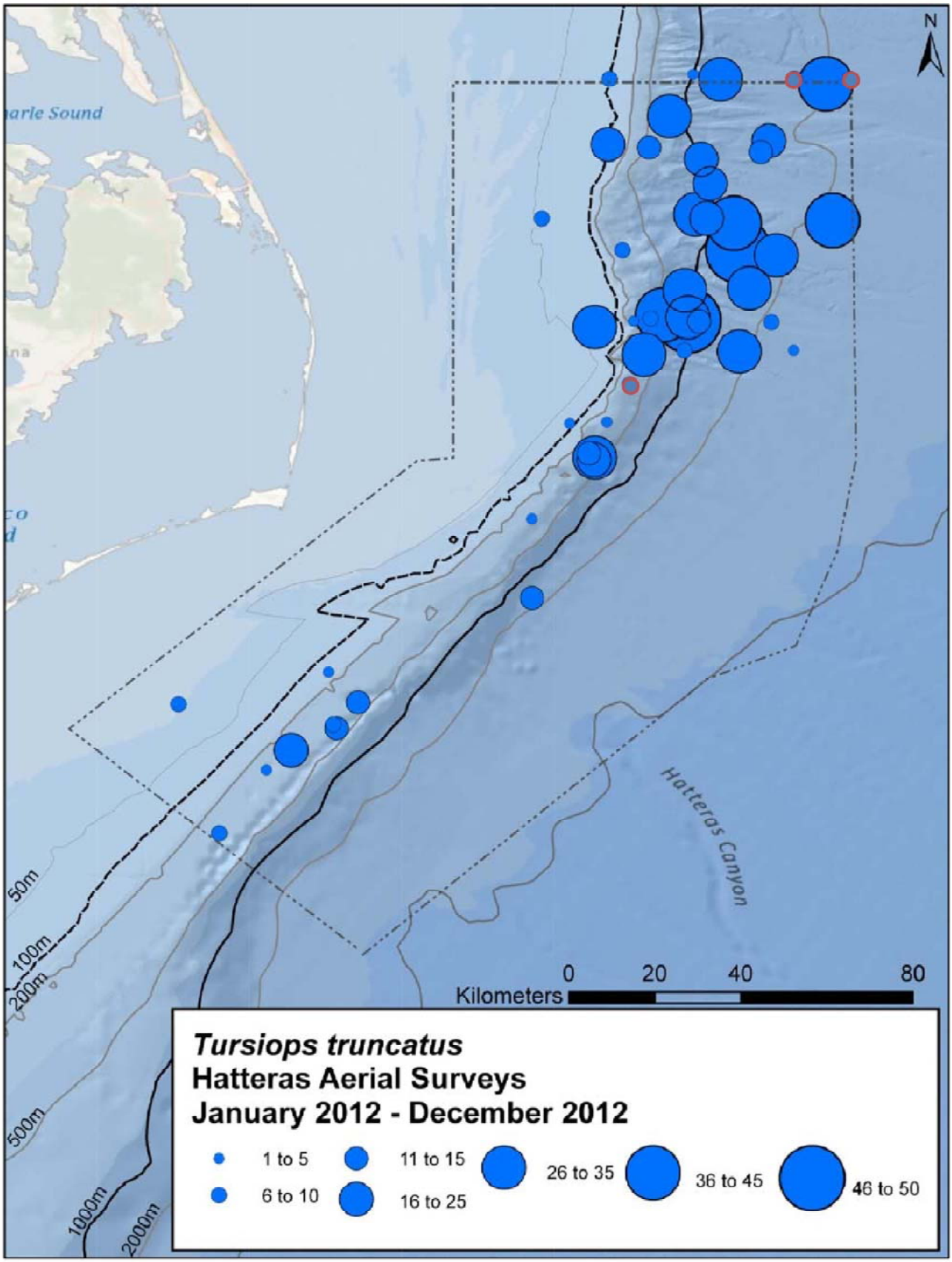


Figure 6. Bottlenose dolphin (*Tursiops truncatus*) sightings by group size. Red outline denotes off effort sightings.

Short-finned pilot whale (*Globicephala macrorhynchus*) (Table 5, Figure 7)

This species was observed 30 times for a total of 327 individuals and was seen in seven of the nine months in which surveys were conducted. Group sizes ranged from one to 45 individuals (mean=11).

Sightings of pilot whales in the western North Atlantic occur primarily near the continental shelf break (Waring *et al*. 2010), and sightings in the Cape Hatteras survey area followed this pattern. Pilot whales were observed from the 100 m isobath to waters greater than 2000 m deep (Figure 7). As both species of *Globicephala* have been reported in the waters north of Cape Hatteras, careful examination of all photos was conducted to determine whether long-finned pilot whales (*Globicephala melas*) were encountered. All sightings were identified as *Globicephala macrorhynchus*. The difficulty of differentiating short-finned and long-finned pilot whales at sea results in NMFS reporting stock numbers and status for both species grouped as *Globicephala* spp. (Waring *et al.* 2010). The abundance estimate of *Globicephala* spp. (24674, CV=0.45) is based upon shipboard surveys along the outer continental shelf of the U.S. Atlantic between Florida and Maryland in 2004 (Waring *et al*. 2011). These estimates were combined with spatial distribution analysis, as well as genetic analyses, to generate the current value of 24674. The status of short-finned pilot whales in the U.S. Atlantic is currently unknown (Waring *et al.* 2011).

Table 5. Short-finned pilot whale (*Globicephala macrorhynchus*) sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #
1-Feb-12	11:41	29	35.834085	-74.463784	E	41	1	100°	15
1-Feb-12	12:10	35	35.764195	-74.823749	W	40	1	90°	4
14-Mar-12	11:59	30	34.753415	-75.273994	NW	25	1	90°	21
14-Mar-12	14:32	46	34.829440	-75.255250	SE	26	1	90°	16
15-Mar-12	10:38	24	35.201177	-74.673247	NW	33	2	100°	25
15-Mar-12	16:01	104	35.980901	-74.353094	E	43	1	90°	18
4-May-12	14:36	103	35.761736	-74.656952	E	40	2	90°	5
4-May-12	14:49	108	35.748995	-74.799130	E	40	3	110°	11
9-Jun-12	9:15	5	35.205705	-74.956640	E	32	1	90°	9
9-Jun-12	13:45	47	36.128285	-74.414388	E	45	2	90°	8
9-Jun-12	14:08	55	36.058991	-74.471143	W	44	2	100°	2
9-Jun-12	14:20	59	36.048126	-74.642296	W	44	1	90°	31
9-Jun-12	15:43	82	35.922541	-74.638361	E	42	2	90°	2
9-Jun-12	15:54	86	35.914315	-74.814962	E	42	1	100°	11
10-Jun-12	11:08	94	35.823113	-74.674842	E	41	2	90°	7
10-Jun-12	11:53	107	35.767227	-74.830361	W	40	1	90°	12
10-Jun-12	13:54	118	35.689751	-74.809128	E	39	2	90°	45
30-Aug-12	13:53	33	35.627248	-74.800441	E	38	1	90°	18
30-Aug-12	14:38	53	35.691674	-74.800817	W	39	2	90°	41
30-Aug-12	15:00	63	35.755539	-74.809280	E	40	2	60°	4
30-Aug-12	15:08	67	35.761492	-74.659694	E	40	2	90°	15
30-Aug-12	15:44	92	35.834234	-74.833176	W	41	2	60°	7
21-Sep-12	10:48	12	34.669830	-75.566572	SE	22	1	90°	5
1-Dec-12	11:05	31	35.541047	-74.357903	E	38	2	90°	1
1-Dec-12	13:10	44	36.121488	-74.505460	E	45	3	90°	3
1-Dec-12	13:20	48	36.121955	-74.363954	E	45	2	90°	5
1-Dec-12	14:16	60	35.970768	-74.670173	E	43	2	90°	5
1-Dec-12	14:25	64	35.973986	-74.328506	E	43	2	90°	13
1-Dec-12	14:36	68	35.903755	-74.436792	W	42	2	90°	3
2-Dec-12	10:44	44	34.600899	-75.457848	SE	22	2	90°	10

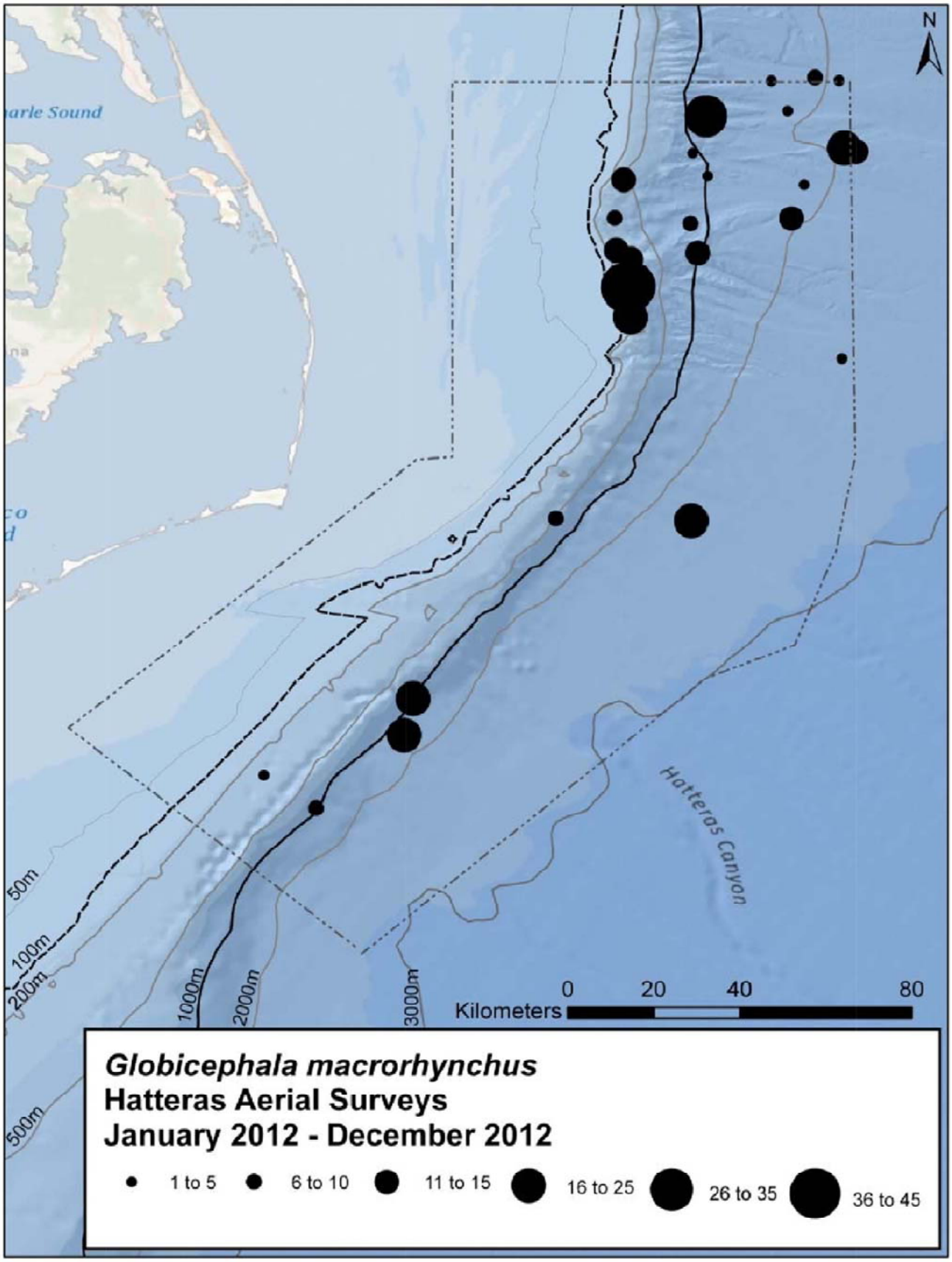


Figure 7. Short-finned pilot whale (*Globicephala macrorhynchus*) sightings by group size.

Cuvier's beaked whale (*Ziphius cavirostris*) (Table 6, Figure 8)

Fourteen sightings of 40 individuals occurred while on effort in the Cape Hatteras survey area, and this species was observed in seven of the nine months in which surveys were conducted. One additional off effort sighting of five animals was recorded inside the range in November. The sighting occurred while we had broken track to investigate a past sighting. Group sized ranged from single animals up to eight individuals (mean=3) All animals were recorded just beyond the 200 m isobath. See below for NMFS stock assessment information for this species.

Table 6. Cuvier's beaked whale (*Ziphius cavirostris*) sightings in the Hatteras survey area from January 2012 to December 2012. Asterisk denotes off effort sighting.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #	
31-Jan-12	10:42	66	35.692390	-74.624678	E	39	1	100°	1	
4-May-12	11:43	54	35.977379	-74.634714	E	43	2	90°	2	
4-May-12	13:57	81	35.821674	-74.724824	E	41	2	60°	3	
9-Jun-12	11:04	29	35.412325	-74.494889	W	35	1	100°	2	
10-Jun-12	14:56	134	35.614247	-74.760269	W	38	2	100°	1	
30-Aug-12	14:27	49	35.692400	-74.694600	W	39	1	90°	1	
30-Aug-12	15:27	79	35.828540	-74.398137	W	41	1	90°	4	
30-Aug-12	15:39	88	35.841997	-74.688174	W	41	2	90°	1	
21-Sep-12	15:29	43	34.897389	-75.069119	NW	28	2	90°	2	
30-Nov-12	13:23	16	35.111504	-74.976190	NW	31	3	90°	5	*
30-Nov-12	14:51	31	35.200557	-74.685430	NW	33	1	100°	5	
30-Nov-12	15:29	44	35.332009	-74.785398	SE	34	2	90°	4	
1-Dec-12	10:09	13	35.483571	-74.646833	W	37	1	90°	1	
2-Dec-12	9:37	12	34.449417	-75.524725	SE	20	1	100°	8	
2-Dec-12	11:05	50	34.643750	-75.394300	NW	23	1	60°	5	

Beaked whale (*Mesoplodon* spp.) (Table 7, Figure 9)

Animals were identified as belonging to the genus *Mesoplodon* and distinguished apart from *Z. cavirostris* on ten sightings for a total of 25 individuals (mean=3). Sightings occurred offshore of the 100 m isobath. The difficulty in differentiating the various species of beaked whales (*Mesoplodon* spp. and *Ziphius* sp.) has led NMFS to create a single combined stock estimate for all species in the western Atlantic. Surveys conducted in 2004 from Maryland to Florida resulted in an estimate abundance at 674 animals (CV=0.36). The status of the various beaked whales stock in the Northwest Atlantic is unknown (Waring *et al.* 2009).

Table 7. *Mesoplodon* spp. sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #
31-Jan-12	11:46	81	35.560197	-74.700421	E	37	2	90°	4
31-Jan-12	12:21	86	35.487627	-74.803840	W	36	1	90°	3
15-Mar-12	9:42	5	35.143693	-74.887270	SE	32	2	90°	3
4-May-12	11:00	37	36.038311	-74.582717	W	44	1	90°	1
4-May-12	15:15	122	35.692604	-74.734785	W	39	2	90°	1
4-May-12	15:26	130	35.682618	-74.603401	W	39	2	90°	1
8-Jun-12	16:01	57	34.747765	-75.130554	SE	26	3	90°	2
30-Aug-12	10:14	6	34.549125	-75.543718	NW	21	1	90°	3
30-Nov-12	13:23	16	35.111504	-74.976190	NW	31	3	90°	3
2-Dec-12	9:43	16	34.408173	-75.489960	SE	20	2	90°	4

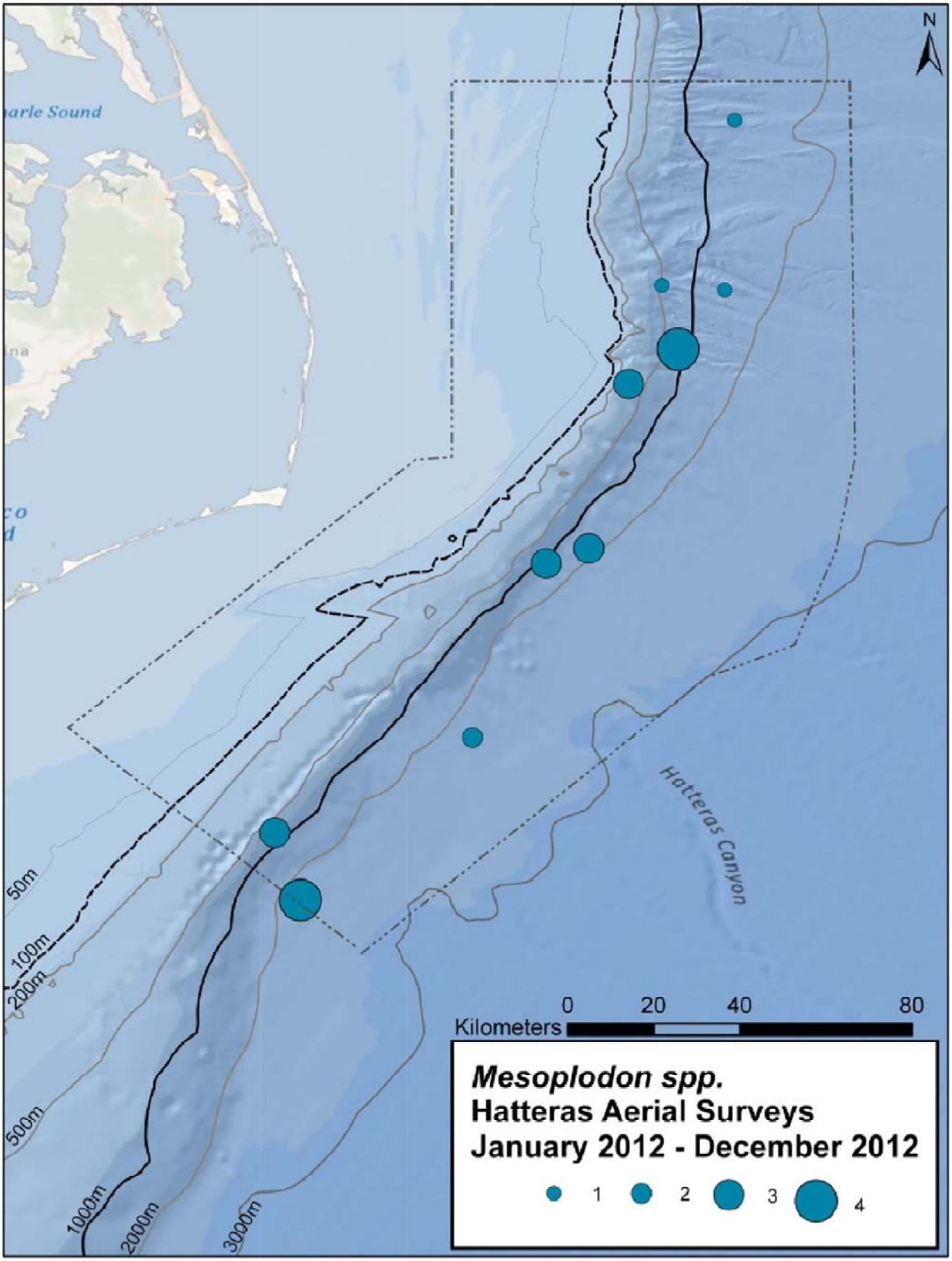


Figure 9. Mesoplodon spp. sightings by group size.

Atlantic spotted dolphin (*Stenella frontalis*) (Table 8, Figure 10)

Eight sightings of 367 individuals were observed while on effort in the Cape Hatteras survey area. Group size ranged between 25 and 85 (mean=46). A single group of 19 individuals was observed while off effort over the continental shelf inside the range. There are two distinct forms, or ecotypes, of the Atlantic spotted dolphin in the western north Atlantic: a heavily spotted, larger form that typically occurs on the continental shelf and is most often encountered around the 200 m isobath or shallower water, and a less spotted and smaller form that occurs further offshore and around islands (Perrin *et al*. 1987, 1994). Spotted dolphins occurred from inside 50m to offshore of the 2000m isobath suggesting that both ecotypes occurred within the survey area. The abundance estimate for *S. frontalis* in the western north Atlantic is 26798 (CV=0.66); the status of the stock(s) is/are unknown (Waring *et al*. 2012).

Table 8. Atlantic spotted dolphin (*Stenella frontalis*) sightings in the Hatteras survey area from January 2012 to December 2012. Asterisk denotes off effort sighting.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #	
15-Mar-12	9:53	9	35.101080	-74.777675	SE	32	2	90°	26	
3-May-12	15:22	33	35.324588	-75.206974			1	90°	19	*
4-May-12	9:52	6	36.112706	-74.990582	E	45	2	90°	48	
4-May-12	11:52	58	35.979662	-74.557988	E	43	2	90°	58	
10-Jun-12	14:32	130	35.622873	-74.662187	W	38	2	45°	25	
1-Dec-12	10:36	21	35.559816	-74.792280	E	38	4	90°	26	
2-Dec-12	10:12	27	34.723346	-75.782118	NW	21	3	90°	85	
2-Dec-12	13:11	61	34.884608	-75.560403	SE	24	2	45°	80	

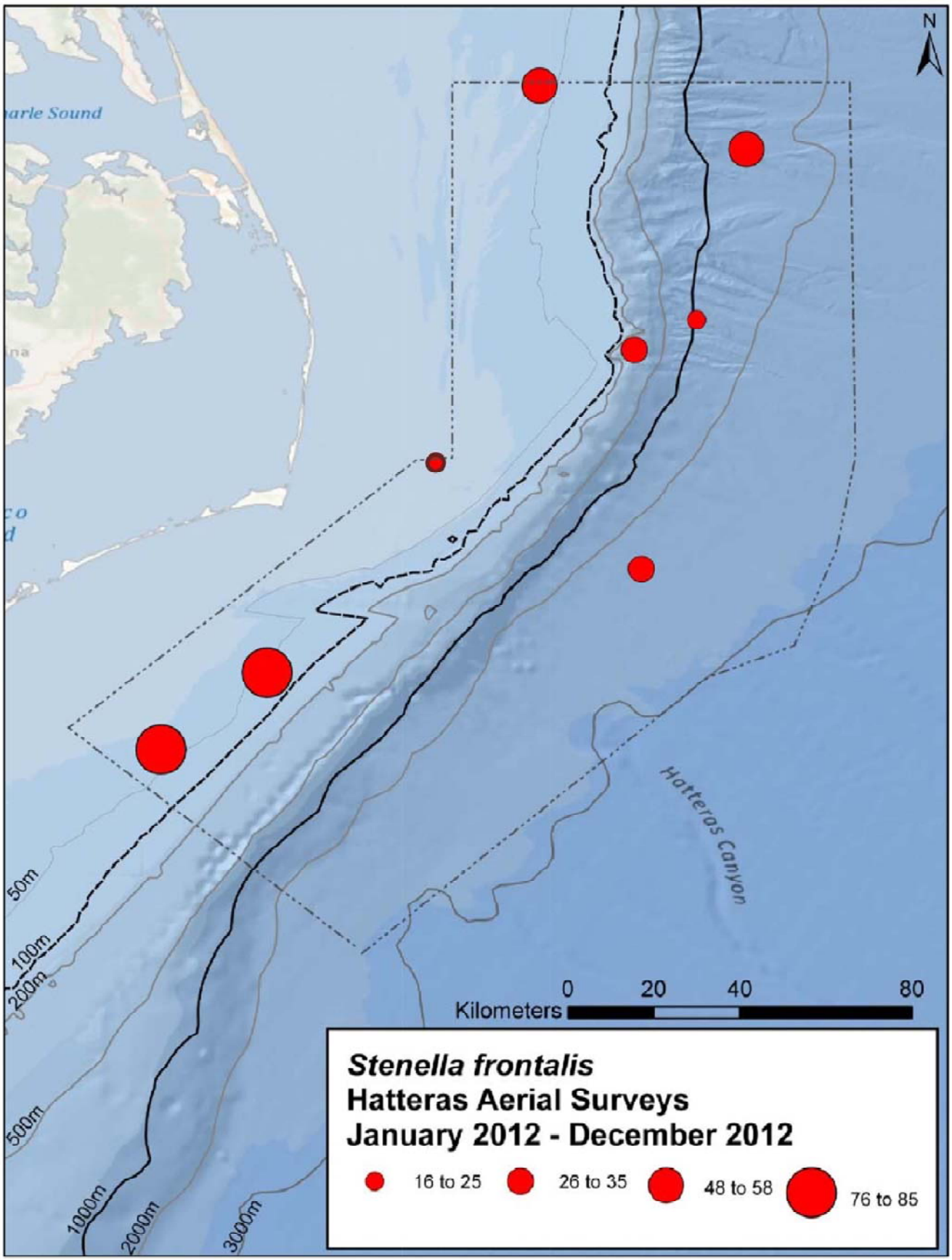


Figure 10. Atlantic spotted dolphin (Stenella frontalis) sightings by group size. Dark red outline denotes off effort sighting.

Common dolphin (*Delphinus delphis*) (Table 9, Figure 11)

Eight sightings of 675 individuals of common dolphins (mean group size =84) were observed beyond the 200 m isobath. Mixed species groups of common dolphin and striped dolphin (*Stenella coeruleoalba*) were observed twice during the current reporting period, including one sighting that occurred while off effort. The current best estimate of common dolphins in the western Atlantic Ocean combines two geographic estimates. Estimates from the Bay of Fundy to Maryland [90547 individuals (CV=0.24)] and from Maryland to central Florida [30196 (CV=0.54)] form a combined estimate of 120743 (CV=0.23) (Waring *et al*. 2010). The status of the common dolphins stock in the Northwest Atlantic is unknown.

Table 9. Common dolphin (*Delphinus delphis*) sightings in the Hatteras survey area from January 2012 to December 2012. Asterisk denotes off effort sighting.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #	
1-Feb-12	12:12	36	35.768284	-74.819007	W	40	1	90°	18	
15-Mar-12	14:47	78	36.126091	-74.417143	E	45	2	60°	75	
15-Mar-12	16:01	105	35.981214	-74.345163	E	43	1	90°	110	*
15-Mar-12	16:41	113	35.693636	-74.757051	W	39	1	60°	125	
4-May-12	10:11	12	36.113022	-74.660513	E	45	1	90°	37	
4-May-12	10:14	15	36.118288	-74.558515	E	45	1	45°	40	
4-May-12	11:05	40	36.041401	-74.684002	W	44	1	45°	45	
4-May-12	11:39	51	35.988005	-74.735377	E	43	3	110°	225	

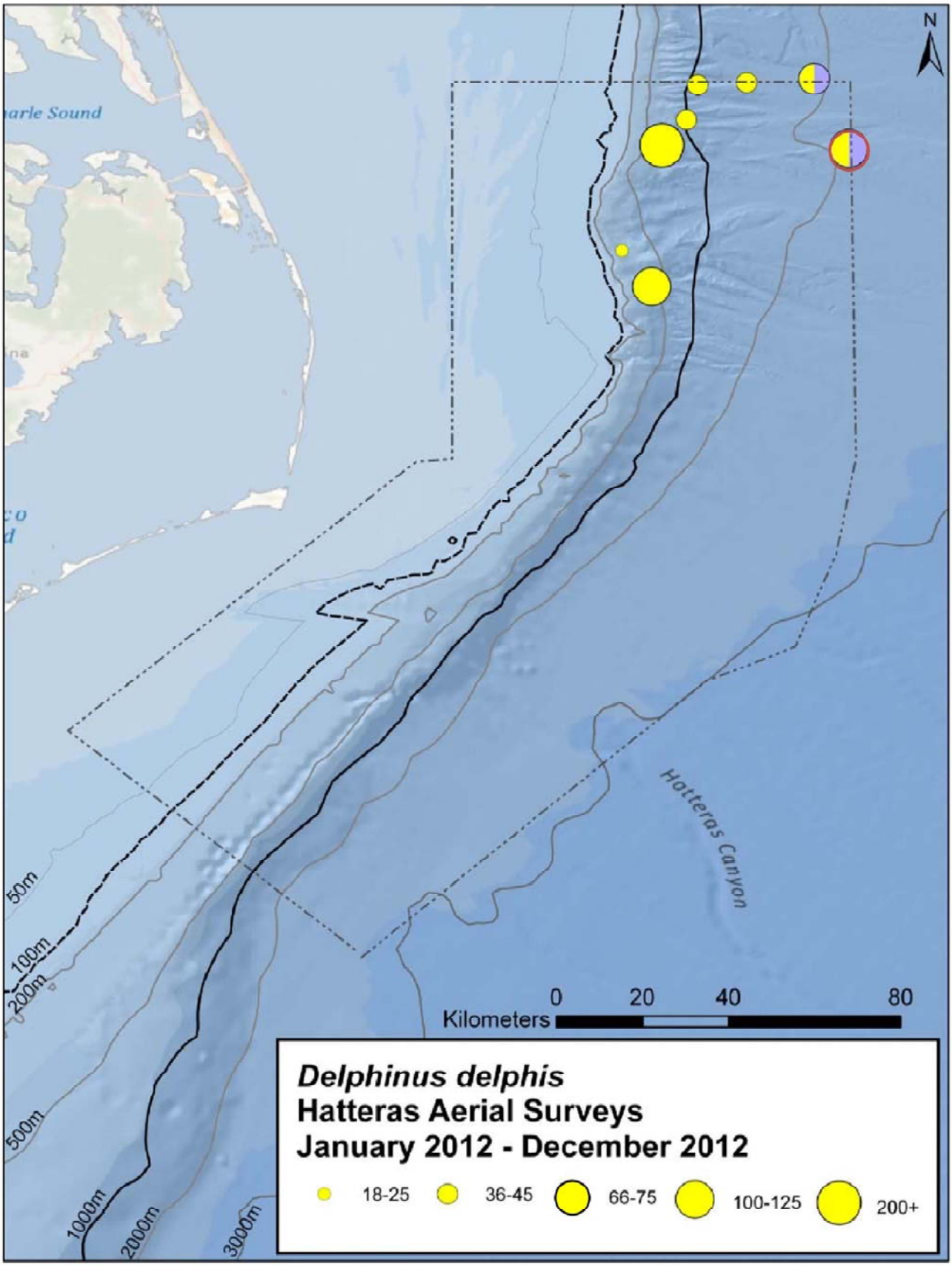


Figure 11. Common dolphin (*Delphinus delphis*) sightings by group size. Bicolor circles denote mixed groups with *Stenella coeruleoalba*. Red outline denotes off effort sighting.

Humpback whale (*Megaptera novaeangliae*) (Table 10, Figure 12)

All sightings of humpback whales were of single animals and occurred over the continental slope. In addition to the four on effort sightings made inside the range, an inshore sighting was made while off effort transiting from the range. A floating carcass of a humpback was encountered within the range while on effort; photographs were collected and local stranding networks were notified. No recovery effort was attempted due to the its advanced state of decomposition, although the carcass was entered into the National Database. Currently, humpback whales in the western North Atlantic are treated as a single stock despite genetic evidence identifying smaller sub-stocks (Waring *et al.* 2012). Population estimates vary depending upon methods utilized, and range between 7698 (genetic tagging methods) and 11570 (photographic mark-recapture methods) (reviewed in Waring *et al.* 2012). This species is listed as endangered under the Endangered Species Act.

Table 10. Humpback whale (*Megaptera novaeangliae*) sightings in the Hatteras survey area from January 2012 to December 2012. Asterisk denotes off effort sighting. Triangle denotes carcass.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #	
30-Jan-12	12:03	30	35.048412	-75.558142	NW	25	4	90°	1	
14-Mar-12	17:29	86	35.676900	-75.446891			1	90°	1	*
15-Mar-12	12:36	56	35.616915	-75.052653	W	38	3	60°	1	Δ
4-May-12	16:11	151	35.629127	-75.069973	E	38	3	90°	1	
2-Dec-12	9:03	4	34.745702	-75.932835	SE	20	2	90°	1	
2-Dec-12	14:12	79	35.019581	-75.633433	NW	25	2	90°	1	

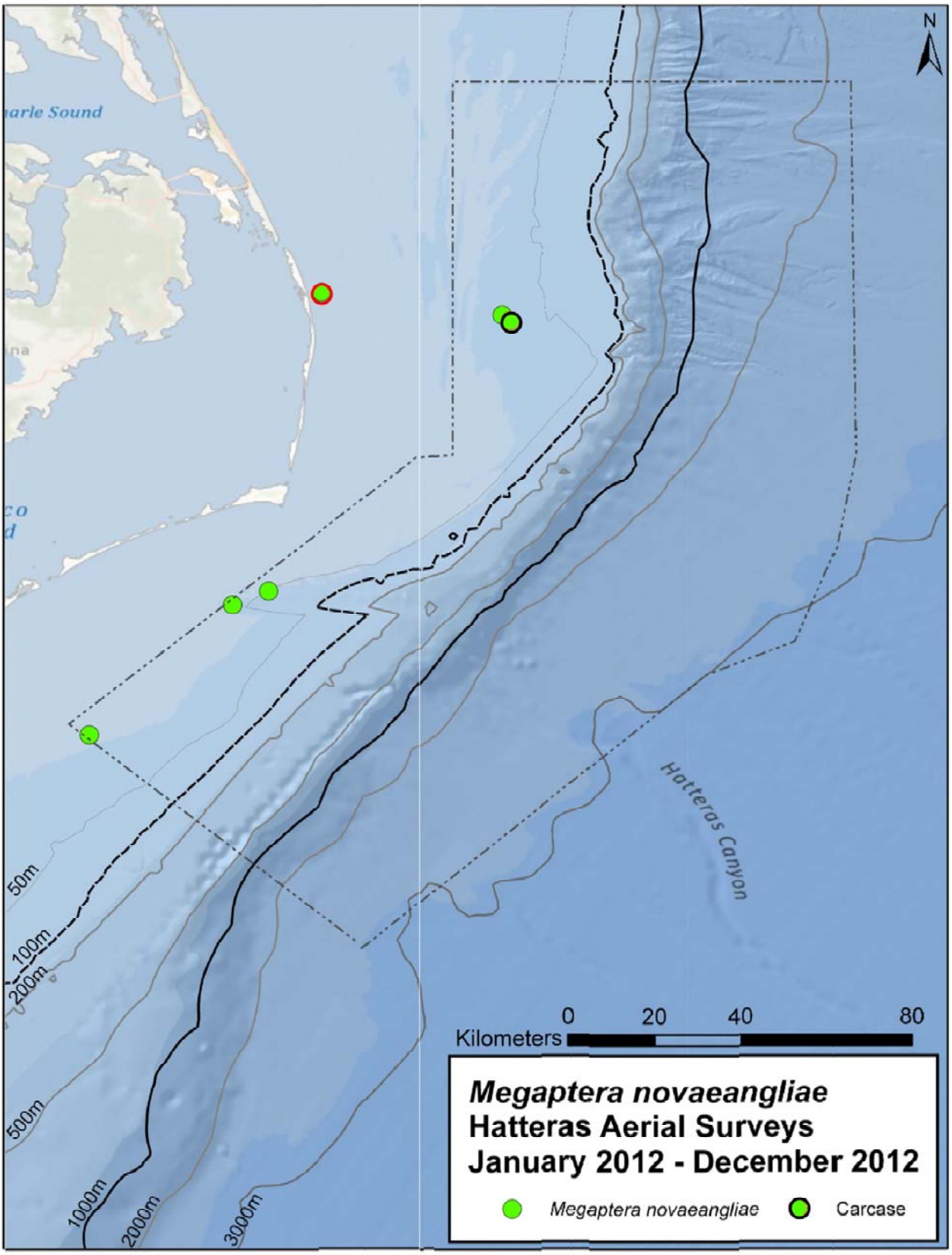


Figure 12. Humpback whale (*Megaptera novaeangliae*) sightings. Red outline denotes off effort sighting. Bold outline denoted floating carcass.

Risso's dolphin (*Grampus griseus*) (Table 11, Figure 13)

This species was encountered four times while on effort for a total of 31 individuals (Figure 8). Group size for this species ranged from 4 to 13 individuals (mean=8). One additional off effort sighting was made on the offshore end of trackline 45. Risso's dolphins were recorded in three of the nine months surveyed, and were only observed in deeper, offshore waters >200m. Risso's dolphins have been found along the mid-Atlantic continental shelf edge year round, with some movement north during spring, summer and fall, and into the mid-Atlantic Bight during winter (Waring *et al.* 2011). The best available estimate for Risso's dolphins, based on results from two US Atlantic surveys conducted in 2004, is 20479 (CV=0.59) (Waring *et al.* 2011). The status of this species in the western Atlantic is unknown (Waring *et al.* 2011).

Table 11. Risso's dolphin (*Grampus griseus*) sightings in the Hatteras survey area from January 2012 to December 2012. Asterisk denotes off effort sighting.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #	
3-May-12	11:20	16	35.104194	-75.087699	SE	32	2	90°	13	
8-Jun-12	15:37	49	34.811290	-75.211198	SE	26	1	90°	8	
9-Jun-12	13:46	48	36.131861	-74.410493	E	45	2	90°	7	*
30-Aug-12	14:01	38	35.630284	-74.665757	E	38	2	90°	6	
30-Aug-12	15:13	73	35.758820	-74.525161	E	40	2	90°	4	

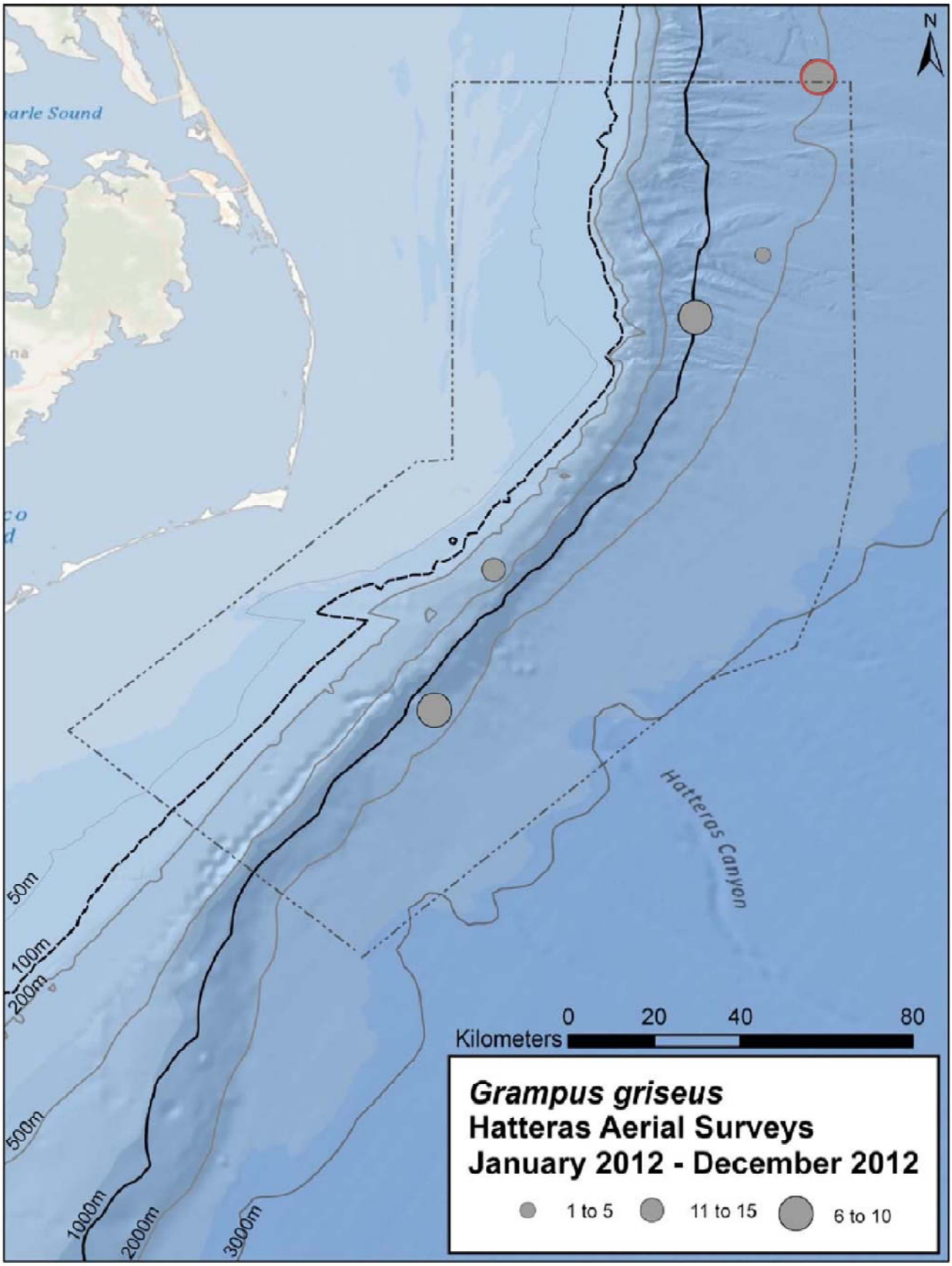


Figure 13. Risso's dolphin (*Grampus griseus*) sightings by group size. Red outline denotes off effort sighting.

Minke whale (*Balaenoptera acutorostrata*) (Table 12, Figure 14)

Minke whale sightings all occurred in offshore waters > 2000m. On effort sightings included a pair of adult whales in January and a mom/calf pair in March. Additional off effort sightings of minke whales including an adult pair and another mom/calf pair recorded in March as well as a single individual in November. Minke whales inhabiting waters off the U.S. east coast are considered part of the Canadian East Coast stock, which occurs from to the western portion of the Davis Strait (45ºW) south to the Gulf of Mexico. The best available abundance estimate for this stock is 8987 (CV=0.32) (Waring *et al.* 2010).

Table 12. Minke whale (*Balaenoptera acutorostrata*) sightings in the Hatteras survey area from January 2012 to December 2012. Asterisk denotes off effort sightings.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #	
31-Jan-12	14:28	97	35.418673	-74.516484	E	35	2	90°	2	
14-Mar-12	16:41	76	34.933077	-74.838806	E	30	3	90°	2	
15-Mar-12	10:10	14	35.032775	-74.405086			1	90°	2	*
15-Mar-12	10:37	23	35.198969	-74.674666	NW	33	2	90°	2	*
30-Nov-12	14:34	28	35.154434	-74.441113	NW	33	2	90°	1	*

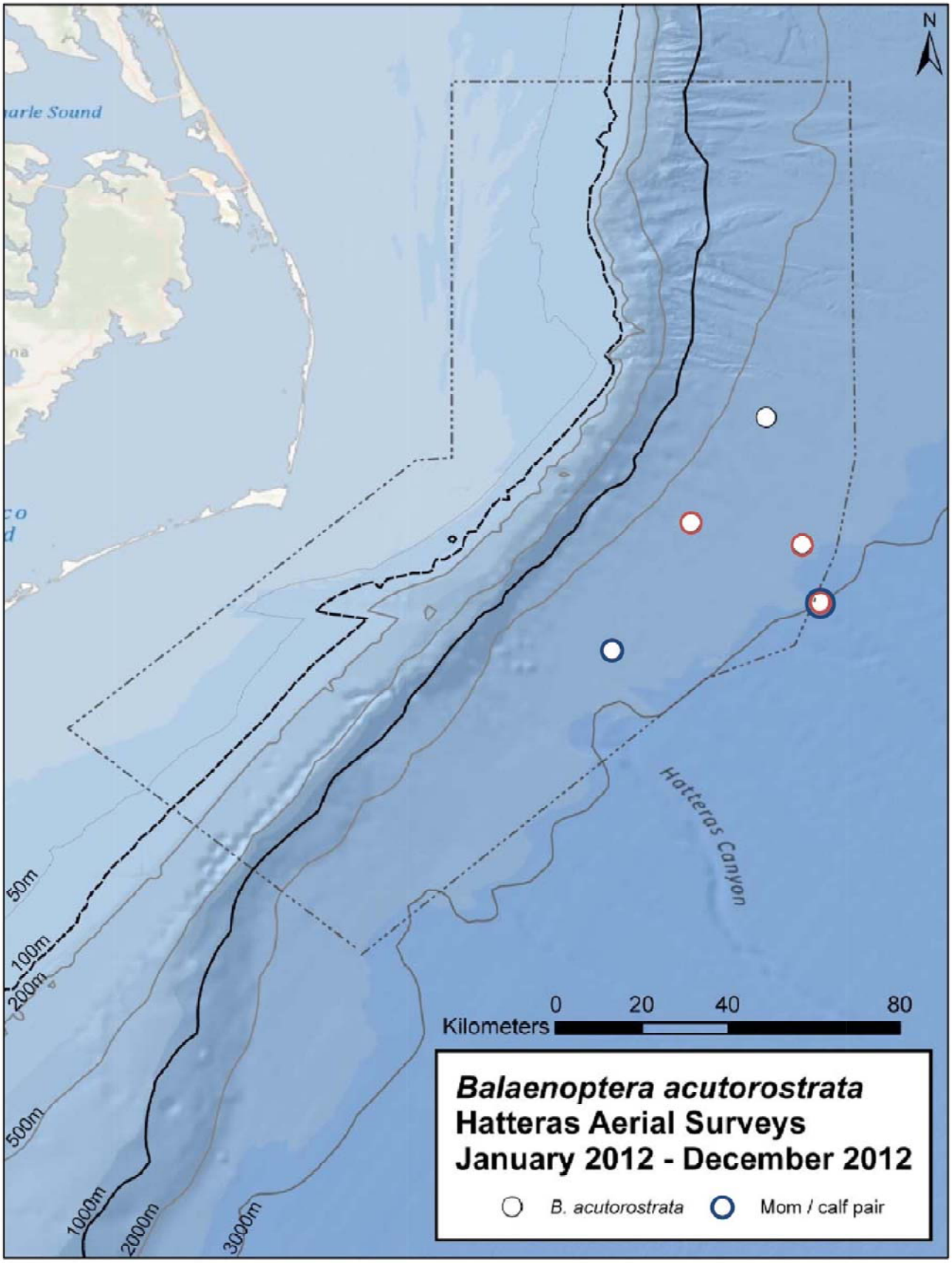


Figure 14. Minke whale (*Balaenoptera acutorostrata*) sightings. Red outline denotes off effort sightings.

Striped dolphin (*Stenella coeruleoalba*) (Table 13, Figure 15)

This species was observed three times, for a total of 775 individuals and was only seen in two of the nine months surveyed during this reporting period. Group size ranged between 75 and 450 (mean=258). All sightings were in depths greater than 200 m. Mixed species groups of striped dolphins and common dolphins (*D. delphis*) were observed twice during the current reporting period, including one sighting that occurred while off effort. The current best population estimate in the western North Atlantic is 94462 (CV=0.04) (Waring *et al*. 2007).

Table 13. Striped dolphin (*Stenella coeruleoalba*) sightings in the Hatteras survey area from January 2012 to December 2012. Asterisk denotes off effort sighting.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #	
1-Feb-12	9:37	6	36.118833	-74.602939	E	45	3	90°	450	
1-Feb-12	12:31	40	35.772974	-74.846489	W	40	1	90°	250	
15-Mar-12	14:47	78	36.126091	-74.417143	E	45	2	60°	75	
15-Mar-12	16:01	105	35.981214	-74.345163	E	43	1	90°	110	*

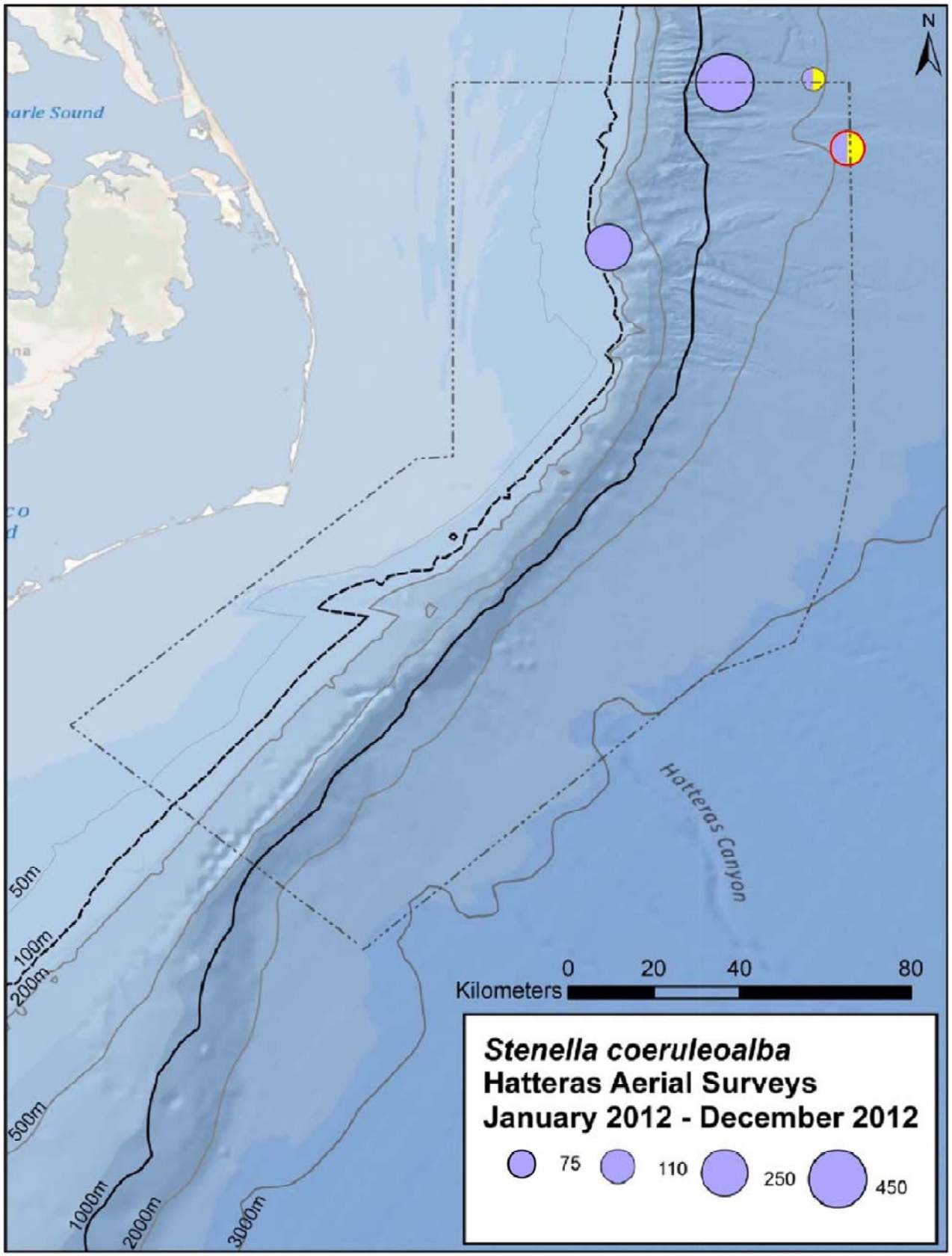


Figure 15. Striped dolphin (*Stenella coeruleoalba*) sightings by group size. Bicolor circles denote mixed groups with *Delphinus delphis*. Red outline denotes off effort sighting

Sperm whale (*Physeter macrocephalus*) (Table 14, Figure 16)

This species was observed four times, for a total of ten individuals, and was seen in four of the nine months surveyed during this reporting period. Group size ranged between one and six. All sightings were recorded beyond the continental shelf, in depths greater than 1000 m. During the November 30th sighting a juvenile sperm whale was observed in close association with two adults. Three more adults were encountered near the original group. Sperm whales are listed as endangered under the Endangered Species Act, and the current best population estimate in the western North Atlantic is 4804 (CV=0.38) (Waring *et al.* 2007).

Table 14. Sperm whale (*Physeter macrocephalus*) sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #
31-Jan-12	15:35	105	35.227815	-74.785030	E	33	2	60°	1
14-Mar-12	16:27	72	34.959386	-74.896202	E	30	3	90°	1
4-May-12	10:21	19	36.129849	-74.468156	E	45	3	90°	2
30-Nov-12	14:34	28	35.154434	-74.441113	NW	33	2	90°	6

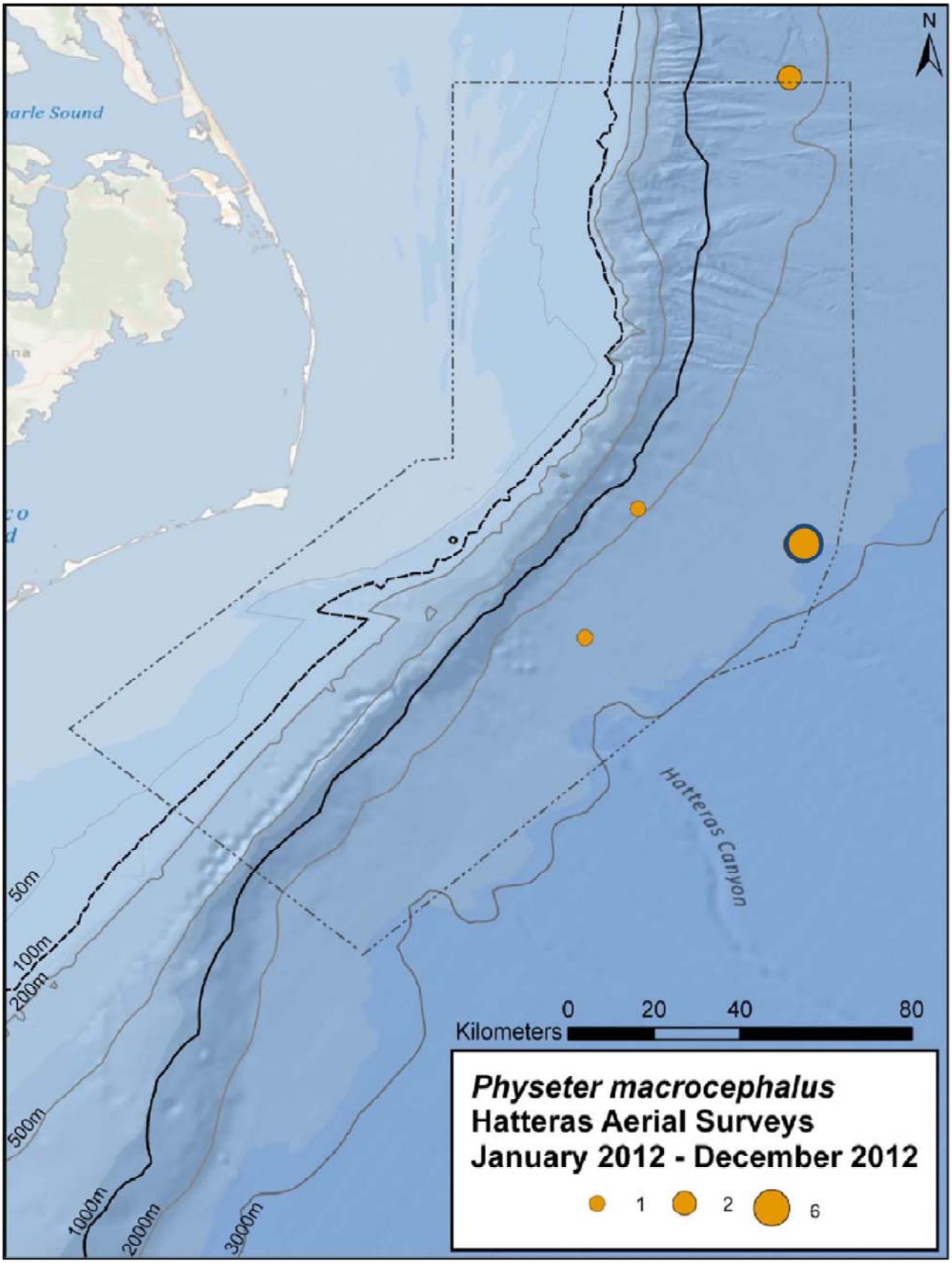


Figure 16. Sperm whale (*Physeter macrocephalus*) sightings by group size. Dark blue outline denotes group with juvenile present.

Fin Whale (*Balaenoptera physalus*) (Table 15, Figure 17)

Four fin whales for a total of seven individuals were observed beyond the 100 m isobath of the Hatteras survey site. Fin whales are listed as endangered under the Endangered Species Act, and the current best population estimate in the western north Atlantic is 3985 (CV=0.24) (Waring *et al.* 2010). The status of fin whales is currently unknown (Waring *et al*. 2010). Waring *et al.* (2010) note that this species is common in offshore waters north of the Cape Hatteras. Near shore sightings of this species have also been recorded off the mouth of the Chesapeake Bay during right whale aerial surveys in 2001 (McLellan *et al.,* 2001), 2002 (McLellan *et al.,* 2002), 2005-06 (McLellan *et al.,* 2006), and 2006-07 (McLellan *et al.,* 2007).

Table 15. Fin whale (*Balaenoptera physalus*) sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #
1-Feb-12	10:32	17	35.972639	-74.790403	E	43	2	100°	1
1-Feb-12	14:50	50	35.031185	-74.841419	SE	31	2	90°	2
15-Mar-12	10:24	19	35.151913	-74.430711	NW	33	2	60°	1
15-Mar-12	14:59	84	36.051086	-74.393703	W	44	1	60°	3

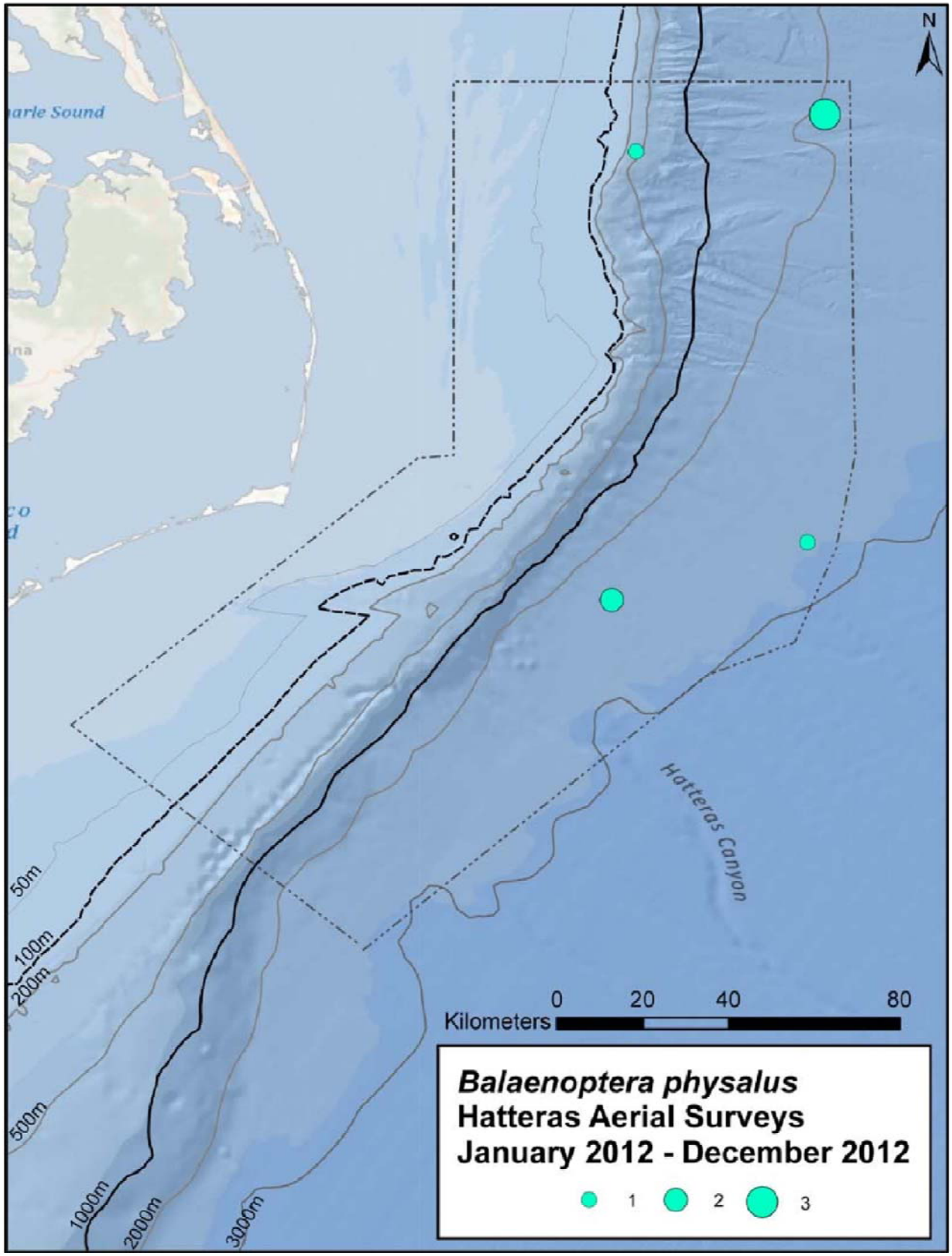


Figure 17. Fin whale (*Balaenoptera physalus*) sightings by group size

Melon-headed whale (*Peponocephala electra)* (Table 16, Figure 18)

Two groups totaling 395 individuals were encountered in March in waters greater than 200m. Currently this species' numbers in the western north Atlantic are unknown due to the paucity of sightings (Waring *et al.* 2007). Vessel surveys in 1999 and 2002 recorded two groups (20 and 80 individuals respectively) off of Cape Hatteras in waters exceeding 2500m.

Table 16. Melon-headed whale (*Peponocephala electra*) sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #
14-Mar-12	17:02	82	35.159333	-75.040836	W	31	1	90°	185
15-Mar-12	10:49	28	35.239920	-74.805528	NW	33	3	90°	210

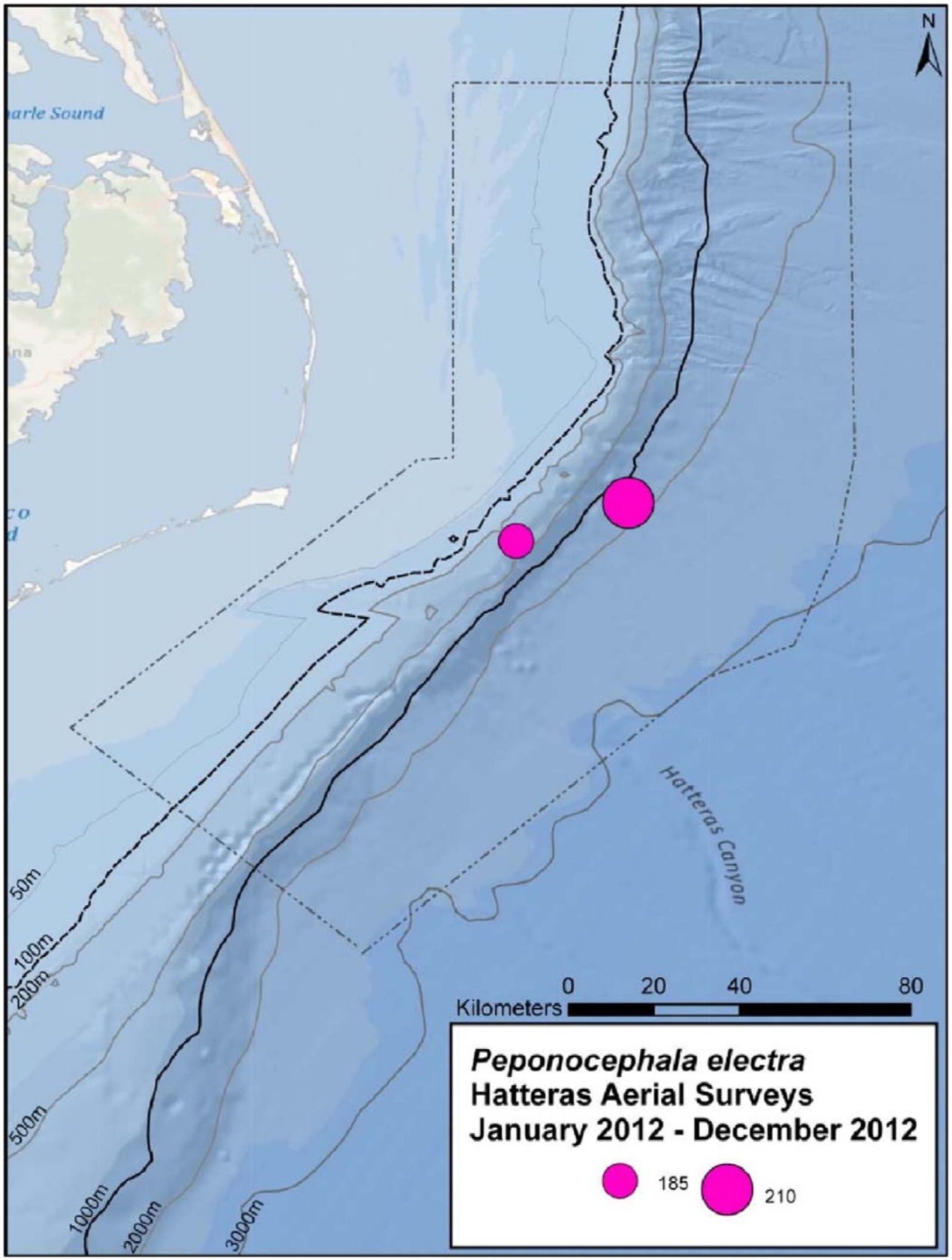


Figure 18. Melon-headed whale (*Peponocephala electra*) sightings by group size.

Clymene dolphin (*Stenella clymene*) (Table 17, Figure 19)

Two sightings totaling 165 individuals were observed beyond the 1000 m isobath. Sighting and stranding reports of this species suggest that Clymene dolphins routinely occur in the western north Atlantic. NOAA vessel surveys conducted in 1998 from Maryland to Florida only recorded this species along the continental slope off Cape Hatteras. The historic estimate of this species in the US Atlantic is 6086 (CV=0.93). There are currently insufficient data to determine the population size of this species in the western north Atlantic and the status of the stock is unknown (Waring *et al.* 2007).

Table 17. Clymene dolphin (*Stenella clymene*) sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #
8-Jun-12	15:47	53	34.802065	-75.194170	SE	26	2	90°	65
10-Jun-12	15:34	149	35.556768	-74.461219	E	37	1	90°	100

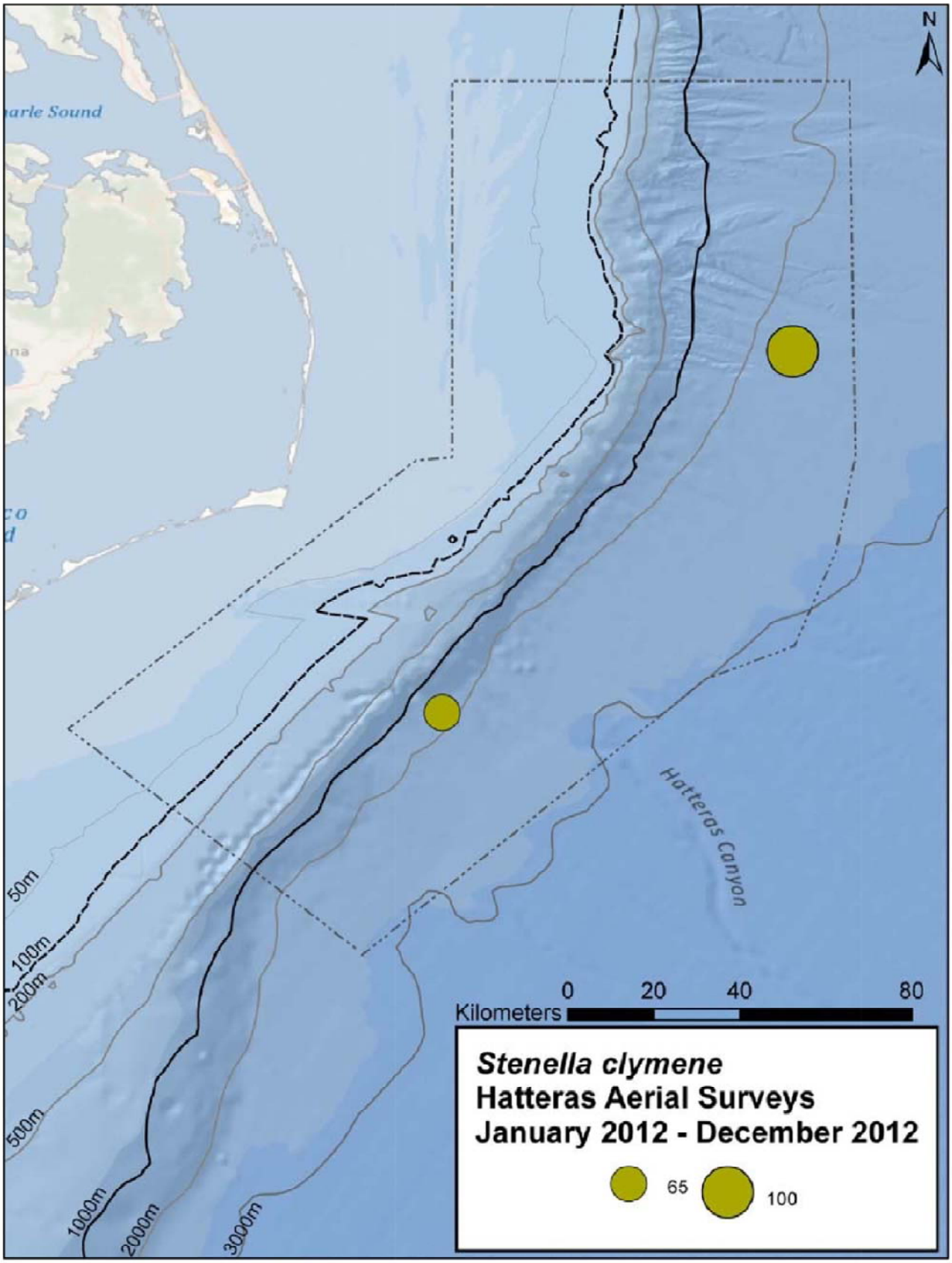


Figure 19. Clymene dolphin (*Stenella clymene*) sightings by group size.

Sea Turtles (Tables 18-19, Figures 20a-c and 21)

Eighty sea turtles were observed during the reporting period. Sighting rates were negatively correlated with Beaufort Sea State, with rates declining at sea states greater than BSS 3 (Figures 20a-b). Sea turtles were recorded in every month surveyed except November; the highest sighting rates occurred in March, May and December (Figure 20c). Loggerhead sea turtles (*Caretta caretta*) represented the majority of sea turtle sightings (89%). The only other sea turtle species that was identified in the Cape Hatteras survey site was the leatherback sea turtles (*Dermochelys coriacea*) (1%). For the remaining 10% of sightings, species identification could not be made with 100% certainty and they are, therefore, listed as "unidentified sea turtles".

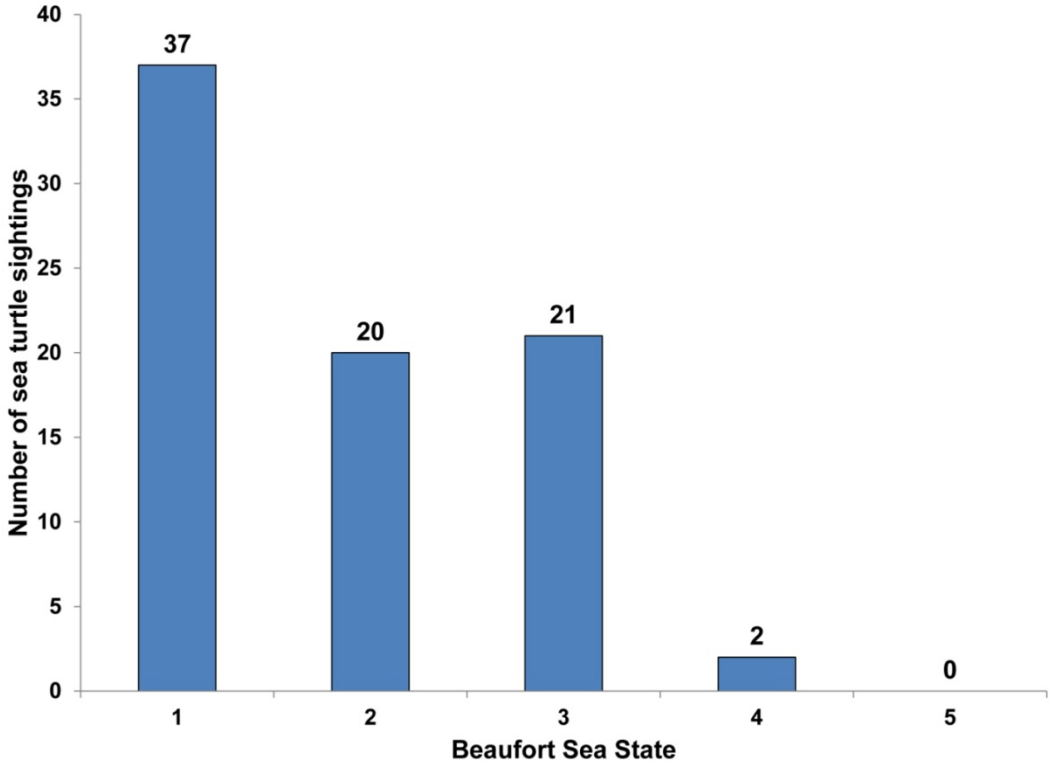


Figure 20a. Total number of sea turtle sightings by Beaufort Sea State in the Hatteras survey area from January 2012 to December 2012.

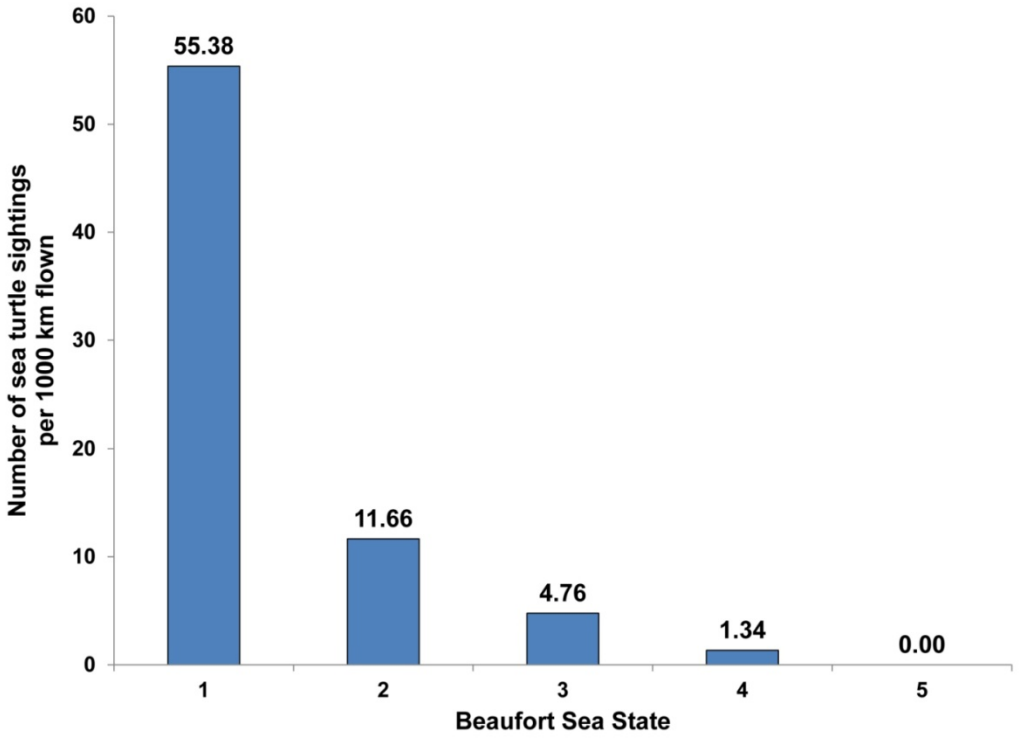


Figure 20b. Sea turtle sightings per 1000 km flown by Beaufort Sea State in the Hatteras survey area from January 2012 to December 2012.

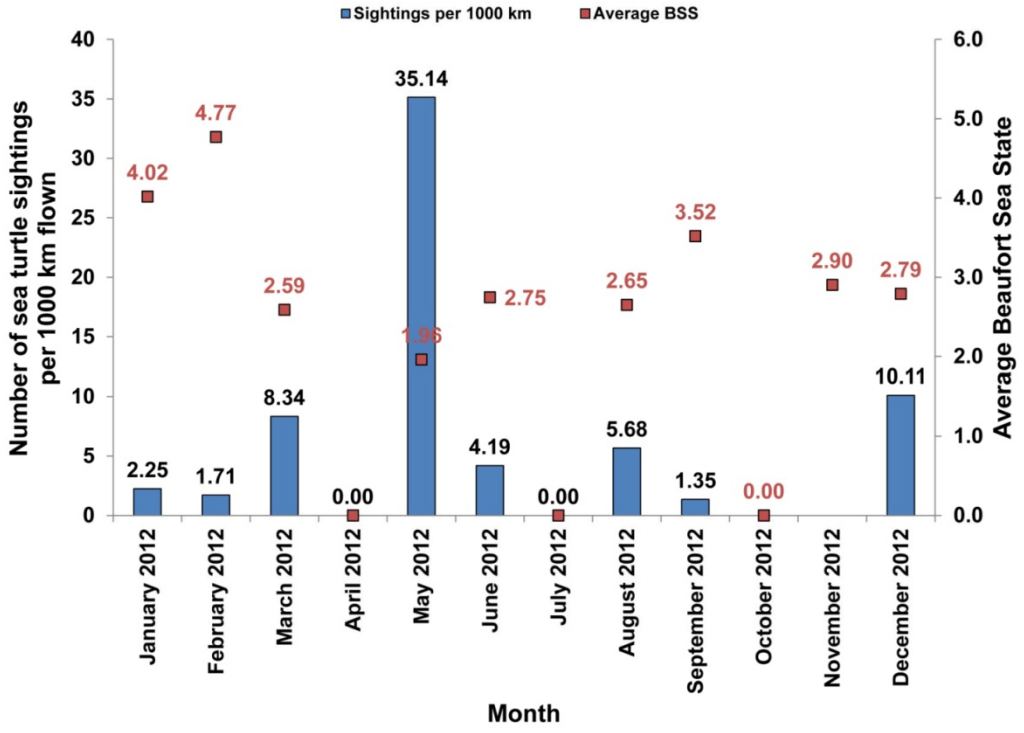


Figure 20c. Sea turtle sightings per 1000 km surveyed and the average Beaufort Sea State per month in the Hatteras survey area from January 2012 to December 2012.

Loggerhead sea turtles (*Caretta caretta*)(Table 18, Figure 21)

Sightings of loggerhead sea turtles occurred in eight of the nine months surveyed, for a total of 71 animals. The vast majority of sightings were over the continental shelf inside of the 100 m isobath. For management purposes, loggerheads along the U.S. Atlantic east coast fall into the Northwest Atlantic Ocean distinct population segment (DPS), which is separated into five separate recovery units (NOAA 2011). The Northern Recovery Unit (defined as loggerheads originating from nests between southern VA through the FL/GA border) is currently listed as threatened under the Endangered Species Act (NMFS 2008).

Table 18. Loggerhead sea turtle (*Caretta caretta*) sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #
30-Jan-12	14:19	38	34.982313	-75.442413	SE	26	2	90°	1
14-Mar-12	11:15	18	34.807049	-75.612704	NW	23	2	110°	1
14-Mar-12	15:10	46	35.049280	-75.412273	NW	27	1	90°	2
14-Mar-12	16:04	57	35.112704	-75.231516	W	29	1	90°	1
14-Mar-12	16:09	59	35.219367	-75.373094	W	29	1	90°	1
15-Mar-12	12:28	40	35.624351	-74.968183	W	38	1	90°	1
15-Mar-12	12:29	41	35.622425	-75.008358	W	38	2	90°	2
15-Mar-12	15:25	68	36.047686	-75.105060	W	44	2	90°	2
3-May-12	10:22	3	35.109130	-75.355676	SE	28	1	90°	1
3-May-12	11:02	11	35.099645	-75.210582	NW	29	1	90°	1
3-May-12	11:12	14	35.245574	-75.271762	SE	30	1	90°	1
3-May-12	15:31	31	35.337961	-74.971990	E	34	2	90°	1
4-May-12	9:48	3	36.119271	-75.116694	E	45	1	90°	1
4-May-12	9:50	3	36.124978	-75.042079	E	45	2	90°	1
4-May-12	9:51	4	36.123250	-75.000243	E	45	1	90°	1
4-May-12	11:16	44	36.041886	-74.987632	W	44	2	90°	1
4-May-12	11:19	45	36.042330	-75.130373	W	44	1	90°	1
4-May-12	11:20	29	36.042565	-75.143855	W	44	1	90°	3
4-May-12	11:24	32	35.973601	-75.095511	E	43	2	100°	3
4-May-12	11:25	48	35.973402	-75.049213	E	43	2	90°	2
4-May-12	11:25	33	35.973452	-75.052896	E	43	2	90°	3
4-May-12	11:27	49	35.975784	-74.990315	E	43	2	60°	4
4-May-12	12:23	70	35.904163	-75.003967	W	42	2	90°	1
4-May-12	12:25	49	35.906719	-75.060310	W	42	1	90°	3
4-May-12	12:26	50	35.904858	-75.089952	W	42	2	90°	4
4-May-12	13:46	76	35.833303	-75.104231	E	41	1	90°	1
4-May-12	15:00	113	35.755940	-75.119142	E	40	3	90°	1
4-May-12	15:06	116	35.685444	-75.027899	W	39	1	90°	1
4-May-12	16:05	100	35.619490	-74.893894	W	38	2	90°	1
4-May-12	16:09	102	35.616549	-75.030994	W	38	2	90°	3
8-Jun-12	15:23	44	35.057983	-75.535721	SE	26	2	90°	2
9-Jun-12	9:28	5	35.133293	-74.825820	E	32	1	90°	1
9-Jun-12	14:47	40	36.048442	-75.116901	W	44	3	90°	1
9-Jun-12	14:55	70	35.980155	-75.004276	W	43	1	90°	1
10-Jun-12	10:48	87	35.836235	-75.120106	E	41	2	90°	1
10-Jun-12	15:13	140	35.552683	-75.065689	E	37	1	90°	1
10-Jun-12	15:20	143	35.552466	-74.791101	E	37	1	90°	1
30-Aug-12	13:49	27	35.620659	-74.822054	E	38	1	90°	1
30-Aug-12	14:52	58	35.763123	-75.107414	E	40	3	60°	1
30-Aug-12	14:55	59	35.764595	-74.962089	E	40	2	90°	1
30-Aug-12	14:56	46	35.765376	-74.948371	E	40	1	90°	1
21-Sep-12	10:06	3	34.321561	-75.371733	SE	20	1	90°	1
1-Dec-12	11:25	29	35.620339	-74.886333	W	39	2	90°	1
1-Dec-12	14:52	53	35.904355	-75.034245	W	42	1	90°	1
2-Dec-12	10:32	37	34.784356	-75.707214	SE	22	1	90°	1
2-Dec-12	11:18	55	34.853245	-75.669282	NW	23	2	90°	1
2-Dec-12	13:09	42	34.910479	-75.608462	SE	24	2	90°	1
2-Dec-12	13:57	54	34.848607	-75.399059	NW	25	2	90°	1
2-Dec-12	14:01	77	34.924865	-75.495757	NW	25	1	90°	1
2-Dec-12	14:01	56	34.933799	-75.506121	NW	25	2	90°	1

Leatherback Sea Turtle (*Dermochelys coriacea*) (Table 19, Figure 21)

One leatherback sea turtle was observed in January around the 100 m isobath. The most recent population estimates for the North Atlantic ranges from 34000 to 94000 adult leatherbacks (Turtle Expert Working Group 2007). Leatherbacks throughout their range are listed as endangered under the Endangered Species Act (NMFS 1992).

Table 19. Leatherback sea turtle (*Dermochelys coriacea*) sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #
31-Jan-12	15:14	92	35.340399	-74.981557	W	34	2	90°	1

Unidentified sea turtles

Turtles labeled as unidentified were typically either of small size, submerged, or too far away for observers to make an accurate identification to species. Eight sightings of individual animals in the Cape Hatteras survey site are listed as unidentified.

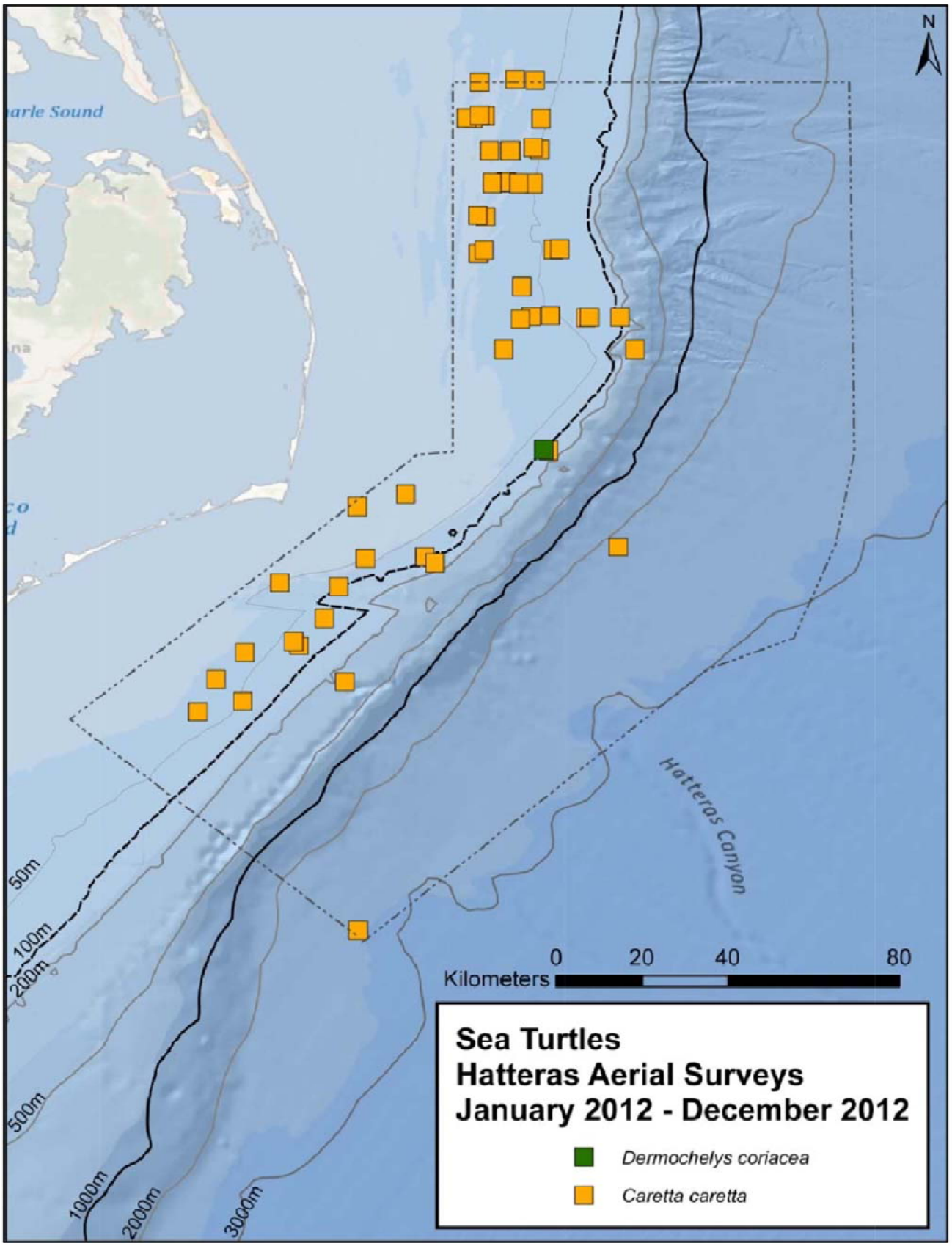


Figure 21. Loggerhead (*Caretta caretta*), and leatherback (*Dermochelys coriacea*) sightings.

Other Marine Vertebrate Sightings (Tables 20-24, Figure 22)

Chondrichthyan fishes

Forty six unidentified shark sightings were recorded during the reporting period. Most sharks were seen in the area near the 100 m isobath in six of the nine months surveyed. One sighting of a whale shark was observed in May off of the 2000 m isobath. Fifty-five manta rays (*Manta birostris*) were observed during the study period, and occurred in eight of the nine months surveyed. Two sightings of 215 individuals of cownose rays were observed in June inside the 100 m isobaths.

Other fishes

Six sightings of eight individuals of ocean sunfish (*Mola mola)* were recorded with the majority off of the 200 m isobath. All sightings occurred in either March or May.

Table 20. Manta ray (*Manta birostris*) sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #
31-Jan-12	11:14	70	35.620908	-74.916730	W	38	1	90°	1
1-Feb-12	12:29	30	35.764894	-74.829801	W	40	1	90°	1
14-Mar-12	11:32	22	34.785942	-75.442206	SE	24	3	90°	1
14-Mar-12	15:05	43	34.946376	-75.276026	NW	27	2	90°	1
14-Mar-12	16:19	70	35.105205	-75.084039	E	30	3	90°	1
14-Mar-12	17:12	72	35.175606	-75.053589	W	31	1	90°	1
15-Mar-12	11:19	21	35.553090	-74.853567	E	37	2	90°	1
3-May-12	15:34	37	35.337540	-74.864631	E	34	1	90°	1
4-May-12	10:01	8	36.119958	-74.743049	E	45	1	90°	1
4-May-12	10:20	13	36.120651	-74.464442	E	45	1	90°	1
4-May-12	10:50	22	36.042394	-74.452557	W	44	1	90°	1
4-May-12	11:13	43	36.042704	-74.883163	W	44	3	90°	2
4-May-12	12:07	45	35.904124	-74.457720	W	42	1	90°	1
4-May-12	13:48	77	35.831250	-75.026414	E	41	2	90°	1
4-May-12	13:48	57	35.832666	-75.041994	E	41	2	90°	1
4-May-12	13:55	59	35.832117	-74.750506	E	41	1	90°	2
4-May-12	14:05	64	35.833689	-74.612451	E	41	1	90°	2
4-May-12	14:42	77	35.764304	-74.713703	W	40	2	90°	3
4-May-12	14:43	106	35.760568	-74.773431	E	40	1	90°	1
4-May-12	15:10	118	35.687021	-74.867441	W	39	3	60°	3
4-May-12	15:12	120	35.691093	-74.788789	W	39	1	90°	3
4-May-12	16:07	148	35.616983	-74.976901	E	38	2	90°	2
8-Jun-12	14:35	32	34.823625	-75.490919	SE	24	1	90°	1
8-Jun-12	14:36	33	34.792949	-75.452283	SE	24	1	90°	1
9-Jun-12	10:00	8	35.231566	-74.816012	W	33	2	90°	1
9-Jun-12	13:32	44	36.122763	-74.772485	E	45	2	90°	2
9-Jun-12	13:33	45	36.123902	-74.735805	E	45	3	90°	1
9-Jun-12	14:25	36	36.049692	-74.652639	W	44	3	90°	1
9-Jun-12	14:38	39	36.049928	-74.776592	W	44	3	90°	3
9-Jun-12	14:57	45	35.980784	-74.910667	E	43	2	90°	1
10-Jun-12	9:28	73	35.147629	-75.143407	NW	30	1	90°	1
10-Jun-12	14:05	121	35.688317	-74.661957	E	39	2	90°	1
10-Jun-12	14:28	101	35.620978	-74.558731	W	38	2	90°	1
30-Aug-12	14:35	41	35.692317	-74.802453	W	39	2	90°	1
30-Aug-12	14:58	60	35.762882	-74.875931	E	40	1	90°	1
30-Aug-12	14:59	61	35.763274	-74.833266	E	40	2	90°	2
30-Aug-12	15:11	70	35.762885	-74.595660	E	40	2	90°	1
21-Sep-12	11:23	21	34.767440	-75.559998	NW	23	1	90°	1
21-Sep-12	14:46	34	35.145568	-75.140791	NW	30	2	90°	2
2-Dec-12	10:20	20	34.786988	-75.849913	NW	21	1	90°	1

Table 21. Ocean sunfish (*Mola mola*) sightings in the Hatteras survey area January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #
14-Mar-12	15:04	42	34.925919	-75.248879	NW	27	2	90°	1
15-Mar-12	14:54	59	36.047749	-74.380803	W	44	1	90°	2
15-Mar-12	15:14	64	36.048208	-74.697467	W	44	1	90°	1
15-Mar-12	15:52	100	35.981580	-74.701363	E	43	1	90°	1
15-Mar-12	15:54	76	35.980228	-74.582010	E	43	1	90°	2
4-May-12	12:27	51	35.904258	-75.151214	W	42	1	90°	1

Table 22. Cownose ray (*Rhinoptera bonasus*) sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #
9-Jun-12	14:48	41	36.048232	-75.153199	W	44	3	90°	115
9-Jun-12	14:53	69	35.984086	-75.087424	E	43	2	90°	100

Table 23. Whale shark (*Rhincodon typus*) sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #
4-May-12	10:37	18	36.120074	-74.339752	E	45	2	90°	1

Table 24. Shark sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #
30-Jan-12	15:46	45	35.148924	-75.278593	NW	29	2	90°	1
31-Jan-12	10:34	64	35.691530	-74.811759	E	39	2	100°	2
31-Jan-12	11:31	76	35.551524	-74.874927	E	37	2	100°	1
31-Jan-12	14:16	86	35.411350	-74.943757	E	35	2	60°	1
31-Jan-12	15:16	93	35.340280	-75.059272	W	34	2	90°	1
31-Jan-12	16:25	104	35.286952	-75.172793	NW	32	3	90°	1
1-Feb-12	11:17	18	35.906640	-74.995842	W	42	1	90°	1
14-Mar-12	14:23	43	34.981119	-75.439423	SE	26	1	90°	1
14-Mar-12	15:05	44	34.955862	-75.288557	NW	27	1	90°	2
14-Mar-12	15:09	45	35.025510	-75.380647	NW	27	1	90°	2
14-Mar-12	15:22	58	35.048186	-75.270932	E	28	2	90°	2
14-Mar-12	16:05	58	35.135787	-75.262088	W	29	1	90°	1
14-Mar-12	16:16	68	35.176076	-75.177059	E	30	2	90°	2
15-Mar-12	10:59	18	35.280617	-75.062533	NW	33	1	90°	1
15-Mar-12	11:18	33	35.553680	-74.866761	E	37	1	90°	1
4-May-12	9:56	6	36.119915	-74.923200	E	45	2	90°	1
4-May-12	10:00	9	36.122167	-74.781411	E	45	2	90°	5
4-May-12	10:00	7	36.122169	-74.781580	E	45	1	90°	6
4-May-12	10:01	10	36.119299	-74.729222	E	45	3	90°	1
4-May-12	11:11	27	36.041520	-74.802816	W	44	1	90°	1
4-May-12	13:49	78	35.829576	-75.001251	E	41	2	90°	2
4-May-12	13:53	79	35.833918	-74.861117	E	41	2	60°	1
10-Jun-12	13:52	115	35.690740	-74.869919	E	39	2	90°	1
10-Jun-12	15:20	142	35.552192	-74.801730	E	37	1	90°	1
1-Dec-12	9:36	3	35.411902	-74.883982	E	36	2	90°	1
1-Dec-12	10:34	19	35.555019	-74.846013	E	38	2	90°	1
1-Dec-12	12:59	41	36.123967	-74.760125	E	45	2	90°	2
1-Dec-12	14:22	62	35.972902	-74.419563	E	43	2	90°	1
2-Dec-12	10:09	25	34.682658	-75.707606	NW	21	1	90°	1
2-Dec-12	11:14	36	34.757154	-75.542560	NW	23	2	90°	1

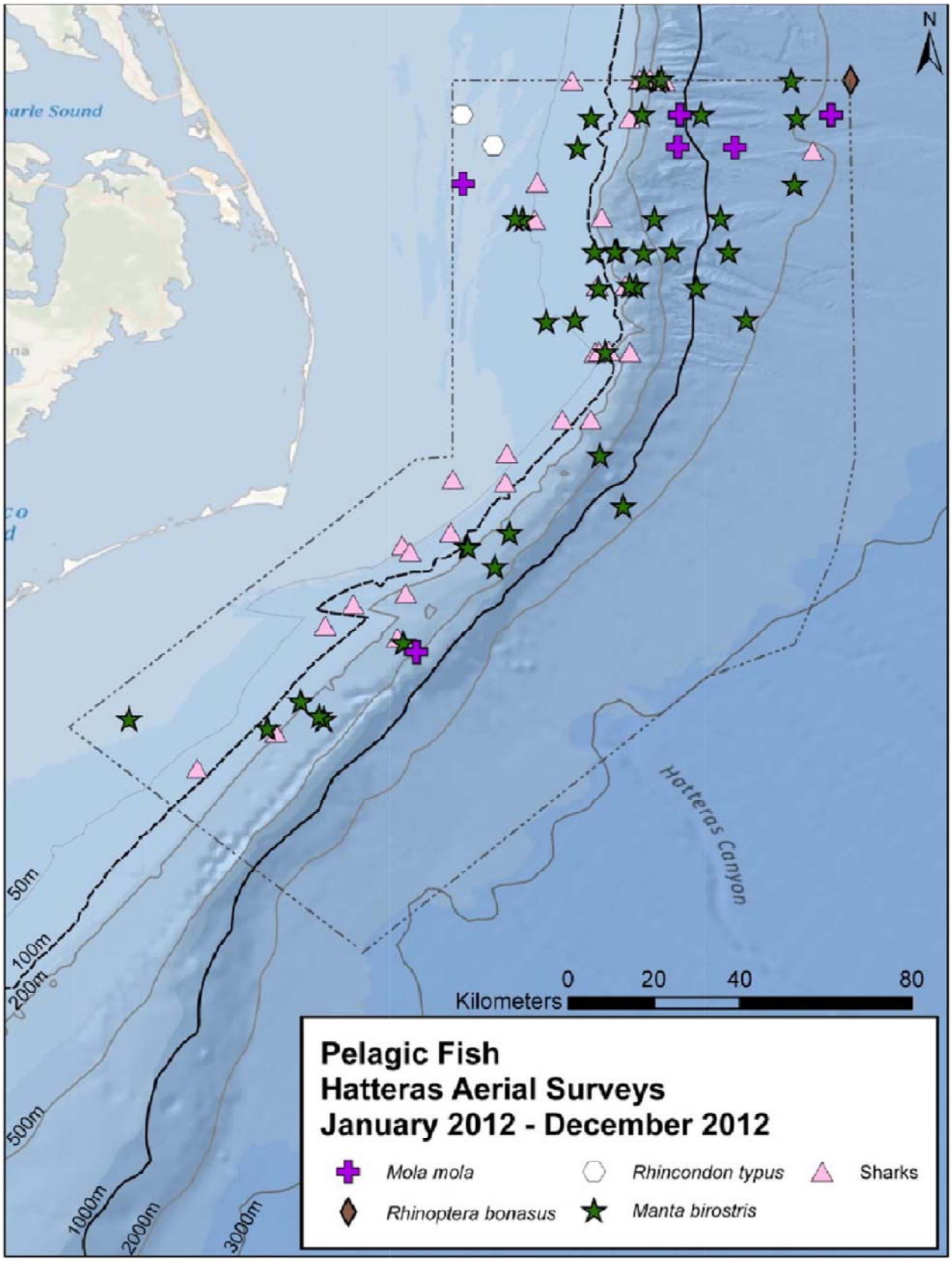


Figure 22. Manta ray (*Manta birostris*), ocean sunfish (*Mola mola*), cownose ray (*Rhinoptera bonasus*), whale shark (*Rhincodon typus*), and shark sightings.

Vessel Sightings Commercial (Table 25, Figure 23)

A total of 60 commercial vessels (*e.g*. tankers, car carriers, and container vessels) were observed in the survey site.

Table 25. Commercial vessel sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #	Comments
30-Jan-12	11:09	16	34.896912	-75.590712	SE	24	1	45°	1	Container vessel
30-Jan-12	11:34	22	34.691896	-75.196889	NW	25	3	45°	1	Container vessel
30-Jan-12	11:43	21	34.862233	-75.410071	NW	25	3	40°	1	Container vessel
30-Jan-12	14:23	30	34.893406	-75.328068	SE	26	2	45°	1	Tanker
30-Jan-12	15:40	44	35.031108	-75.122166	NW	29	3	90°	2	Container vessel
30-Jan-12	15:48	49	35.184777	-75.325902	NW	29	1	90°	1	Tug
31-Jan-12	10:29	63	35.693048	-75.035848	E	39	2	30°	1	Car carrier
1-Feb-12	10:46	13	35.979539	-74.739665	E	43	3	90°	1	Tanker
1-Feb-12	10:47	14	35.979351	-74.689621	E	43	1	45°	1	Tanker
1-Feb-12	11:08	23	35.906896	-74.682852	W	42	1	30°	1	Container vessel
1-Feb-12	11:17	25	35.906643	-75.023275	W	42	2	60°	2	Tug and barge
1-Feb-12	11:34	23	35.833323	-74.729371	E	41	3	90°	1	Container vessel
1-Feb-12	12:45	44	35.762631	-74.923563	W	40	2	30°	1	Container vessel
1-Feb-12	12:46	33	35.762651	-74.981484	W	40	1	45°	1	Car carrier
14-Mar-12	14:20	42	35.045205	-75.523156	SE	26	3	60°	2	Tug and barge
14-Mar-12	14:29	44	34.857168	-75.278463	SE	26	2	60°	1	Container vessel
15-Mar-12	9:32	3	35.289946	-75.180282	SE	32	2	90°	1	Container vessel
15-Mar-12	10:58	17	35.270621	-75.014607	NW	33	3	60°	1	Container vessel
15-Mar-12	11:53	32	35.620644	-74.350832	W	38	3	60°	1	Tanker
15-Mar-12	15:59	102	35.979793	-74.371471	E	43	1	90°	2	Tug and barge
15-Mar-12	16:51	87	35.689424	-74.862145	W	39	2	60°	1	Container vessel
3-May-12	10:27	5	35.014994	-75.228570	SE	28	1	45°	1	Container vessel
3-May-12	15:09	26	35.250450	-74.912350	NW	33	3	60°	1	Tanker
3-May-12	15:27	36	35.336925	-75.128346	E	34	2	100°	1	Container vessel
4-May-12	11:19	28	36.042895	-75.113351	W	44	1	45°	1	Tanker and tug
4-May-12	11:41	36	35.973870	-74.696169	E	43	3	45°	1	Tanker
4-May-12	12:27	71	35.904202	-75.150537	W	42	2	30°	2	Tug and barge
4-May-12	14:10	67	35.828144	-74.545013	E	41	1	90°	1	Container vessel
4-May-12	15:29	133	35.690593	-74.470812	W	39	3	30°	1	Container vessel
8-Jun-12	14:46	30	34.694494	-75.322497	E	24	2	45°	1	Car carrier
8-Jun-12	15:03	40	34.695322	-75.195951	NW	25	2	45°	1	Car carrier
8-Jun-12	15:09	33	34.814920	-75.353369	W	25	2	60°	1	Car carrier
8-Jun-12	16:14	62	34.733246	-74.989814	NW	27	1	45°	1	Container vessel
9-Jun-12	11:18	32	35.410179	-74.794335	W	35	4	60°	1	Container vessel
9-Jun-12	13:30	27	36.123033	-74.893359	E	45	3	45°	1	Tanker
10-Jun-12	9:02	56	35.019710	-74.846358	SE	31	3	45°	1	Conatiner vessel
10-Jun-12	9:03	57	34.983962	-74.803345	SE	31	2	90°	2	Tug and barge
10-Jun-12	10:04	69	34.800954	-74.948292	NW	28	3	60°	1	Container vessel
10-Jun-12	10:05	82	34.814870	-74.964147	NW	28	3	45°	1	Container vessel
10-Jun-12	16:02	154	35.481175	-74.918291	W	36	3	45°	1	Container vessel
30-Aug-12	11:32	18	34.719377	-75.363571	SE	24	1	30°	1	Container vessel
30-Aug-12	11:52	21	34.741667	-75.256762	NW	25	1	90°	1	Container vessel
30-Aug-12	13:55	35	35.619740	-74.759061	E	38	2	45°	2	Container vessel
21-Sep-12	15:09	37	34.932721	-74.992911	SE	29	4	45°	1	Container vessel
30-Nov-12	13:39	14	35.234386	-75.126575	NW	31	4	45°	1	Container vessel
1-Dec-12	10:20	13	35.480752	-75.058295	W	37	3	45°	1	Tanker
1-Dec-12	10:45	20	35.551713	-74.627836	E	38	3	60°	1	Tanker
1-Dec-12	13:00	42	36.123631	-74.735814	E	45	4	60°	1	Commercial fishing vessel
1-Dec-12	13:43	55	36.041036	-74.907234	W	44	2	30°	1	Tanker
2-Dec-12	9:47	19	34.357454	-75.418300	SE	20	3	90°	1	Container vessel
2-Dec-12	9:59	22	34.533673	-75.511064	NW	21	3	90°	1	Container vessel
2-Dec-12	13:31	69	34.734712	-75.378113	SE	24	2	45°	1	Container vessel
2-Dec-12	13:35	71	34.655392	-75.266447	SE	24	2	45°	1	Car carrier

Table 25. Commercial vessel sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #	Comments
30-Jan-12	11:09	16	34.896912	-75.590712	SE	24	1	45°	1	Container vessel
30-Jan-12	11:34	22	34.691896	-75.196889	NW	25	3	45°	1	Container vessel
30-Jan-12	11:43	21	34.862233	-75.410071	NW	25	3	40°	1	Container vessel
30-Jan-12	14:23	30	34.893406	-75.328068	SE	26	2	45°	1	Tanker
30-Jan-12	15:40	44	35.031108	-75.122166	NW	29	3	90°	2	Container vessel
30-Jan-12	15:48	49	35.184777	-75.325902	NW	29	1	90°	1	Tug
31-Jan-12	10:29	63	35.693048	-75.035848	E	39	2	30°	1	Car carrier
1-Feb-12	10:46	13	35.979539	-74.739665	E	43	3	90°	1	Tanker
1-Feb-12	10:47	14	35.979351	-74.689621	E	43	1	45°	1	Tanker
1-Feb-12	11:08	23	35.906896	-74.682852	W	42	1	30°	1	Container vessel
1-Feb-12	11:17	25	35.906643	-75.023275	W	42	2	60°	2	Tug and barge
1-Feb-12	11:34	23	35.833323	-74.729371	E	41	3	90°	1	Container vessel
1-Feb-12	12:45	44	35.762631	-74.923563	W	40	2	30°	1	Container vessel
1-Feb-12	12:46	33	35.762651	-74.981484	W	40	1	45°	1	Car carrier
14-Mar-12	14:20	42	35.045205	-75.523156	SE	26	3	60°	2	Tug and barge
14-Mar-12	14:29	44	34.857168	-75.278463	SE	26	2	60°	1	Container vessel
15-Mar-12	9:32	3	35.289946	-75.180282	SE	32	2	90°	1	Container vessel
15-Mar-12	10:58	17	35.270621	-75.014607	NW	33	3	60°	1	Container vessel
15-Mar-12	11:53	32	35.620644	-74.350832	W	38	3	60°	1	Tanker
15-Mar-12	15:59	102	35.979793	-74.371471	E	43	1	90°	2	Tug and barge
15-Mar-12	16:51	87	35.689424	-74.862145	W	39	2	60°	1	Container vessel
3-May-12	10:27	5	35.014994	-75.228570	SE	28	1	45°	1	Container vessel
3-May-12	15:09	26	35.250450	-74.912350	NW	33	3	60°	1	Tanker
3-May-12	15:27	36	35.336925	-75.128346	E	34	2	100°	1	Container vessel
4-May-12	11:19	28	36.042895	-75.113351	W	44	1	45°	1	Tanker and tug
4-May-12	11:41	36	35.973870	-74.696169	E	43	3	45°	1	Tanker
4-May-12	12:27	71	35.904202	-75.150537	W	42	2	30°	2	Tug and barge
4-May-12	14:10	67	35.828144	-74.545013	E	41	1	90°	1	Container vessel
4-May-12	15:29	133	35.690593	-74.470812	W	39	3	30°	1	Container vessel
8-Jun-12	14:46	30	34.694494	-75.322497	E	24	2	45°	1	Car carrier
8-Jun-12	15:03	40	34.695322	-75.195951	NW	25	2	45°	1	Car carrier
8-Jun-12	15:09	33	34.814920	-75.353369	W	25	2	60°	1	Car carrier
8-Jun-12	16:14	62	34.733246	-74.989814	NW	27	1	45°	1	Container vessel
9-Jun-12	11:18	32	35.410179	-74.794335	W	35	4	60°	1	Container vessel
9-Jun-12	13:30	27	36.123033	-74.893359	E	45	3	45°	1	Tanker
10-Jun-12	9:02	56	35.019710	-74.846358	SE	31	3	45°	1	Conatiner vessel
10-Jun-12	9:03	57	34.983962	-74.803345	SE	31	2	90°	2	Tug and barge
10-Jun-12	10:04	69	34.800954	-74.948292	NW	28	3	60°	1	Container vessel
10-Jun-12	10:05	82	34.814870	-74.964147	NW	28	3	45°	1	Container vessel
10-Jun-12	16:02	154	35.481175	-74.918291	W	36	3	45°	1	Container vessel
30-Aug-12	11:32	18	34.719377	-75.363571	SE	24	1	30°	1	Container vessel
30-Aug-12	11:52	21	34.741667	-75.256762	NW	25	1	90°	1	Container vessel
30-Aug-12	13:55	35	35.619740	-74.759061	E	38	2	45°	2	Container vessel
21-Sep-12	15:09	37	34.932721	-74.992911	SE	29	4	45°	1	Container vessel
30-Nov-12	13:39	14	35.234386	-75.126575	NW	31	4	45°	1	Container vessel
1-Dec-12	10:20	13	35.480752	-75.058295	W	37	3	45°	1	Tanker
1-Dec-12	10:45	20	35.551713	-74.627836	E	38	3	60°	1	Tanker
1-Dec-12	13:00	42	36.123631	-74.735814	E	45	4	60°	1	Commercial fishing vessel
1-Dec-12	13:43	55	36.041036	-74.907234	W	44	2	30°	1	Tanker
2-Dec-12	9:47	19	34.357454	-75.418300	SE	20	3	90°	1	Container vessel
2-Dec-12	9:59	22	34.533673	-75.511064	NW	21	3	90°	1	Container vessel
2-Dec-12	13:31	69	34.734712	-75.378113	SE	24	2	45°	1	Container vessel
2-Dec-12	13:35	71	34.655392	-75.266447	SE	24	2	45°	1	Car carrier

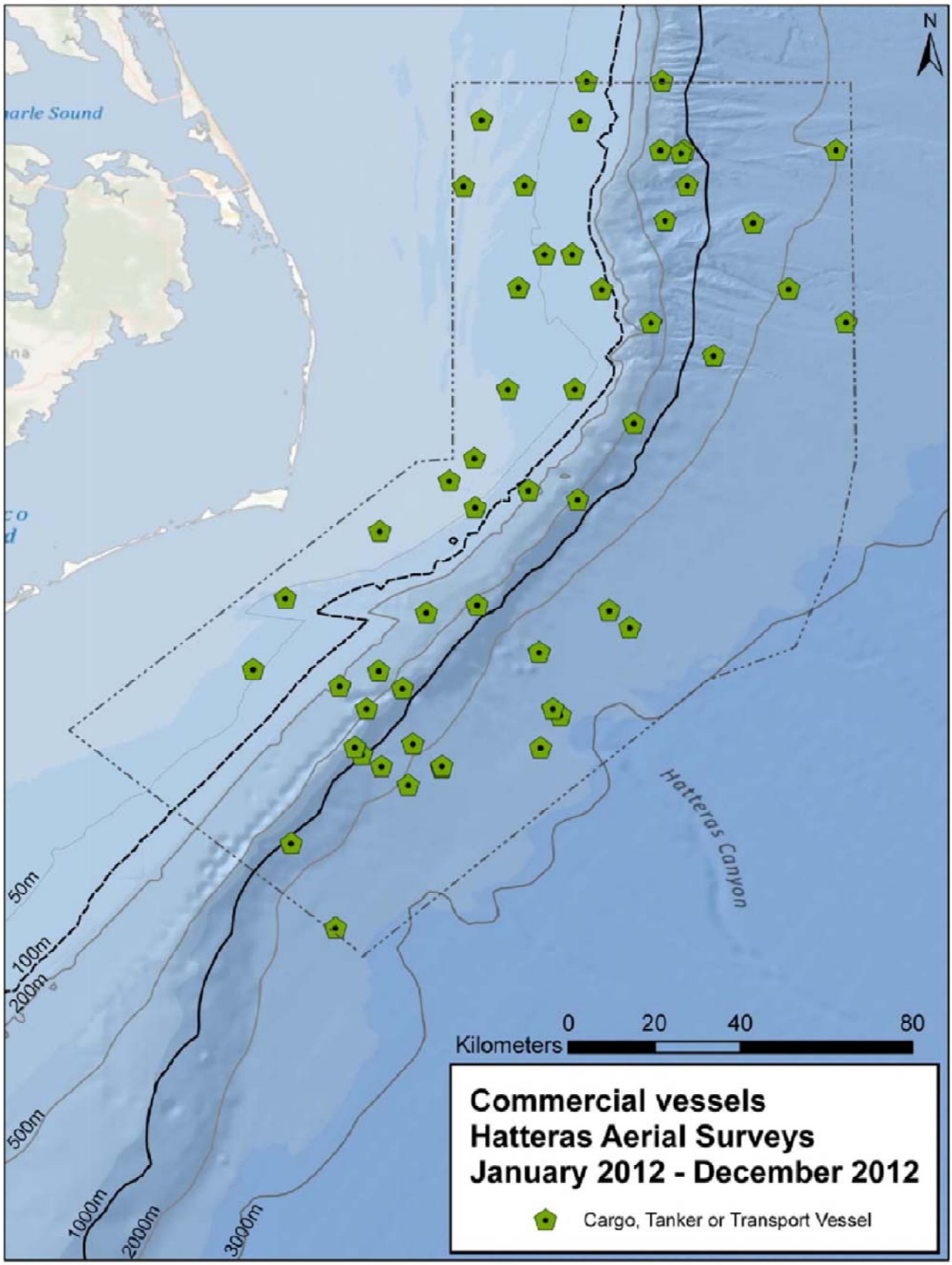


Figure 23. Large commercial shipping vessel sightings.

Military / Coast Guard Vessels (Table 26, Figure 24)

A total of four military vessels were observed in the survey site.

Table 26. Military vessel sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #	Comments
30-Jan-12	14:17	37	35.028867	-75.502693	SE	26	1	60°	1	Coast Guard vessel
1-Feb-12	15:51	45	35.221525	-75.239292	W	30	2	45°	1	Coast Guard vessel
30-Jan-12	10:09	8	34.679623	-75.706340	NW	21	2	60°	1	Military beach lander
14-Mar-12	11:31	21	34.814030	-75.479488	SE	24	2	60°	1	Millitary transport vessel

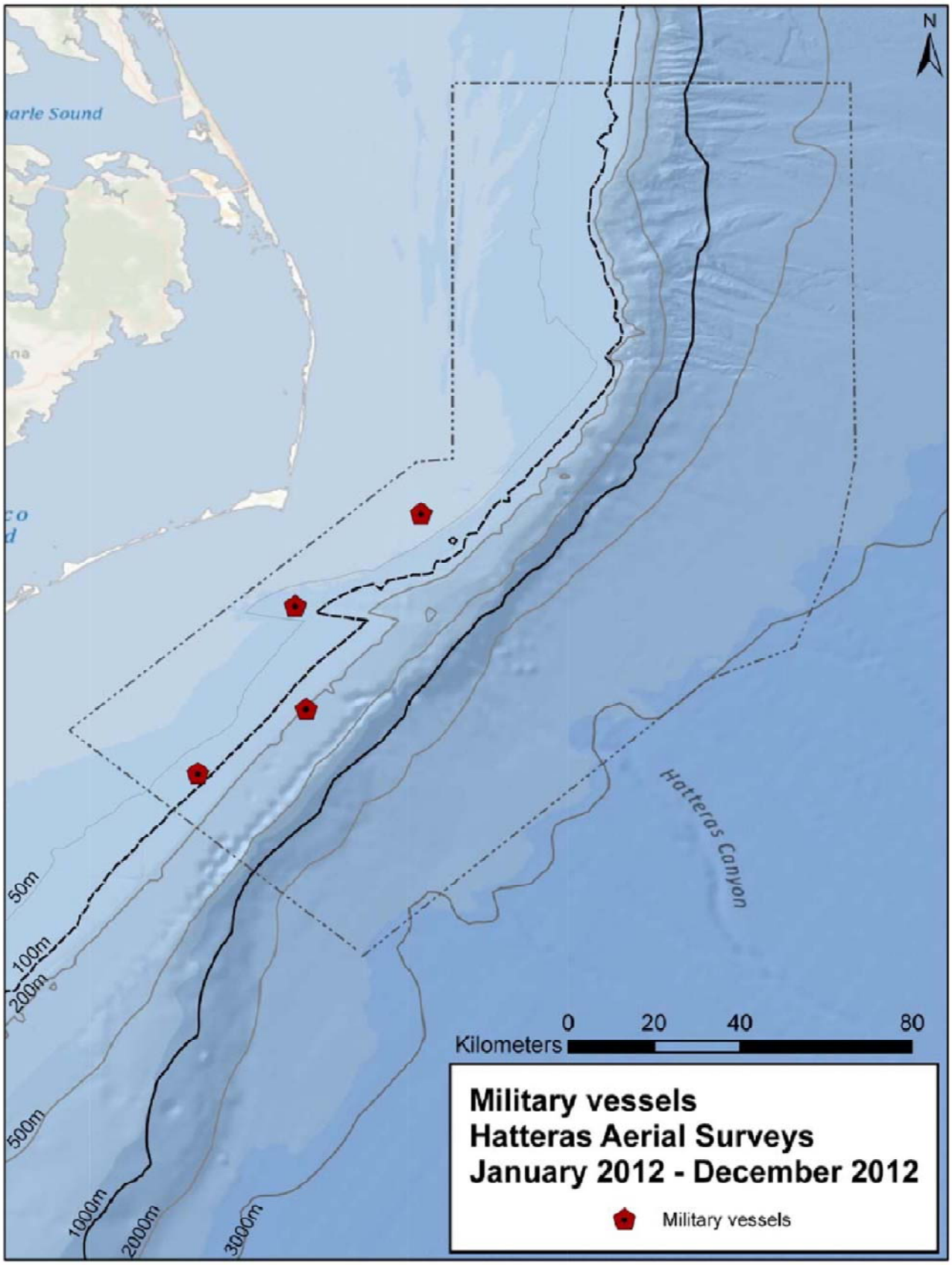


Figure 24. Military vessel sightings.

Other Vessels (Table 27, Figure 25)

A total of 281 other vessels were recorded in the survey site. Recreational sport fishing vessels constituted the majority of these sightings (n=271). This category also included sailing vessels and yachts.

Table 27 (Continued). Other vessel sightings in the Hatteras survey area from January 2012 to December 2012.

Date	Time	Way Point	Latitude	Longitude-1	Heading	Track Number	Angle out	Degree Forward	Best #	Comments
8-Jun-12	15:24	45	35.032304	-75.503401	SE	26	1	90°	3	Recreational fishing vessel
8-Jun-12	15:26	39	34.988092	-75.451113	E	26	2	30°	1	Recreational fishing vessel
8-Jun-12	15:27	46	34.985015	-75.447188	SE	26	3	90°	6	Recreational fishing vessel
8-Jun-12	15:29	40	34.941025	-75.391095	E	26	2	45°	2	Recreational fishing vessel
8-Jun-12	16:33	50	35.098466	-75.477129	W	27	1	30°	1	Recreational fishing vessel
9-Jun-12	10:04	10	35.260048	-74.948032	W	33	3	60°	4	Recreational fishing vessel
9-Jun-12	10:18	11	35.345272	-75.073930	E	34	2	60°	2	Recreational fishing vessel
9-Jun-12	10:19	15	35.346542	-75.055295	E	34	2	60°	3	Recreational fishing vessel
9-Jun-12	10:23	16	35.342292	-74.903414	E	34	3	90°	4	Recreational fishing vessel
9-Jun-12	11:19	20	35.410094	-74.830789	W	35	3	90°	3	Recreational fishing vessel
9-Jun-12	11:32	37	35.410936	-74.871878	W	35	2	45°	1	Recreational fishing vessel
9-Jun-12	11:34	38	35.411222	-74.961826	W	35	3	60°	8	Recreational fishing vessel
9-Jun-12	11:38	39	35.409276	-75.103941	W	35	2	90°	1	Recreational fishing vessel
9-Jun-12	14:53	68	35.980689	-75.117116	E	43	3	45°	1	Recreational fishing vessel
9-Jun-12	14:56	44	35.979251	-74.970416	E	43	2	45°	2	Sailboat
10-Jun-12	8:53	67	35.240180	-75.138839	SE	31	4	90°	1	Cruise ship
10-Jun-12	8:54	55	35.214765	-75.103405	SE	31	3	60°	1	Recreational fishing vessel
10-Jun-12	9:33	75	35.230848	-75.250537	NW	30	2	45°	1	Sailboat
10-Jun-12	9:42	65	35.123409	-75.245520	SE	29	1	90°	1	Cruise ship
10-Jun-12	10:08	83	34.870979	-75.035384	NW	28	3	45°	1	Yacht
10-Jun-12	10:17	84	35.034434	-75.256891	NW	28	3	90°	4	Recreational fishing vessel
10-Jun-12	11:03	92	35.832235	-74.864542	E	41	3	90°	1	Recreational fishing vessel
10-Jun-12	11:16	79	35.833647	-74.556188	E	41	3	60°	1	Sailboat
10-Jun-12	11:46	86	35.763284	-74.810072	W	40	2	45°	2	Recreational fishing vessel
10-Jun-12	13:46	114	35.689344	-75.088353	E	39	3	90°	1	Recreational fishing vessel
10-Jun-12	13:52	116	35.690215	-74.850860	E	39	3	90°	5	Recreational fishing vessel
10-Jun-12	13:53	93	35.689772	-74.829467	E	39	2	60°	4	Recreational fishing vessel
10-Jun-12	14:57	136	35.620560	-74.800373	W	38	2	90°	18	Recreational fishing vessel
10-Jun-12	14:57	106	35.620419	-74.785175	W	38	2	60°	7	Recreational fishing vessel
10-Jun-12	15:16	110	35.550979	-74.935453	E	37	2	60°	1	Recreational fishing vessel
30-Aug-12	10:40	9	34.694742	-75.590618	SE	22	2	45°	1	Recreational fishing vessel
30-Aug-12	11:09	13	34.748301	-75.537421	NW	23	2	60°	1	Recreational fishing vessel
30-Aug-12	11:24	15	34.881109	-75.571853	SE	24	3	45°	1	Recreational fishing vessel
30-Aug-12	11:25	17	34.856171	-75.539614	SE	24	2	60°	1	Recreational fishing vessel
30-Aug-12	11:25	16	34.857919	-75.541903	SE	24	2	45°	1	Recreational fishing vessel
30-Aug-12	11:57	22	34.854124	-75.407074	NW	25	3	60°	2	Recreational fishing vessel
30-Aug-12	12:01	19	34.932459	-75.509730	NW	25	2	45°	1	Recreational fishing vessel
30-Aug-12	14:33	39	35.693245	-74.725961	W	39	1	90°	2	Recreational fishing vessel
30-Aug-12	14:34	40	35.692232	-74.784270	W	39	3	60°	11	Recreational fishing vessel
30-Aug-12	14:58	48	35.762835	-74.873136	E	40	2	90°	3	Recreational fishing vessel
21-Sep-12	10:43	11	34.700613	-75.598413	SE	22	3	60°	1	Recreational fishing vessel
21-Sep-12	11:23	20	34.754097	-75.541599	NW	23	3	60°	1	Recreational fishing vessel
21-Sep-12	11:23	17	34.764480	-75.555693	NW	23	2	60°	8	Recreational fishing vessel
21-Sep-12	11:39	24	34.873596	-75.560496	SE	24	3	90°	7	Recreational fishing vessel
21-Sep-12	11:39	20	34.861771	-75.545230	SE	24	3	60°	5	Recreational fishing vessel
21-Sep-12	12:22	30	35.040337	-75.394249	NW	27	3	90°	3	Recreational fishing vessel
1-Dec-12	10:14	15	35.480903	-74.802020	W	37	4	60°	1	Recreational fishing vessel
1-Dec-12	10:34	16	35.555387	-74.856740	E	38	2	90°	1	Recreational fishing vessel
1-Dec-12	11:22	28	35.618697	-74.783661	W	39	1	60°	1	Recreational fishing vessel
2-Dec-12	14:01	57	34.941405	-75.515823	NW	25	3	30°	14	Recreational fishing vessel

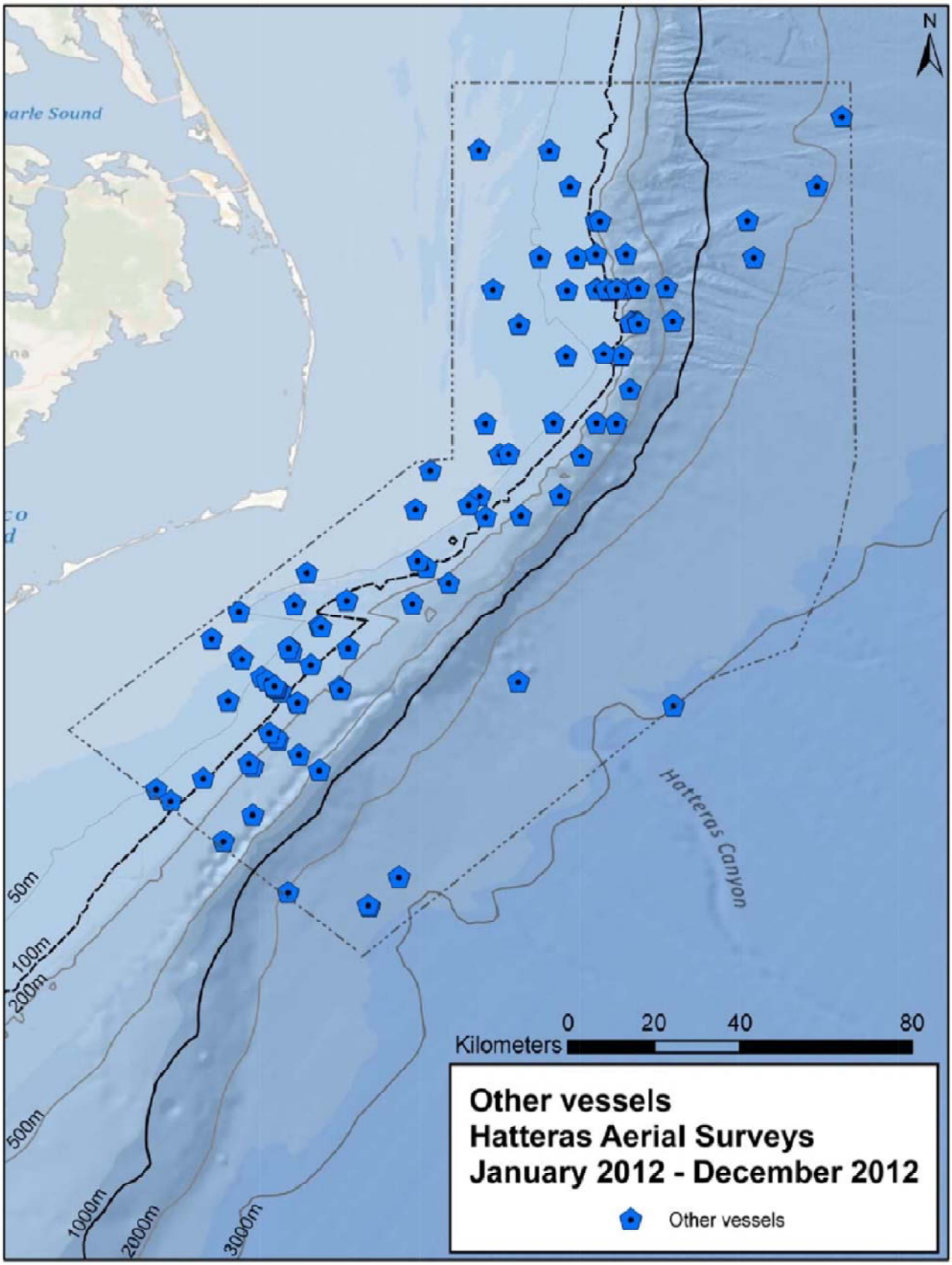


Figure 25. Other vessel sightings.

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Date: Jan 30, 2012

USWTR Daily Plane Log Sheet

Pilot in Command: Dave Second in Command: Stan Plane: N1353L
Observers: Ryan - Left, Erin - Right
Time take off: 8:38 HOBBS Start: 1831.3
Land for lunch: 13:03
Track Lines and Direction (e.g. N to S) Flown: 20 - 25

Take off after lunch: 13:49 HOBBS Stop: 1839.1
Land: 16:52 HOBBS Total: 7.8
Track Lines and Direction (e.g. N to S) Flown: 26 - 29
Overall weather: Winds 20 knots, BSS 4-5

General Observations

The sea state made it difficult to find and resight animals. There was one humpback sighting on the eastern portion of line 25.

Transit effort leg: No

Date: 1/31/2012

USWTR Daily Plane Log Sheet

Pilot in Command: Dave Second in Command: Stan Plane: N1353L
Observers: Erin - Left, Ryan - Right
Time take off: HOBBS Start: 1839.1
Land for lunch: 13:06
Track Lines and Direction (e.g. N to S) Flown: 39 - 36

Take off after lunch: 13:53 HOBBS Stop: 1846.6
Land: 16:48 HOBBS Total: 7.5
Track Lines and Direction (e.g. N to S) Flown: 35 - 32
Overall weather: Moderate seas

General Observations

Seas ranged from a BSS 3 to a 4 with clear skies. Flew 8 lines with 6 sighitngs. Beaked whales, sperm whale and a pair of minke whales.

Transit effort leg: No

Date: Feb 1, 2012

USWTR Daily Plane Log Sheet

Pilot in Command: Dave Second in Command: Stan Plane: N1353L
Observers: Ryan - Left, Erin - Right
Time take off: 9:12 HOBBS Start: 1846.6
Land for lunch: 13:05
Track Lines and Direction (e.g. N to S) Flown: 45 - 40

Take off after lunch: 14:11 HOBBS Stop: 1853.8
Land: 17:11 HOBBS Total: 7.2
Track Lines and Direction (e.g. N to S) Flown: 31 & 30
Overall weather: BSS 4-5, winds 15-20 knots

General Observations

Multiple species were observed including striped dolphins, common dolphins, pilot whales and a fin whale. There were also several unidentified animals, this was due to the difficulty of resighting animals in a high BSS.

Transit effort leg: No

Date: 3/14/2012

USWTR Daily Plane Log Sheet

Pilot in Command: Cameron Second in Command: Bob Plane: N1353L
Observers: Heather - Left, Ryan - Right
Time take off: 9:30 HOBBS Start: 1879.9
Land for lunch: 12:50
Track Lines and Direction (e.g. N to S) Flown: 20 to 25

Take off after lunch: 13:53 HOBBS Stop: 1887.5
Land: 17:41 HOBBS Total: 7.6
Track Lines and Direction (e.g. N to S) Flown: 26 to 31
Overall weather: Sunny but hazy, BSS 2-4

General Observations

12 lines surveyed, relatively low sighting numbers for ideal conditions. Couple of groups of dolphin, 2 pilot whales, minke whale mom/calf, 1 sperm whale. One humpback whale while transiting to shore.

Transit effort leg: No

Date: 3/15/2012

USWTR Daily Plane Log Sheet

Pilot in Command: Bob Second in Command: Cameron Plane: N1353L
Observers: Heather - Left, Ryan - Right
Time take off: 9:12 HOBBS Start: 1887.5
Land for lunch: 12:53
Track Lines and Direction (e.g. N to S) Flown: 23, 33, 37, 38

Take off after lunch: 13:55 HOBBS Stop: 1896.1
Land: 17:21 HOBBS Total: 8.6
Track Lines and Direction (e.g. N to S) Flown: 45, 44, 43, 39
Overall weather:

General Observations

Forecast of good weather. Total of 21 sighitngs, beaked whales, minke, fin, pilot, spotted dolphins, bottlenose dolphins, common dolphins, stripped dolphins & unidentified delphinds.

Dead humpback on trackline 38 inshore.

March 16 transit to Beaufort along coastline, 1.2 of the 8.6 hours were transit effort.

Transit effort leg: 1.2 hrs

Date: 5/3/2012

USWTR Daily Plane Log Sheet

Pilot in Command: Stan Second in Command: Bob Plane: N337CH
Observers: Erin - Left, Ryan - Right
Time take off: 9:19 HOBBS Start: 3506.5
Land for lunch: 12:30
Track Lines and Direction (e.g. N to S) Flown: 28 to 31

Take off after lunch: 13:43 HOBBS Stop: 3513.4
Land: 16:55 HOBBS Total: 6.9
Track Lines and Direction (e.g. N to S) Flown: 32 to 35
Overall weather: Cloudy with low lying clouds in the northern part of the survey area.

General Observations

Forecast 10-15 knots dropping to 10 knots, Seas 3-4ft.

Duke boats: NOAA CRVX and Exocetus are out for pilot whale project.

AM: 4 lines BSS 2-3, 1 sighting of Grampus

PM: 4 lines - northern lines obscured by low clouds, 2 sightings bottlenose and spotted dolphins

Surprisingly few sighting.

Transit effort leg: No

Date: 5/4/2012

USWTR Daily Plane Log Sheet

Pilot in Command: Bob Second in Command: Stan Plane: N337Ch
Observers: Ryan - Left, Erin - Right
Time take off: 9:33 HOBBS Start: 3513.4
Land for lunch: 12:39
Track Lines and Direction (e.g. N to S) Flown: 45 - 42

Take off after lunch: 13:32 HOBBS Stop: 3520.8
Land: 17:31 HOBBS Total: 7.4
Track Lines and Direction (e.g. N to S) Flown: 41 - 38
Overall weather: Hazy / foggy, BSS 1, light winds

General Observations

Great weather, calm seas. 13 sightings in the AM: Dde, Zca, Ttr, Sfr, Pma and a whale shark
The afternoon seas picked up to BSS 4, we had a total of 27 sightings.

Transit effort leg: No

Date: 6/8/2012

USWTR Daily Plane Log Sheet

Pilot in Command: Rockey Second in Command: John E. Plane: N1353L
Observers: Erin - Left, Ryan - Right
Time take off: 9:12 HOBBS Start: 1912.4
Land for lunch: 12:42
Track Lines and Direction (e.g. N to S) Flown: 20 - 23

Take off after lunch: 13:55 HOBBS Stop: 1919.4
Land: 17:00 HOBBS Total: 7.0
Track Lines and Direction (e.g. N to S) Flown: 24 - 27
Overall weather: Dropping as the day went on

General Observations

3 to 5 ft seas forecasted
AM: 2 lines with higher sea states - calming by noon - 2 sighitngs in 4 lines
PM: BSS 1-2 across 4 lines, sightings of Ttr, Ggr, Scl and beaked whales

Transit effort leg: No

Date: 6/9/2012

USWTR Daily Plane Log Sheet

Pilot in Command: John E. Second in Command: Rockey Plane: N1353L
Observers: Ryan - Left, Erin - Right
Time take off: 8:41 HOBBS Start: 1919.4
Land for lunch: 12:04
Track Lines and Direction (e.g. N to S) Flown: 32 - 35

Take off after lunch: 13:09 HOBBS Stop: 1926.5
Land: 16:25 HOBBS Total: 7.1
Track Lines and Direction (e.g. N to S) Flown: 45 - 42
Overall weather: Clear skies, BSS 3 most of the day

General Observations

Seas were not as calm as predicted. 14 sightings with 4 species: Ttr, Ggr, Gma and mesoplodon spp.

Transit effort leg: No

Date: 6/10/2012

USWTR Daily Plane Log Sheet

Pilot in Command: John E. Second in Command: Rockey Plane: N1353L
Observers: Erin - Left, Ryan - Right
Time take off: 8:32 HOBBS Start: 1926.4
Land for lunch: 12:29
Track Lines and Direction (e.g. N to S) Flown: 31-28, 41 & 40

Take off after lunch: 13:30 HOBBS Stop: 1933.8
Land: 16:28 HOBBS Total: 7.4
Track Lines and Direction (e.g. N to S) Flown: 39 - 36
Overall weather: BSS 3 dominated day - 10 sightings

General Observations

Completed 10 tracklines with 10 cetacean sightings recorded. Seas averaged a BSS 3 with increasing winds form the previous day. 5 species of cetaceans observered: Ttr, Gma, Sfr, Scl and beaked whales.

Transit effort leg: No

Date: 8/30/2012

USWTR Daily Plane Log Sheet

Pilot in Command: Josh Second in Command: Bob Plane: N1353L
Observers: Ryan - Left, Erin - Right
Time take off: 8:46 HOBBS Start: 2677.5
Land for lunch: 12:27
Track Lines and Direction (e.g. N to S) Flown: 20 - 25

Take off after lunch: 13:23 HOBBS Stop: 2685.4
Land: 16:04 HOBBS Total: 7.9
Track Lines and Direction (e.g. N to S) Flown: 38 - 41
Overall weather: Mostly BSS 3 and cloudy in the Am, BSS 2-3 and sunny in the PM

General Observations

Only one sighting of a beaked whale in the morning. The wind was still blowing causing a higher sea state. 14 sightings in the afternoon which included beaked whales, Gma, Ggr, and Ttr. The seas and winds were much calmer in the afternoon.

We took off from ILM and flew survey lines til lunch when we landed in Manteo. After lunch we flew more lines then landed back in Maneteo to drop Ryan off, then flew back to ILM to drop of Erin and gear.

Transit effort leg: No

Date: 9/21/2012

USWTR Daily Plane Log Sheet

Pilot in Command: Dave Second in Command: Josh Plane: N1375l
Observers: Ryan - Right, Erin - Left
Time take off: 8:58 HOBBS Start: 2700.5
Land for lunch: 12:52
Track Lines and Direction (e.g. N to S) Flown: 20-24, 27

Take off after lunch: 13:47 HOBBS Stop: 2709.9
Land: 19:30 HOBBS Total: 9.4*
Track Lines and Direction (e.g. N to S) Flown: 31-28
Overall weather: Predicted 3-5ft and 10-15 knots

General Observations

Seas higher than expected, single sighting during both morning and afternoon flights. Transited down to JAX for surveys tomorrow.

Transit effort leg: Yes

Date: 11/30/2012

USWTR Daily Plane Log Sheet

Pilot in Command: Mike
Second in Command: Bob
Plane: N1275M
Observers: Erin - Left, Ryan - Right
Time take off: 11:34
HOBBS Start: 730.2
Land for lunch: 11:34
Track Lines and Direction (e.g. N to S) Flown: 30 - 34

Take off after lunch: NA
HOBBS Stop: 734.9
Land: NA
HOBBS Total: 4.7
Track Lines and Direction (e.g. N to S) Flown: 31 - 28
Overall weather: BSS 2-4

General Observations

Partly cloudy in the morning and then sunny, Nine sightings in total for the day

Transit effort leg: No

Date: 12/1/2012

USWTR Daily Plane Log Sheet

Pilot in Command: Bob
Second in Command: Mike
Plane: N1275M
Observers: Ryan - Left, Erin - Right
Time take off: 9:11
HOBBS Start: 734.9
Land for lunch: 11:47
Track Lines and Direction (e.g. N to S) Flown: 36 - 39

Take off after lunch: 12:37
HOBBS Stop: 740.4
Land: 15:09
HOBBS Total: 5.5
Track Lines and Direction (e.g. N to S) Flown: 45 - 42
Overall weather: Clear skies, light winds but rough seas

General Observations

BSS between 2-4, 9 sighitngs throughout the day. Northern lines had slightly calmer seas

Transit effort leg: No

Date: 12/2/2012

USWTR Daily Plane Log Sheet

Pilot in Command: Bob
Second in Command: Mike
Plane: N1275M
Observers: Erin - Left, Ryan - Right
Time take off: 8:16
HOBBS Start: 741.8
Land for lunch: 11:41
Track Lines and Direction (e.g. N to S) Flown: 20 - 23

Take off after lunch: 12:46
HOBBS Stop: 748.5
Land: 15:38
HOBBS Total: 6.7
Track Lines and Direction (e.g. N to S) Flown: 24 & 25
Overall weather: Good sea states between 1 - 3

General Observations

12 sightings - 2 near shore humpbacks

Few tracklines in the afternoon because of humpback sighting and fading light conditions. Large group of Zca.

Transit effort leg: No

Monday, January 30, 2012 Sighting # 1

Initial sighting on Track

Time: 9:37 WP#: 3 Lat: 34.44632 Long: -75.525185
Vertical Angle: 2 Horizontal Bearing in Degrees: 100 Sighting Cue: Body
On/Off Effort: On Trackline: 20 Beaufort Sea State: 5
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 9:41 WP#: 4 Lat: 34.45636 Long: -75.556625
Species: *Unidentified Delphinid* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: See comments below

Representative images used for Species ID: N/A
Photographer: N/A Frame numbers: N/A Spacer: N/A
Calculated distance from Trackline: N/A

Final Time and Position of Sighting

Time: N/A WP#: N/A Lat: N/A Long: N/A
Calculated Distance Traveled: N/A

Behavior and Additional Comments

Single light colored animal traveling very fast below the surface. Animal slightly larger than a dolphin.

Monday, January 30, 2012 Sighting # 2

Initial sighting on Track

Time: 11:44 WP#: 24 Lat: 34.8827 Long: -75.437848
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 25 Beaufort Sea State: 4
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 11;45 WP#: 25 Lat: 34.88733 Long: -75.433136
Species: *Tursiops truncatus* Numbers (Low/High/Best): 2 / 3 / 3
Features used in Species ID: Robust body appearance, uniform grey coloration, light grey blaze up to dorsal fin

Representative images used for Species ID: 6727, 6730, 6736, 6766
Photographer: Erin Frame numbers: 6727 - 6768 Spacer: 6769
Calculated distance from Trackline: 0.67 km

Final Time and Position of Sighting

Time: 11:50 WP#: 26 Lat: 34.88121 Long: -75.442969
Calculated Distance Traveled: 1.13 km

Behavior and Additional Comments

Traveling as a pair upon initial observation, third joined. Animal headed towards large container vessel during the sighting and began bow riding for the remainder of the sighting.

Monday, January 30, 2012 Sighting # 3

Initial sighting on Track

Time: 11:57 WP#: 28 Lat: 35.01103 Long: -75.601892
Vertical Angle: 4 Horizontal Bearing in Degrees: 90 Sighting Cue: Breach
On/Off Effort: On Trackline: 25 Beaufort Sea State: 4
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 12:03 WP#: 30 Lat: 35.04841 Long: -75.558142
Species: *Megaptera novaeangliae* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Large knobby, white pectoral fins, deep V to caudal fin

Representative images used for Species ID: 6770, 6782, 6784, 6789
Photographer: Erin Frame numbers: 6770 - 6795 Spacer: 6796
Calculated distance from Trackline: 5.75 km

Final Time and Position of Sighting

Time: 12:17 WP#: 31 Lat: 35.04384 Long: -75.548710
Calculated Distance Traveled: 1.00 km

Behavior and Additional Comments

Saw animals splash from breaching - during subsequent sightings animal dove from sight quickly after surfacing.

Tuesday, January 31, 2012 Sighting # 1

Initial sighting on Track

Time: 10:34 WP#: 65 Lat: 35.691722 Long: -74.630828
Vertical Angle: 1 Horizontal Bearing in Degrees: 100 Sighting Cue: Splash
On/Off Effort: On Trackline: 39 Beaufort Sea State: 4
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 10:42 WP#: 66 Lat: 35.691736 Long: -74.630091
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 1 / 1 /1
Features used in Species ID: Large white/ grey bodied animal. Scaring down back, dorsal fin set far back on body
Representative images used for Species ID: 6799, 6800, 6802-04
Photographer: Ryan Frame numbers: 6797 - 6809 Spacer: 6810
Calculated distance from Trackline: 0.07 km

Final Time and Position of Sighting

Time: 10:42 WP#: 66 Lat: 35.692390 Long: -74.624678
Calculated Distance Traveled: 0.49 km

Behavior and Additional Comments

Large body, hung at surface for a quick period. Observed one blow. Lots of scaring.

Tuesday, January 31, 2012 Sighting # 2

Initial sighting on Track

Time: 11:42 WP#: 80 Lat: 35.551803 Long: -74.700371
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 37 Beaufort Sea State: 4
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 11:46 WP#: 81 Lat: 35.560197 Long: -74.700421
Species: *Unidentified Mesoplodon* Numbers (Low/High/Best): 4 / 4 / 4
Features used in Species ID: Large bodied animals with dorsal fin set way back on the body.
Representative images used for Species ID: 6812
Photographer: Ryan Frame numbers: 6811 - 6814 Spacer: 6815
Calculated distance from Trackline: 0.93 km

Final Time and Position of Sighting

Time: 11:54 WP#: 82 Lat: 35.562393 Long: -74.697688
Calculated Distance Traveled: 0.35 km

Behavior and Additional Comments

Four individuals close together. All dove by the time plane was in position to photograph. While the plane continued to circle the area individual animals would surface quickly before descending from the surface.

Tuesday, January 31, 2012 Sighting # 3

Initial sighting on Track

Time: 12:18 WP#: 85 Lat: 35.480831 Long: -74.794658
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 85 Beaufort Sea State: 4
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 12:21 WP#: 86 Lat: 35.487627 Long: -74.803840
Species: *Unidentified Mesoplodon* Numbers (Low/High/Best): 3 / 3 / 3
Features used in Species ID: Large, fast, white bodied animals not staying on surface for more than 30 seconds.
Representative images used for Species ID: NA
Photographer: Ryan Frame numbers: NA Spacer: NA
Calculated distance from Trackline: 1.12 km

Final Time and Position of Sighting

Time: 12:37 WP#: 87 Lat: 35.485791 Long: -74.796125
Calculated Distance Traveled: 0.72 km

Behavior and Additional Comments

Animals were traveling through the water very fast. Not staying on the surface for very long. Unable to get photographs. While on this sighting a group of Tursiops came into view.

Tuesday, January 31, 2012 Sighting # 4

Initial sighting on Track

Time: 12:18 WP#: 85 Lat: 35.480831 Long: -74.794658
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: Off Trackline: 85 Beaufort Sea State: 4
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 12:21 WP#: 86 Lat: 35.487627 Long: -74.803840
Species: *Tursiops truncatus* Numbers (Low/High/Best): 6 / 6 / 6
Features used in Species ID: Robust uniform grey animals
Representative images used for Species ID: 6822 - 6824
Photographer: Ryan Frame numbers: 6816 - 6828 Spacer: 6829
Calculated distance from Trackline: 1.12 km

Final Time and Position of Sighting

Time: 13:37 WP#: 87 Lat: 35.485791 Long: -74.796125
Calculated Distance Traveled: 0.72 km

Behavior and Additional Comments

Traveling very fast, sighitng was seen in conjunction with mesoplodon sighting #3

Tuesday, January 31, 2012 Sighting # 5

Initial sighting on Track

Time: 14:26 WP#: 96 Lat: 35.411671 Long: -74.517878
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 35 Beaufort Sea State: 3
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 14:28 WP#: 97 Lat: 35.418673 Long: -74.516484
Species: *Balaenoptera acutorostrata* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Large dark fusiform body, baleen whale with white pectoral fins.

Representative images used for Species ID: 6844, 6856, 6857, 6859
Photographer: Ryan Frame numbers: 6830 - 6875 Spacer: 6876
Calculated distance from Trackline: 0.78 km

Final Time and Position of Sighting

Time: 14:46 WP#: 98 Lat: 35.432965 Long: -74.513941
Calculated Distance Traveled: 1.61 km

Behavior and Additional Comments

Hanging just below the surface, staying close together. not surfacing very often.

Tuesday, January 31, 2012 Sighting # 6

Initial sighting on Track

Time: 15:35 WP#: 104 Lat: 35.223686 Long: -74.785283
Vertical Angle: 2 Horizontal Bearing in Degrees: 60 Sighting Cue: Blow
On/Off Effort: On Trackline: 33 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 15:35 WP#: 105 Lat: 35.227815 Long: -74.785030
Species: *Physeter macrocephalus* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Large grey colored animal with forward blow. Wrinkled appearance to skin.

Representative images used for Species ID: NA
Photographer: Ryan Frame numbers: NA Spacer: NA
Calculated distance from Trackline: 0.46 km

Final Time and Position of Sighting

Time: 15:43 WP#: 106 Lat: 35.225205 Long: -74.771976
Calculated Distance Traveled: 1.22 km

Behavior and Additional Comments

Large grey body animal with forward blow.

Wednesday, February 1, 2012 Sighting # 1

Initial sighting on Track

Time: 9:35 WP#: 5 Lat: 36.12271 Long: -74.595922
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 45 Beaufort Sea State: 4
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 9:37 WP#: 6 Lat: 36.11883 Long: -74.602939
Species: *Stenella coeruleoalba* Numbers (Low/High/Best): 400 / 475 / 450
Features used in Species ID: Dark line from eye to pectoral and a second down to anus

Representative images used for Species ID: 6890, 6891, 6903, 6907, 6909, 6923, 6926, 6931
Photographer: Ryan Frame numbers: 6877 - 6942 Spacer: 6943
Calculated distance from Trackline: 0.76 km

Final Time and Position of Sighting

Time: 9:47 WP#: 7 Lat: 36.1237 Long: -74.605667
Calculated Distance Traveled: 0.59 km

Behavior and Additional Comments

Very large group of animals traveling fast and surfacing quickly with large disturbance. Formed into single group but then split into smaller groups of a few hundred.

Wednesday, February 1, 2012 Sighting # 2

Initial sighting on Track

Time: 10:32 WP#: 16 Lat: 35.97938 Long: -74.794661
Vertical Angle: 2 Horizontal Bearing in Degrees: 100 Sighting Cue: Body
On/Off Effort: On Trackline: 43 Beaufort Sea State: 5
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 10:32 WP#: 17 Lat: 35.97264 Long: -74.790403
Species: *Balaenoptera physalis* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Large fusiform body appearance, white coloration on right side of mandible, small dorsal fin placed far back on the body.
Representative images used for Species ID: 6947- 6949
Photographer: Erin Frame numbers: 6944 - 6955 Spacer: 6956
Calculated distance from Trackline: 0.84 km

Final Time and Position of Sighting

Time: 10:44 WP#: 18 Lat: 35.99254 Long: -74.792350
Calculated Distance Traveled: 2.22 km

Behavior and Additional Comments

Animal dove during initial sighting but resurfaced ~15 minutes later.

Wednesday, February 1, 2012 Sighting # 3

Initial sighting on Track

Time: 11:40 WP#: 28 Lat: 35.83353 Long: -74.462903
Vertical Angle: 1 Horizontal Bearing in Degrees: 100 Sighting Cue: Body
On/Off Effort: On Trackline: 41 Beaufort Sea State: 5
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 11:41 WP#: 29 Lat: 35.83409 Long: -74.463784
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 12 / 18 / 15
Features used in Species ID: Dark bodies, blunt square head with no extended rostrum. Dorsal fin place 1/3 back the animals body.
Representative images used for Species ID: 6957, 6958
Photographer: Erin Frame numbers: 6957 - 6965 Spacer: 6965
Calculated distance from Trackline: 0.10 km

Final Time and Position of Sighting

Time: 11:50 WP#: 30 Lat: 35.83672 Long: -74.459409
Calculated Distance Traveled: 0.49 km

Behavior and Additional Comments

Line of large and smaller animals traveling near the surface, animals surfacing to breath at a regular interval.

Wednesday, February 1, 2012 Sighting # 4

Initial sighting on Track

Time: 12:09 WP#: 34 Lat: 35.76275 Long: -74.822486
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 40 Beaufort Sea State: 5
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 12:10 WP#: 35 Lat: 35.7642 Long: -74.823749
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 4 / 4 / 4
Features used in Species ID: Dark bodies, blunt square head with no extended rostrum. Dorsal fin place 1/3 back the animals body.
Representative images used for Species ID: 6968 & 6972
Photographer: Erin Frame numbers: 6966 - 6973 Spacer: 6978
Calculated distance from Trackline: 0.20 km

Final Time and Position of Sighting

Time: 12:28 WP#: 37 Lat: 35.77193 Long: -74.819553
Calculated Distance Traveled: 0.94 km

Behavior and Additional Comments

Animals in swimming in a tight line but began to spread out during the sighting. Queue from this sighting is the same as that for sightings 5 & 6. Animals in the same area but not showing an association with one another.

Wednesday, February 1, 2012 Sighting # 5

Initial sighting on Track

Time: 12:12 WP#: 36 Lat: 35.76828 Long: -74.819007
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 40 Beaufort Sea State: 5
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 12:12 WP#: 36 Lat: 35.76828 Long: -74.819007
Species: *Delphinus delphis* Numbers (Low/High/Best): 15 / 20 / 18
Features used in Species ID: Cream coloration rising high along the animals body at the region behind the blowhole. Rostrum of moderate length with lighter coloration on the tip.
Representative images used for Species ID: 6974 & 6975
Photographer: Erin Frame numbers: 6974 & 6975 Spacer: NA
Calculated distance from Trackline: NA

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Only a single point of the animals actual location was taken.
Animals traveling at moderate pace surfacing frequently.
Sighting queue for these animals the same as that for sighting 4 as species were found in the same area but not associated with one another.

Wednesday, February 1, 2012 Sighting # 6

Initial sighting on Track

Time: 12:12 WP#: 36 Lat: 35.76828 Long: -74.819007
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 40 Beaufort Sea State: 5
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 12:12 WP#: 36 Lat: 35.76828 Long: -74.819007
Species: *Tursiops truncatus* Numbers (Low/High/Best): 8 / 10 / 9
Features used in Species ID: White peduncle, robust body appearance, uniform grey on thoracic region.
Representative images used for Species ID: 6976 & 6977
Photographer: Erin Frame numbers: 6976 & 6977 Spacer: NA
Calculated distance from Trackline: NA

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Point collected was an estimation of the animals location.
Only a single sighting was made of the animals they were not the originally sighted animal.
Sighting queue for these animals the same as that for sighting 4 as species were found in the same area but not associated with one another.

Wednesday, February 1, 2012 Sighting # 7

Initial sighting on Track

Time: 12:29 WP#: 39 Lat: 35.76681 Long: -74.853803
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 40 Beaufort Sea State: 5
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 12:31 WP#: 40 Lat: 35.77297 Long: -74.846489
Species: *Stenella coeruleoalba* Numbers (Low/High/Best): 200 / 300 / 250
Features used in Species ID: Dark line from eye to pectoral and a second down to anus

Representative images used for Species ID: 6989, 6990, 7007, 7013, 7019, 7029
Photographer: Erin Frame numbers: 6979-7043 Spacer: 7044
Calculated distance from Trackline: 0.95 km

Final Time and Position of Sighting

Time: 12:42 WP#: 42 Lat: 35.75891 Long: -74.856185
Calculated Distance Traveled: 1.79 km

Behavior and Additional Comments

String of animals numbering approximately 60, larger group joined the first during our observation
Each group numbering in the hundreds. Animals traveling in definite direction at a high rate of speed.

Wednesday, February 1, 2012 Sighting # 8

Initial sighting on Track

Time: 14:48 WP#: 49 Lat: 35.01959 Long: -74.840051
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 31 Beaufort Sea State: 5
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 14:50 WP#: 50 Lat: 35.03119 Long: -74.841419
Species: *Balaenoptera physalis* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Large fusiform body appearance, varring white coloration along the body, lighter coloration along the right mandible.
Representative images used for Species ID: 7045-7049
Photographer: Erin Frame numbers: 7045-7049 Spacer: 7050
Calculated distance from Trackline: 1.30 km

Final Time and Position of Sighting

Time: 15:04 WP#: 51 Lat: 35.03867 Long: -74.842553
Calculated Distance Traveled: 0.83 km

Behavior and Additional Comments

Animal staying approximately stationary 30 ft under the water. Animals surfaced only once during the 16 minute sighting. Could still make out distinct species characteristic through the water.

Wednesday, February 1, 2012 Sighting # 9

Initial sighting on Track

Time: 15:07 WP#: 53 Lat: 34.97076 Long: -74.781977
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 31 Beaufort Sea State: 5
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 15:15 WP#: 54 Lat: 34.97998 Long: -74.790353
Species: *Unidentified Balaenopteridae* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Large fusiform body, light and dark coloration along body.

Representative images used for Species ID: NA
Photographer: Erin Frame numbers: NA Spacer: NA
Calculated distance from Trackline: 1.28 km

Final Time and Position of Sighting

Time: 15:20 WP#: 55 Lat: 34.98496 Long: -74.782849
Calculated Distance Traveled: 0.87 km

Behavior and Additional Comments

Streamline shape to the animals body, was observed submerged rolling on its side and diving to deeper water. Light and dark coloration was seen on the animals side, head came to a definite point. Animal never surfaced for a second observation.

Wednesday, March 14, 2012 Sighting # 1

Initial sighting on Track

Time: 11:58 WP#: 29 Lat: 34.756697 Long: -75.280021
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 25 Beaufort Sea State: 3
Observer: Heather Observer side: Right

Actual Time and Position of Sighting

Time: 11:59 WP#: 30 Lat: 34.753415 Long: -75.273994
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 20 / 23 / 21
Features used in Species ID: Black body, blunt head with no rostrum, large dorsal fin placed ~1/3 back on animals body.
Representative images used for Species ID: 7056 & 7070
Photographer: Heather Frame numbers: 7055 - 7078 Spacer: 7079
Calculated distance from Trackline: 0.66 km

Final Time and Position of Sighting

Time: 12:02 WP#: 31 Lat: 34.760847 Long: -75.270311
Calculated Distance Traveled: 0.89 km

Behavior and Additional Comments

Long line of animals with groups of 3 to 5 in closer proximity to one another

Wednesday, March 14, 2012 Sighting # 2

Initial sighting on Track

Time: 12:06 WP#: 33 Lat: 34.825351 Long: -75.371196
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 25 Beaufort Sea State: 3
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 12:08 WP#: 34 Lat: 34.823642 Long: -75.371893
Species: *Tursiops truncatus* Numbers (Low/High/Best): 11 / 15 / 14
Features used in Species ID: Robust body, lighter blaze along sides trailing to dorsal fin Animals with white peduncles
Representative images used for Species ID: 7081, 7085, 7087, 7091, 7092
Photographer: Heather Frame numbers: 7080-7109 Spacer: 7110
Calculated distance from Trackline: 0.20 km

Final Time and Position of Sighting

Time: 12:14 WP#: 35 Lat: 34.82407 Long: -75.370914
Calculated Distance Traveled: 0.10 km

Behavior and Additional Comments

Pairs or threes breaching at the surface, some animals chasing on another. Once plane circled the group breaching stopped and they began directional travel at a moderate rate.

Wednesday, March 14, 2012 Sighting # 3

Initial sighting on Track

Time: 14:30 WP#: 45 Lat: 34.82969 Long: -75.242867
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 26 Beaufort Sea State: 2
Observer: Heather Observer side: Right

Actual Time and Position of Sighting

Time: 14:32 WP#: 46 Lat: 34.82944 Long: -75.255250
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 12 / 16 / 16
Features used in Species ID: Blunt head with no rostrum, black bodies, large dorsal fin placed ~1/3 the way back on the animals body
Representative images used for Species ID: 7123-25, 7130-32, & 7134
Photographer: Heather Frame numbers: 7113 - 7137 Spacer: 7138
Calculated distance from Trackline: 1.13 km

Final Time and Position of Sighting

Time: 14:35 WP#: 47 Lat: 34.829445 Long: -75.244667
Calculated Distance Traveled: 0.97 km

Behavior and Additional Comments

Three groups of between 4 and 6 individuals all of varying size, some whit coloration behind dorsal fin.

Wednesday, March 14, 2012 Sighting # 4

Initial sighting on Track

Time: 14:36 WP#: 49 Lat: 34.814578 Long: -75.221811
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 26 Beaufort Sea State: 2
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 14:40 WP#: 50 Lat: 34.811058 Long: -75.216392
Species: *Unidentified Cetacean* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID:
Representative images used for Species ID: NA
Photographer: Heather Frame numbers: NA Spacer: NA
Calculated distance from Trackline: 0.63 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Only a brief initial sighting - could not estimate numbers
Assumed location collected.

Wednesday, March 14, 2012 Sighting # 5

Initial sighting on Track

Time: 15:34 WP#: 59 Lat: 34.786639 Long: -74.924721
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 28 Beaufort Sea State: 2
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 15:40 WP#: 60 Lat: 34.785733 Long: -74.933775
Species: *Unidentified Cetacean* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID:
Representative images used for Species ID: NA
Photographer: NA Frame numbers: NA Spacer: NA
Calculated distance from Trackline: 0.83 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Only a breif initial sighting - could not estimate numbers

Wednesday, March 14, 2012 Sighting # 6

Initial sighting on Track

Time: 16:26 WP#: 71 Lat: 34.957542 Long: -74.891237
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Blow
On/Off Effort: On Trackline: 30 Beaufort Sea State: 2
Observer: Heather Observer side: Right

Actual Time and Position of Sighting

Time: 16:27 WP#: 72 Lat: 34.959386 Long: -74.896202
Species: *Physeter macrocephalus* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Large square head, blowhole forward and on the left side, thin bright white underslung jaw, dorsal ridge
Representative images used for Species ID: 7147, 7153, 7155, 7176, 7177, 7195
Photographer: Heather Frame numbers: 7139-7197 Spacer: 7198
Calculated distance from Trackline: 0.50 km

Final Time and Position of Sighting

Time: 16:30 WP#: 73 Lat: 34.955817 Long: -74.892746
Calculated Distance Traveled: 0.51 km

Behavior and Additional Comments

Single animal taking a series of breathes at surface before submerging. Animal turned on its side and swimming with its mouth open - could see lower jaw. Animal dove for half a minute before resurfacing.

Distinctive markings, scarring on the area in front of the dorsal ridge - possible ID feature.

Wednesday, March 14, 2012 Sighting # 7

Initial sighting on Track

Time: 16:33 WP#: 75 Lat: 34.923099 Long: -74.845599
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 30 Beaufort Sea State: 2
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 16:41 WP#: 76 Lat: 34.93307 Long: -74.838806
Species: *Balaenoptera acutorostrata* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: White pigmentation on pectoral fins, dorsal fin placed well back on body
Representative images used for Species ID: 7210-12, 7220-22, 7225, 7234, 7235, 7238
Photographer: Heather Frame numbers: 7199 - 7249 Spacer: 7250
Calculated distance from Trackline: 1.27 km

Final Time and Position of Sighting

Time: 16:42 WP#: 77 Lat: 34.910908 Long: -74.825100
Calculated Distance Traveled: 2.76 km

Behavior and Additional Comments

Mom and calf pair, upon circling calf stayed closer to mother and dove in sync with her. Calf up more frequently than mother.

Wednesday, March 14, 2012 Sighting # 8

Initial sighting on Track

Time: 17:02 WP#: 81 Lat: 35.157604 Long: -75.034195
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 31 Beaufort Sea State: 2
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 17:02 WP#: 82 Lat: 35.159333 Long: -75.040836
Species: *Peponocephala electra* Numbers (Low/High/Best): 175 / 200 / 185
Features used in Species ID: Elongated body, head triangular but rounded, no rostrum, dorsal fin at the midpoint of the body.
Representative images used for Species ID: 7261-2, 7270, 7273-4, 7282
Photographer: Heather Frame numbers: 7251 - 7346 Spacer: 7347
Calculated distance from Trackline: 0.63 km

Final Time and Position of Sighting

Time: 17:09 WP#: 83 Lat: 35.15236 Long: -75.027013
Calculated Distance Traveled: 1.48 km

Behavior and Additional Comments

Large group all traveling at a slow rate of speed.

Thursday, March 15, 2012 Sighting # 1

Initial sighting on Track

Time: 9:42 WP#: 4 Lat: 35.147156 Long: -74.881733
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 32 Beaufort Sea State: 2
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 9:42 WP#: 5 Lat: 35.143693 Long: -74.88727
Species: *Unidentified Mesoplodon* Numbers (Low/High/Best): 3 / 3 / 3
Features used in Species ID: Small pectoral fins, small dorsal fin placed far back on the animal. Large body size.
Representative images used for Species ID: 7367, 7371, 7372
Photographer: Ryan Frame numbers: 7364 Spacer: 7374
Calculated distance from Trackline: 0.63 km

Final Time and Position of Sighting

Time: 9:48 WP#: 6 Lat: 35.150020 Long: -74.878071
Calculated Distance Traveled: 1.09 km

Behavior and Additional Comments

Two larger animals with a third, smaller animal hanging close to one of the adults. Larger animals ~18ft long. Animals surfaced once then dove out of sight.

Thursday, March 15, 2012 Sighting # 2

Initial sighting on Track

Time: 9:51 WP#: 8 Lat: 35.100116 Long: -74.751476
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 32 Beaufort Sea State: 2
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 9:53 WP#: 9 Lat: 35.101080 Long: -74.777675
Species: *Stenella frontalis* Numbers (Low/High/Best): 25 / 26 / 26
Features used in Species ID: White tip to rostrum, faint light and dark alternation of color, some light spotting on a few of the animals.
Representative images used for Species ID: 7383, 7389, 7390, 7403, 7404, 7405
Photographer: Ryan Frame numbers: 7375 - 7421 Spacer: 7422
Calculated distance from Trackline: 2.39 km

Final Time and Position of Sighting

Time: 9:53 WP#: 10 Lat: 35.105539 Long: -74.778713
Calculated Distance Traveled: 0.50 km

Behavior and Additional Comments

Large group of dolphins - fairly close to one another, smaller groups of pairs or trios surrounding main group. unified direction to travel.

Thursday, March 15, 2012 Sighting # 3

Initial sighting on Track

Time: 10:09 WP#: 13 Lat: 35.032063 Long: -74.396965
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: Off Trackline: 32 & 33 Beaufort Sea State: 2
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 10:10 WP#: 14 Lat: 35.032775 Long: -74.405086
Species: *Balaenoptera acutorostrata* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Fusiform shape, white coloration across middle of pectoral fins, small dorsal fin far back on body.
Representative images used for Species ID: 7433, 7435, 7441, 7453, 7454, 7456, 7468
Photographer: Ryan Frame numbers: 7423 - 7474 Spacer: 7475
Calculated distance from Trackline: 0.74 km

Final Time and Position of Sighting

Time: 10:17 WP#: 15 Lat: 35.034741 Long: -74.395515
Calculated Distance Traveled: 0.90 km

Behavior and Additional Comments

Mom calf pair sighted between tracklines 32 and 33, calf surfacing more frequently than mother. Animals continued their pattern of surfacing and direction of travel throughout the encounter.

Thursday, March 15, 2012 Sighting # 4

Initial sighting on Track

Time: 10:23 WP#: 18 Lat: 35.141339 Long: -74.433726
Vertical Angle: 2 Horizontal Bearing in Degrees: 60 Sighting Cue: Body
On/Off Effort: On Trackline: 33 Beaufort Sea State: 2
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 10:24 WP#: 19 Lat: 35.151913 Long: -74.430711
Species: *Balaenoptera physalis* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Fusiform body shape. Lighter coloration in the right jaw area. Uniform coloration to pectoral fins.
Representative images used for Species ID: 7494, 7497
Photographer: Ryan Frame numbers: 7476 - 7511 Spacer: 7512
Calculated distance from Trackline: 1.21 km

Final Time and Position of Sighting

Time: 10:27 WP#: 20 Lat: 35.152107 Long: -74.426363
Calculated Distance Traveled: 0.40 km

Behavior and Additional Comments

Traveling mainly subsurface always within view of the observers.

Thursday, March 15, 2012 Sighting # 5

Initial sighting on Track

Time: 10:34 WP#: 22 Lat: 35.199494 Long: -74.672795
Vertical Angle: 2 Horizontal Bearing in Degrees: 100 Sighting Cue: Body
On/Off Effort: On Trackline: 33 Beaufort Sea State: 2
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 10:38 WP#: 24 Lat: 35.201177 Long: -74.673247
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 24 / 25 / 25
Features used in Species ID: Large square head with no rostrum, Large dorsal fin places ~1/3 back on the animals body, dark body coloration with white area around dorsal fin.
Representative images used for Species ID: 7542 & 7543
Photographer: Ryan Frame numbers: 7513 - 7575 Spacer: 7576
Calculated distance from Trackline: 0.19 km

Final Time and Position of Sighting

Time: 10:44 WP#: 25 Lat: 35.205495 Long: -74.673247
Calculated Distance Traveled: 0.5 km

Behavior and Additional Comments

Initial sighting of nine individuals in a close groups, additional animals were observed in smaller groups seen within 300 ft. of the original group. Sighting 6 animals were observed in the same area as this sighting and traveled below them during while the team circled both groups.

Thursday, March 15, 2012 Sighting # 6

Initial sighting on Track

Time: 10:34 WP#: 22 Lat: 35.199494 Long: -74.672795
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: Off Trackline: 33 Beaufort Sea State: 2
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 10:37 WP#: 23 Lat: 35.198969 Long: -74.674666
Species: *Balaenoptera acutorostrata* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Fusiform body shape, white coloration to middle of each pectoral fin, small dorsal fin.
Representative images used for Species ID: 7529, 7531, 7572
Photographer: Ryan Frame numbers: 7513 - 7575 Spacer: 7576
Calculated distance from Trackline: 0.18 km

Final Time and Position of Sighting

Time: 10:44 WP#: 25 Lat: 35.205495 Long: -74.671966
Calculated Distance Traveled: 0.77 km

Behavior and Additional Comments

Pair of adult minke whales observed near group of pilot whales observed from the trackline. Minke whales traveled deep to pilot whales at times an surfaced at least 200 ft away from pilot whales that while they were at the surface.

Thursday, March 15, 2012 Sighting # 7

Initial sighting on Track

Time: 10:47 WP#: 27 Lat: 35.228325 Long: -74.809822
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 33 Beaufort Sea State: 2
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 10:49 WP#: 28 Lat: 35.239920 Long: -74.805528
Species: *Peponocephala electra* Numbers (Low/High/Best): 200 / 220 / 210
Features used in Species ID: Dorsal fin shape, small rostrum.

Representative images used for Species ID: 7579, 7592, 7607, 7624, 7625, 7629, 7634
Photographer: Ryan Frame numbers: 7577 - 7644 Spacer: 7645
Calculated distance from Trackline: 1.35 km

Final Time and Position of Sighting

Time: 10:52 WP#: 29 Lat: 35.236201 Long: -74.809254
Calculated Distance Traveled: 0.53 km

Behavior and Additional Comments

Very large group of dolphins traveling in a long string ~1/4 mile long. Several distinct sub-groups unidirectional travel.

Thursday, March 15, 2012 Sighting # 8

Initial sighting on Track

Time: 11:20 WP#: 34 Lat: 35.551895 Long: -74.776984
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 37 Beaufort Sea State: 3
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 11:21 WP#: 35 Lat: 35.550984 Long: -74.773731
Species: *Tursiops truncatus* Numbers (Low/High/Best): 24 / 32 / 28
Features used in Species ID: Robust body appearance, uniform grey coloration with lighter blaze to dorsal fin.
Representative images used for Species ID: 7649, 7650, 7653, 7661, 7665, 7667, 7668
Photographer: Ryan Frame numbers: 7646 - 7671 Spacer: 7672
Calculated distance from Trackline: 0.31 km

Final Time and Position of Sighting

Time: 11:25 WP#: 36 Lat: 35.551574 Long: -74.778211
Calculated Distance Traveled: 0.41 km

Behavior and Additional Comments

Distinct sub groups all spread out from one another traveling in different directions. When animals surfaces blows were clearly visible.

Thursday, March 15, 2012 Sighting # 9

Initial sighting on Track

Time: 11:28 WP#: 38 Lat: 35.553080 Long: -74.688497
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 37 Beaufort Sea State: 2
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 11:31 WP#: 39 Lat: 35.558571 Long: -74.689945
Species: *Tursiops truncatus* Numbers (Low/High/Best): 8 / 8 / 8
Features used in Species ID: Robust body appearance, uniform grey coloration

Representative images used for Species ID: 7680, 7688, 7694, 7696, 7700, 7701, 7706, 7709
Photographer: Ryan Frame numbers: 7673 - 7711 Spacer: 7712
Calculated distance from Trackline: 0.63 km

Final Time and Position of Sighting

Time: 11:32 WP#: 40 Lat: 35.566833 Long: -74.693174
Calculated Distance Traveled: 0.96 km

Behavior and Additional Comments

Small group but lots of activity - animals moving quickly in groups of 2 or 3, some smaller individuals included in the group.

Thursday, March 15, 2012 Sighting # 10

Initial sighting on Track

Time: 11:35 WP#: 42 Lat: 35.554330 Long: -74.566584
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 37 Beaufort Sea State: 3
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 11:35 WP#: 42 Lat: 35.554330 Long: -74.566584
Species: *Unidentified Cetacean* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Only a sighting que was observed - location is given as the point where que was observed not of the animal(s)
Representative images used for Species ID: NA
Photographer: Ryan Frame numbers: NA Spacer: NA
Calculated distance from Trackline: NA

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Unidentified animal.

Thursday, March 15, 2012 Sighting # 11

Initial sighting on Track

Time: 12:09 WP#: 48 Lat: 35.624597 Long: -74.691061
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 38 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 12:10 WP#: 49 Lat: 35.628645 Long: -74.682070
Species: *Tursiops truncatus* Numbers (Low/High/Best): 30 / 40 / 35
Features used in Species ID: Robust body appearance, uniform body coloration.

Representative images used for Species ID: 7759 & 7761
Photographer: Ryan Frame numbers: 7750 - 7769 Spacer: 7770
Calculated distance from Trackline: 0.93 km

Final Time and Position of Sighting

Time: 12:14 WP#: 50 Lat: 35.638268 Long: -74.681652
Calculated Distance Traveled: 1.07 km

Behavior and Additional Comments

Long spread out group of animals separated into smaller groups, individuals within the group appeared with white peduncles, some aerial activity displayed.

Thursday, March 15, 2012 Sighting # 12

Initial sighting on Track

Time: 12:16 WP#: 52 Lat: 35.622455 Long: -74.744606
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 28 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 12:18 WP#: 53 Lat: 35.633265 Long: -74.735229
Species: *Tursiops truncatus* Numbers (Low/High/Best): 35 / 45 / 40
Features used in Species ID: Robust body appearance, uniform grey coloration.

Representative images used for Species ID: 7759 & 7761
Photographer: Ryan Frame numbers: 7750 - 7769 Spacer: 7770
Calculated distance from Trackline: 1.47 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Thursday, March 15, 2012 Sighting # 13

Initial sighting on Track

Time: 12:32 WP#: 55 Lat: 35.622075 Long: -75.060253
Vertical Angle: 3 Horizontal Bearing in Degrees: 60 Sighting Cue: Body
On/Off Effort: On Trackline: 38 Beaufort Sea State: 3
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 12:36 WP#: 56 Lat: 35.616915 Long: -75.052653
Species: *Megaptera novaeangliae* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Large nodular pectoral fins with white coloration, ventral pleats distinct fluke shape.
Representative images used for Species ID: 7777 & 7788
Photographer: Ryan Frame numbers: 7771 - 7829 Spacer: 7830
Calculated distance from Trackline: 0.89 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Carcass floating up-side-down with a number of sharks circling and feeding on it.

Thursday, March 15, 2012 Sighting # 14

Initial sighting on Track

Time: 14:14 WP#: 63 Lat: 36.123971 Long: -74.839722
Vertical Angle: 1 Horizontal Bearing in Degrees: 100 Sighting Cue: Body
On/Off Effort: On Trackline: 45 Beaufort Sea State: 3
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 14:18 WP#: 64 Lat: 36.126358 Long: -74.845911
Species: *Tursiops truncatus* Numbers (Low/High/Best): 7 / 9 / 8
Features used in Species ID: Robust body appearance, lighter grey blaze to dorsal fin
Representative images used for Species ID: 7841, 7849, 7854-56
Photographer: Ryan Frame numbers: 7831 - 7861 Spacer: 7862
Calculated distance from Trackline: 0.61 km

Final Time and Position of Sighting

Time: 14:21 WP#: 65 Lat: 36.124796 Long: -74.844991
Calculated Distance Traveled: 0.19 km

Behavior and Additional Comments

Small group of animals, tightly packed traveling together.

Thursday, March 15, 2012 Sighting # 15

Initial sighting on Track

Time: 14:25 WP#: 68 Lat: 36.124183 Long: -74.669558
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 45 Beaufort Sea State: 2
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 14:28 WP#: 69 Lat: 36.136306 Long: -74.671118
Species: *Tursiops truncatus* Numbers (Low/High/Best): 4 / 4 / 4
Features used in Species ID: Robust body, white peduncle, uniform grey coloration except for lighter blaze to dorsal fin.
Representative images used for Species ID: 7863-65, 7867, 7869, 7884
Photographer: Ryan Frame numbers: 7863 - 7890 Spacer: 7891
Calculated distance from Trackline: 1.36 km

Final Time and Position of Sighting

Time: 14:30 WP#: 70 Lat: 36.141028 Long: -74.671995
Calculated Distance Traveled: 0.53 km

Behavior and Additional Comments

White peduncle coloration clearly visible in all animals, two groups of two animals all showing very little motion while hanging close to the surface.

Thursday, March 15, 2012 Sighting # 16

Initial sighting on Track

Time: 14:32 WP#: 72 Lat: 36.125311 Long: -74.605225
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 45 Beaufort Sea State: 2
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 14:33 WP#: 73 Lat: 36.125825 Long: -74.614163
Species: *Tursiops truncatus* Numbers (Low/High/Best): 24 / 30 / 26
Features used in Species ID: Uniform grey coloration except for lighter blaze to dorsal fin
Robust body appearance
Representative images used for Species ID: 7895, 7899, 7900, 7905-07
Photographer: Ryan Frame numbers: 7892 - 7918 Spacer: 7919
Calculated distance from Trackline: 0.80 km

Final Time and Position of Sighting

Time: 14:35 WP#: 74 Lat: 36.126679 Long: -74.613571
Calculated Distance Traveled: 0.10 km

Behavior and Additional Comments

Animals showing lots of activity, two distinct sub groups of 2-3 animals.

Thursday, March 15, 2012 Sighting # 17

Initial sighting on Track

Time: 14:42 WP#: 77 Lat: 36.112570 Long: -74.409144
Vertical Angle: 2 Horizontal Bearing in Degrees: 60 Sighting Cue: Splash
On/Off Effort: On Trackline: 45 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 14:47 WP#: 78 Lat: 36.126091 Long: -74.417143
Species: *Delphinus delphis* Numbers (Low/High/Best): 60 / 90 / 75
Features used in Species ID: Yellow coloration from rostrum back to dorsal fin region meeting with white coloration from peduncle in a V shape. Yellow pectorals and internal area of dorsal fin.
Representative images used for Species ID: 7957, 7960, 7964
Photographer: Ryan Frame numbers: 7920 - 8017 Spacer: 8018
Calculated distance from Trackline: 1.67 km

Final Time and Position of Sighting

Time: 14:48 WP#: 79 Lat: 36.128927 Long: -74.415035
Calculated Distance Traveled: 0.37 km

Behavior and Additional Comments

Mixed group

Thursday, March 15, 2012 Sighting # 18

Initial sighting on Track

Time: 14:42 WP#: 77 Lat: 36.112570 Long: -74.406144
Vertical Angle: 2 Horizontal Bearing in Degrees: 60 Sighting Cue: Splash
On/Off Effort: On Trackline: 45 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 14:47 WP#: 78 Lat: 36.126091 Long: -74.417143
Species: *Stenella coeruleoalba* Numbers (Low/High/Best): 60 / 90 / 75
Features used in Species ID: Strong narrow blaze to dorsal fin, white peduncle coloration connected to ventral coloration, smaller dorsal fin, light colored pectoral fins.
Representative images used for Species ID: 7934, 7935, 7937, 7948, 7950, 7956, 7961, 7976
Photographer: Ryan Frame numbers: 7920 - 8017 Spacer: 8018
Calculated distance from Trackline: 1.80 km

Final Time and Position of Sighting

Time: 14:48 WP#: 79 Lat: 36.128927 Long: -74.415035
Calculated Distance Traveled: 0.37 km

Behavior and Additional Comments

Mixed group

Thursday, March 15, 2012 Sighting # 19

Initial sighting on Track

Time: 14:55 WP#: 83 Lat: 36.047535 Long: -74.400501
Vertical Angle: 1 Horizontal Bearing in Degrees: 60 Sighting Cue: Body
On/Off Effort: On Trackline: 44 Beaufort Sea State: 2
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 14:59 WP#: 84 Lat: 36.051086 Long: -74.393703
Species: *Balaenoptera physalis* Numbers (Low/High/Best): 3 / 3 / 3
Features used in Species ID: Large fusiform body, white coloration to the right lower jaw
Small dorsal fin placed far back on the animals body.
Representative images used for Species ID: 8019, 8024, 8036, 8042, 8043
Photographer: Ryan Frame numbers: 8019 - 8053 Spacer: 8054
Calculated distance from Trackline: 0.73 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Blows when animals surfaced clearly visible, single animal plus a pair. basking shark also observed in the same area.

Thursday, March 15, 2012 Sighting # 20

Initial sighting on Track

Time: 15:36 WP#: 93 Lat: 35.980421 Long: -74.851128
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 43 Beaufort Sea State: 3
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 15:42 WP#: 94 Lat: 35.989608 Long: -74.849415
Species: *Tursiops truncatus* Numbers (Low/High/Best): 15 / 25 / 20
Features used in Species ID: Uniform grey coloration except for lighter blaze to dorsal fin and white peduncle patter, robust body appearance.
Representative images used for Species ID: 8072 & 8073
Photographer: Ryan Frame numbers: 8055 - 8076 Spacer: 8077
Calculated distance from Trackline: 1.03 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Large group packed close to one another, whole group dove and traveled subsurface for an extended period of time.

Thursday, March 15, 2012 Sighting # 21

Initial sighting on Track

Time: 15:46 WP#: 96 Lat: 35.980603 Long: -74.760411
Vertical Angle: 2 Horizontal Bearing in Degrees: 100 Sighting Cue: Body
On/Off Effort: On Trackline: 43 Beaufort Sea State: 3
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 15:48 WP#: 97 Lat: 35.982781 Long: -74.763415
Species: *Tursiops truncatus* Numbers (Low/High/Best): 14 / 16 / 15
Features used in Species ID: Robust body appearance, uniform grey coloration except for light grey blaze to dorsal fin and white peduncle coloration.
Representative images used for Species ID: 8083-85, 8088-8093, 8106, 8108, 8113, 8122, 8124
Photographer: Ryan Frame numbers: 8078 - 8128 Spacer: 8129
Calculated distance from Trackline: 0.36 km

Final Time and Position of Sighting

Time: 15:50 WP#: 98 Lat: 35.984069 Long: -74.757607
Calculated Distance Traveled: 0.54 km

Behavior and Additional Comments

Not much activity, tightly packed group with white peduncles

Thursday, March 15, 2012 Sighting # 22

Initial sighting on Track

Time: 16:00 WP#: 103 Lat: 35.979766 Long: -74.352462
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 43 Beaufort Sea State: 3
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 16:01 WP#: 104 Lat: 35.980901 Long: -74.353094
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 16 / 20 / 18
Features used in Species ID: large square head with no rostrum, dorsal fin places 1/3 back on the animals body, black body coloration except for white around peduncle and D fin, short fins
Representative images used for Species ID: 8133, 8134, 8154, 8158-61
Photographer: Ryan Frame numbers: 8130 - 8125 Spacer: 8126
Calculated distance from Trackline: 0.14 km

Final Time and Position of Sighting

Time: 16:14 WP#: 106 Lat: 35.992243 Long: -74.328614
Calculated Distance Traveled: 2.54 km

Behavior and Additional Comments

Traveling near one another separated from dolphins (sightings 23 &24) by several hundred yards.
Consistent slow travel to group - no signs of interaction with dolphins.

Thursday, March 15, 2012 Sighting # 23

Initial sighting on Track

Time: 16:00 WP#: 103 Lat: 35.979766 Long: -74.352462
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: Off Trackline: 43 Beaufort Sea State: 3
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 16:01 WP#: 105 Lat: 35.981214 Long: -74.345163
Species: *Delphinus delphis* Numbers (Low/High/Best): 105 / 115 / 110
Features used in Species ID: Cream yellow color along midline of body to dorsal fin, white coloration from peduncle to dorsal fin, lighter colored pectoral fins.
Representative images used for Species ID: 8198, 8199, 8202, 8217, 8258, 8288, 8289, 8314
Photographer: Ryan Frame numbers: 8130 - 8425 Spacer: 8426
Calculated distance from Trackline: 0.67 km

Final Time and Position of Sighting

Time: 16:14 WP#: 106 Lat: 35.992243 Long: -74.328614
Calculated Distance Traveled: 1.93 km

Behavior and Additional Comments

Lots of aerial activity within the group, multiple larger groups with a number of outliers.

Thursday, March 15, 2012 Sighting # 24

Initial sighting on Track

Time: 16:00 WP#: 103 Lat: 35.979766 Long: -74.352462
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: Off Trackline: 43 Beaufort Sea State: 3
Observer: Heather Observer side: Left

Actual Time and Position of Sighting

Time: 16:01 WP#: 105 Lat: 35.981214 Long: -74.345163
Species: *Stenella coeruleoalba* Numbers (Low/High/Best): 105 / 115 / 110
Features used in Species ID: Dark stripe from rostrum to eye then to pectoral fin and back along animals body, narrow distinct light blaze to area of dorsal fin.
Representative images used for Species ID: 8143, 8147, 8182, 8193, 8194, 8195, 8210, 8211
Photographer: Ryan Frame numbers: 8130 - 8425 Spacer: 8426
Calculated distance from Trackline: 0.68 km

Final Time and Position of Sighting

Time: 16:14 WP#: 106 Lat: 35.882243 Long: -74.328614
Calculated Distance Traveled: NA

Behavior and Additional Comments

Lots of aerial activity within the group, multiple larger groups with a number of outliers.

Thursday, March 15, 2012 Sighting # 25

Initial sighting on Track

Time: 16:28 WP#: 110 Lat: 35.688026 Long: -74.499732
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 39 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 16:28 WP#: 110 Lat: 35.688026 Long: -74.499732
Species: *Unidentified Cetacean* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Animal not relocated after initial que

Representative images used for Species ID: NA
Photographer: Ryan Frame numbers: NA Spacer: NA
Calculated distance from Trackline: NA

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Animal not relocated after initial que

Thursday, March 15, 2012 Sighting # 26

Initial sighting on Track

Time: 16:40 WP#: 112 Lat: 35.689169 Long: -74.763096
Vertical Angle: 1 Horizontal Bearing in Degrees: 60 Sighting Cue: Splash
On/Off Effort: On Trackline: 39 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 16:41 WP#: 113 Lat: 35.693636 Long: -74.757051
Species: *Delphinus delphis* Numbers (Low/High/Best): 100 / 150 / 125
Features used in Species ID: Yellow coloration from head back to dorsal fin below the animals midline. White coloration from peduncle to dorsal fin making a v shape.
Representative images used for Species ID: 8431 & 8444
Photographer: Ryan Frame numbers: 8427 - 8490 Spacer: 8491
Calculated distance from Trackline: 0.74 km

Final Time and Position of Sighting

Time: 16:48 WP#: 114 Lat: 35.405759 Long: -74.741883
Calculated Distance Traveled: NA

Behavior and Additional Comments

Very active group, widely dispersed. Traveling at a high rate of speed with fast shallow surfacings making images of body difficult to obtain.

Thursday, May 3, 2012 Sighting # 1

Initial sighting on Track

Time: 11:18 WP#: 15 Lat: 35.109885 Long: -75.088772
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 30 Beaufort Sea State: 2
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 11:20 WP#: 16 Lat: 35.104194 Long: -75.087699
Species: *Grampus griseus* Numbers (Low/High/Best): 7 / 18 / 13
Features used in Species ID: Grey, robust, blunt head cleft in melon

Representative images used for Species ID: 11, 31, 32, 42, 44-46, 48, 49, 52, 69
Photographer: Ryan Frame numbers: 1 - 71 Spacer: 72
Calculated distance from Trackline: 0.64 km

Final Time and Position of Sighting

Time: 11:27 WP#: 17 Lat: 35.100020 Long: -75.095129
Calculated Distance Traveled: 0.82 km

Behavior and Additional Comments

Lots of jumping, traveling very fast, staying spaced out, one subgroup.

Thursday, May 3, 2012 Sighting # 2

Initial sighting on Track

Time: 15:20 WP#: 22 Lat: 35.322825 Long: -75.201685
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: Off Trackline: 33-34 Beaufort Sea State: 2
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 15:22 WP#: 33 Lat: 35.324588 Long: -75.206974
Species: *Stenella frontalis* Numbers (Low/High/Best): 16 / 25 / 19
Features used in Species ID: Alternating light and dark pattern down body, spotting

Representative images used for Species ID: 73, 74, 80
Photographer: Ryan Frame numbers: 73 - 85 Spacer: 86
Calculated distance from Trackline: 0.52 km

Final Time and Position of Sighting

Time: 15:24 WP#: 34 Lat: 35.329445 Long: -75.205207
Calculated Distance Traveled: 0.56 km

Behavior and Additional Comments

Grouped together, rolling over and flashing white bellies.

Thursday, May 3, 2012 Sighting # 3

Initial sighting on Track

Time: 16:06 WP#: 42 Lat: 35.407388 Long: -74.928051
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 3 Beaufort Sea State: 35
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 16:11 WP#: 43 Lat: 35.406789 Long: -74.929029
Species: *Tursiops truncatus* Numbers (Low/High/Best): 4 / 4 / 4
Features used in Species ID: Uniform grey bodies with white peduncle

Representative images used for Species ID: 93, 95, 101, 102
Photographer: Ryan Frame numbers: 87 - 104 Spacer: 105
Calculated distance from Trackline: 0.11 km

Final Time and Position of Sighting

Time: 16:16 WP#: 44 Lat: 35.409225 Long: -74.921876
Calculated Distance Traveled: 0.70 km

Behavior and Additional Comments

Staying close together, milling then traveling fast, white peduncles

Friday, May 4, 2012 Sighting # 1

Initial sighting on Track

Time: 9:52 WP#: 5 Lat: 36.123509 Long: -74.986138
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 45 Beaufort Sea State: 1
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 9:52 WP#: 6 Lat: 36.112706 Long: -74.990582
Species: *Stenella frontalis* Numbers (Low/High/Best): 45 / 50 / 48
Features used in Species ID: Alternating light and dark body coloration, white tip to rostrum
Slender body appearance, spotting present on larger animals.
Representative images used for Species ID: 10 & 12
Photographer: Erin Frame numbers: 1-17 Spacer: 18
Calculated distance from Trackline: 1.27 km

Final Time and Position of Sighting

Time: 9:54 WP#: 7 Lat: 36.119045 Long: -74.98586
Calculated Distance Traveled: 0.82 km

Behavior and Additional Comments

Densely packed group all within 1-2 body lengths of one another. Animals showing little directional travelling staying in the same area through out the sighting. Animals showed more characteristics of inshore spotted dolphins having more spotting and light dark alternating body color.

Friday, May 4, 2012 Sighting # 2

Initial sighting on Track

Time: 10:03 WP#: 11 Lat: 36.121464 Long: -74.657081
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Spalsh
On/Off Effort: On Trackline: 45 Beaufort Sea State: 1
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 10:11 WP#: 12 Lat: 36.113022 Long: -74.660513
Species: *Delphinus delphis* Numbers (Low/High/Best): 35 / 40 / 37
Features used in Species ID: Yellow coloration along midline from rostrum to trailing edge of d fin
white coloration from peduncle meeting yellow in v shape. Yellow coloration to pectoral fins.
Representative images used for Species ID: 30, 32, & 35
Photographer: Erin Frame numbers: 19 - 37 Spacer: 38
Calculated distance from Trackline: 0.99 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Animals hanging at the surface in smaller sub groups of between 7-10 individuals. Three groups observed in area with interactions within groups observed.
Lot of splashing occurred when animals surfaced.

Friday, May 4, 2012 Sighting # 3

Initial sighting on Track

Time: 10:13 WP#: 14 Lat: 36.119861 Long: -74.564540
Vertical Angle: 1 Horizontal Bearing in Degrees: 45 Sighting Cue: Splash
On/Off Effort: On Trackline: 45 Beaufort Sea State: 1
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 10:14 WP#: 15 Lat: 36.118288 Long: -74.558515
Species: *Delphinus delphis* Numbers (Low/High/Best): 35 / 45 / 40
Features used in Species ID: Yellow coloration along midline from rostrum to trailing edge of d fin white coloration from peduncle meeting yellow in v shape. Yellow coloration to pectoral fins.
Representative images used for Species ID: 42
Photographer: Erin Frame numbers: 39 - 56 Spacer: 57
Calculated distance from Trackline: 0.57 km

Final Time and Position of Sighting

Time: 10:17 WP#: 16 Lat: 36.113911 Long: -74.557510
Calculated Distance Traveled: 0.50 km

Behavior and Additional Comments

One large, densely packed group - splashing while at the surface. Animals changing position within the group and interacting with one another then diving sub surface, out of sight for periods of time.

Friday, May 4, 2012 Sighting # 4

Initial sighting on Track

Time: 10:20 WP#: 18 Lat: 36.120743 Long: -74.463989
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Blow
On/Off Effort: On Trackline: 45 Beaufort Sea State: 1
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 10:21 WP#: 19 Lat: 36.129849 Long: -74.468156
Species: *Physeter macrocephalus* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Large square head with blow hole facing forward and off to one side "knuckles" on dorsal ridge, wrinkled body especially posterior.
Representative images used for Species ID: 59, 68, & 77
Photographer: Erin Frame numbers: 58 - 81 Spacer: 82
Calculated distance from Trackline: 1.08 km

Final Time and Position of Sighting

Time: 10:21 WP#: 20 Lat: 36.128327 Long: -74.463494
Calculated Distance Traveled: 0.45 km

Behavior and Additional Comments

Second animal appeared while circling on the first. Sighting occurred right on a sargassum line.
One animal had white scarring preceding its dorsal fin.

Friday, May 4, 2012 Sighting # 5

Initial sighting on Track

Time: 10:20 WP#: 18 Lat: 36.120743 Long: -74.463989
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: Off Trackline: 45 Beaufort Sea State: 1
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 10:25 WP#: 21 Lat: 36.126969 Long: -74.460064
Species: *Tursiops truncatus* Numbers (Low/High/Best): 6 / 8 / 7
Features used in Species ID: Robust body appearance, uniform coloration except for white pigmentation on peduncle.
Representative images used for Species ID: 86 & 89
Photographer: Erin Frame numbers: 83 - 92 Spacer: 93
Calculated distance from Trackline: 0.78 km

Final Time and Position of Sighting

Time: 10:27 WP#: 22 Lat: 36.120183 Long: -74.457443
Calculated Distance Traveled: 0.79 km

Behavior and Additional Comments

A couple of small groups widely spaced from one another. White peduncles clearly visible.
Observed while circling sperm whales

Friday, May 4, 2012 Sighting # 6

Initial sighting on Track

Time: 10:31 WP#: 25 Lat: 36.118302 Long: -74.395113
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 45 Beaufort Sea State: 1
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 10:32 WP#: 26 Lat: 36.116379 Long: -74.394527
Species: *Tursiops truncatus* Numbers (Low/High/Best): 37 / 41 / 39
Features used in Species ID: Robust body appearance with uniform grey coloration across body
Representative images used for Species ID: 96 & 97
Photographer: Erin Frame numbers: 94 - 104 Spacer: 105
Calculated distance from Trackline: 0.22 km

Final Time and Position of Sighting

Time: 10:35 WP#: 27 Lat: 36.116884 Long: -74.398342
Calculated Distance Traveled: 0.35 km

Behavior and Additional Comments

Three sub groups spending considerable time sub surface. No directional travel to group.

Friday, May 4, 2012 Sighting # 7

Initial sighting on Track

Time: NA WP#: NA Lat: NA Long: NA
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: Off Trackline: 45 Beaufort Sea State: 1
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 10:42 WP#: 30 Lat: 36.125553 Long: -74.342572
Species: *Tursiops truncatus* Numbers (Low/High/Best): 8 / 8 / 8
Features used in Species ID: Uniform grey colorations with white peduncles, robust body appearance.
Representative images used for Species ID: 108 & 109
Photographer: Erin Frame numbers: 106 - 120 Spacer: 121
Calculated distance from Trackline: NA

Final Time and Position of Sighting

Time: 10:43 WP#: 31 Lat: 36.123705 Long: -74.344016
Calculated Distance Traveled: 0.24 km

Behavior and Additional Comments

Well spread group. Animals sighted while investigating whale shark which was the original sighting que.

Friday, May 4, 2012 Sighting # 8

Initial sighting on Track

Time: 10:53 WP#: 36 Lat: 36.042353 Long: -74.587124
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 44 Beaufort Sea State: 1
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 11:00 WP#: 37 Lat: 36.038311 Long: -74.582717
Species: *Unidentified Mesoplodon* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Large body, small pectoral fins and dorsal fin.
Representative images used for Species ID: none
Photographer: Erin Frame numbers: no images Spacer: none
Calculated distance from Trackline: 0.60 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Observed single animal while looking for another que.

Friday, May 4, 2012 Sighting # 9

Initial sighting on Track

Time: 11:04 WP#: 39 Lat: 36.043725 Long: -74.681414
Vertical Angle: 1 Horizontal Bearing in Degrees: 45 Sighting Cue: Splash
On/Off Effort: On Trackline: 44 Beaufort Sea State: 1
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 11:05 WP#: 40 Lat: 36.041401 Long: -74.684002
Species: *Delphinus delphis* Numbers (Low/High/Best): 40 / 50 / 45
Features used in Species ID: Yellow coloration along midline to ventral area below dorsal fin lighter grey /white coloration from peduncle meeting yellow forming hourglass pattern. Light pectorals.
Representative images used for Species ID: 130, 134, & 137
Photographer: Erin Frame numbers: 122 - 138 Spacer: 139
Calculated distance from Trackline: 0.35 km

Final Time and Position of Sighting

Time: 11:07 WP#: 41 Lat: 36.047293 Long: -74.685466
Calculated Distance Traveled: 0.67 km

Behavior and Additional Comments

Dense group traveling at a moderate pace.

Friday, May 4, 2012 Sighting # 10

Initial sighting on Track

Time: 11:34 WP#: 50 Lat: 35.975614 Long: -74.734733
Vertical Angle: 3 Horizontal Bearing in Degrees: 110 Sighting Cue: Splash
On/Off Effort: On Trackline: 43 Beaufort Sea State: 1
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 11:39 WP#: 51 Lat: 35.988005 Long: -74.735377
Species: *Delphinus delphis* Numbers (Low/High/Best): 200 / 250 / 225
Features used in Species ID: Yellow coloration along midline to ventral area below dorsal fin lighter grey /white coloration from peduncle meeting yellow forming hourglass pattern. Light pectorals.
Representative images used for Species ID: 142, 146, 152, 155 & 162
Photographer: Erin Frame numbers: 140 - 165 Spacer: 166
Calculated distance from Trackline: 1.38 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Three densely packed groups traveling slowly in a stretched out line. Lots of splashing while surfacing and interacting with one another.

Friday, May 4, 2012 Sighting # 11

Initial sighting on Track

Time: 11:42 WP#: 53 Lat: 35.974300 Long: -74.634677
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 43 Beaufort Sea State: 1
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 11:43 WP#: 54 Lat: 35.977379 Long: -74.634714
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Small pectoral fins, small dorsal fin placed far back on animals body.
Representative images used for Species ID: 174, 178, 179, 182, 183, 186
Photographer: Erin Frame numbers: 167 - 189 Spacer: 190
Calculated distance from Trackline: 0.34 km

Final Time and Position of Sighting

Time: 11:44 WP#: 55 Lat: 35.975891 Long: -74.641809
Calculated Distance Traveled: 0.66 km

Behavior and Additional Comments

Pair of animals surfacing at regular intervals before diving deep and out of sight.

Friday, May 4, 2012 Sighting # 12

Initial sighting on Track

Time: 11:46 WP#: 57 Lat: 35.974276 Long: -74.583458
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 43 Beaufort Sea State: 1
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 11:52 WP#: 58 Lat: 35.979662 Long: -74.557988
Species: *Stenella frontalis* Numbers (Low/High/Best): 55 / 60 / 58
Features used in Species ID: White tip to rostrum, alternating light and dark coloration across the body, spotting only visible in lighter regions of large animals.
Representative images used for Species ID: 195, 196, 202 & 203
Photographer: Erin Frame numbers: 191 - 208 Spacer: 209
Calculated distance from Trackline: 2.37 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Closely spaced group traveling slowly with frequent surfacings. Animals dove from surface occasionally during the course of our observations.

Friday, May 4, 2012 Sighting # 13

Initial sighting on Track

Time: 11:52 WP#: 60 Lat: 35.974399 Long: -74.529432
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 43 Beaufort Sea State: 1
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 11:53 WP#: 61 Lat: 35.973742 Long: -74.529780
Species: *Tursiops truncatus* Numbers (Low/High/Best): 12 / 15 / 13
Features used in Species ID: Robust body appearance, uniform grey coloration except for lighter coloration across peduncle region.
Representative images used for Species ID: 210, 215, & 217
Photographer: Erin Frame numbers: 210 - 219 Spacer: 220
Calculated distance from Trackline: 0.08 km

Final Time and Position of Sighting

Time: 11:56 WP#: 62 Lat: 35.973524 Long: -74.538430
Calculated Distance Traveled: 0.78 km

Behavior and Additional Comments

Traveling in stretched out lines.

Friday, May 4, 2012 Sighting # 14

Initial sighting on Track

Time: 12:12 WP#: 67 Lat: 35.905070 Long: -74.627547
Vertical Angle: 1 Horizontal Bearing in Degrees: 60 Sighting Cue: Spalsh
On/Off Effort: On Trackline: 42 Beaufort Sea State: 1
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 12:14 WP#: 68 Lat: 35.907999 Long: -74.635989
Species: *Tursiops truncatus* Numbers (Low/High/Best): 18 / 25 / 23
Features used in Species ID: Robust body appearance, uniform grey coloration except for lighter coloration across peduncle region.
Representative images used for Species ID: 222 & 223
Photographer: Erin Frame numbers: 221 - 228 Spacer: 229
Calculated distance from Trackline: 0.83 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Multiple groups all with slow travel near the surface. White peduncles clearly visible.

Friday, May 4, 2012 Sighting # 15

Initial sighting on Track

Time: 13:56 WP#: 80 Lat: 35.830982 Long: -74.727038
Vertical Angle: 2 Horizontal Bearing in Degrees: 60 Sighting Cue: Body
On/Off Effort: On Trackline: 41 Beaufort Sea State: 1
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 13:57 WP#: 81 Lat: 35.821674 Long: -74.724824
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 3 / 3 / 3
Features used in Species ID: Small pectora fins, small dorsal fin placed far back on animals body.

Representative images used for Species ID: 231 & 233
Photographer: Erin Frame numbers: 230 - 233 Spacer: 234
Calculated distance from Trackline: 1.05 km

Final Time and Position of Sighting

Time: 13:58 WP#: 82 Lat: 35.829477 Long: -74.725450
Calculated Distance Traveled: 0.87 km

Behavior and Additional Comments

One animal much whiter than other, only at the surface for a brief period before diving deep out of sight.

Friday, May 4, 2012 Sighting # 16

Initial sighting on Track

Time: 13:59 WP#: 84 Lat: 35.830369 Long: -74.663787
Vertical Angle: 3 Horizontal Bearing in Degrees: 110 Sighting Cue: Body
On/Off Effort: On Trackline: 41 Beaufort Sea State: 1
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 14:00 WP#: 85 Lat: 35.843667 Long: -74.666141
Species: *Tursiops truncatus* Numbers (Low/High/Best): 28 / 35 / 32
Features used in Species ID: Uniform grey coloration, robust body appearance.

Representative images used for Species ID: 236
Photographer: Erin Frame numbers: 235 - 241 Spacer: 242
Calculated distance from Trackline: 1.49 km

Final Time and Position of Sighting

Time: 14:03 WP#: 86 Lat: 35.848992 Long: -74.665287
Calculated Distance Traveled: 0.60 km

Behavior and Additional Comments

Two groups of animals.

Friday, May 4, 2012 Sighting # 17

Initial sighting on Track

Time: 14:05 WP#: 88 Lat: 35.834051 Long: -74.583971
Vertical Angle: 2 Horizontal Bearing in Degrees: 45 Sighting Cue: Body
On/Off Effort: On Trackline: 41 Beaufort Sea State: 1
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 14:06 WP#: 89 Lat: 35.825246 Long: -74.586393
Species: *Tursiops truncatus* Numbers (Low/High/Best): 38 / 43 / 40
Features used in Species ID: Robust body appearance, uniform grey coloration except for lighter white peduncle coloration.
Representative images used for Species ID: 245 & 247
Photographer: Erin Frame numbers: 243 - 260 Spacer: 261
Calculated distance from Trackline: 1.00 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Multiple groups near patchy sargassum.

Friday, May 4, 2012 Sighting # 18

Initial sighting on Track

Time: 14:22 WP#: 93 Lat: 35.757505 Long: -74.503445
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 40 Beaufort Sea State: 1
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 14:23 WP#: 94 Lat: 35.758378 Long: -74.497698
Species: *Tursiops truncatus* Numbers (Low/High/Best): 30 / 38 / 34
Features used in Species ID: Robust body appearance, uniform grey coloration except for lighter white peduncle coloration.
Representative images used for Species ID: 266 & 269
Photographer: Erin Frame numbers: 262 - 270 Spacer: 271
Calculated distance from Trackline: 0.53 km

Final Time and Position of Sighting

Time: 14:25 WP#: 96 Lat: 35.760466 Long: -74.496310
Calculated Distance Traveled: 0.26 km

Behavior and Additional Comments

Single dense group with a few single outliers.

Friday, May 4, 2012 Sighting # 19

Initial sighting on Track

Time: 14:28 WP#: 99 Lat: 35.761786 Long: -74.584402
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 41 Beaufort Sea State: 1
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 14:28 WP#: 100 Lat: 35.767991 Long: -74.577045
Species: *Tursiops truncatus* Numbers (Low/High/Best): 40 / 60 / 50
Features used in Species ID: Uniform grey coloration, robust body appearance and dorsal fin.

Representative images used for Species ID: 279, 281, 282, & 283
Photographer: Erin Frame numbers: 272 - 283 Spacer: 284
Calculated distance from Trackline: 0.96 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Multiple groups covering both sides of the trackline. Four groups with between 10 - 15 animals in each Subgroup approached passing tanker and began bow riding.

Friday, May 4, 2012 Sighting # 20

Initial sighting on Track

Time: 14:34 WP#: 102 Lat: 35.757415 Long: -74.662514
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 40 Beaufort Sea State: 1
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 14:36 WP#: 103 Lat: 35.761736 Long: -74.656952
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 5 / 5 / 5
Features used in Species ID: Black bodied animals, large square head with no rostrum. Some lighter coloration on peduncle.
Representative images used for Species ID: 287
Photographer: Erin Frame numbers: 285 - 288 Spacer: 289
Calculated distance from Trackline: 0.69 km

Final Time and Position of Sighting

Time: 14:40 WP#: 104 Lat: 35.762005 Long: -74.651617
Calculated Distance Traveled: 0.48 km

Behavior and Additional Comments

Well spread single animals separated by ~ one body length.

Friday, May 4, 2012 Sighting # 21

Initial sighting on Track

Time: 14:47 WP#: 107 Lat: 35.757272 Long: -74.813943
Vertical Angle: 3 Horizontal Bearing in Degrees: 110 Sighting Cue: Body
On/Off Effort: On Trackline: 40 Beaufort Sea State: 1
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 14:49 WP#: 108 Lat: 35.748995 Long: -74.799130
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 9 / 12 / 11
Features used in Species ID: Large black bodied animals with blunt square heads. Wide dorsal fin placed ~1/3 back on the animals body.
Representative images used for Species ID: 296, 298 & 299
Photographer: Erin Frame numbers: 290 - 299 Spacer: 300
Calculated distance from Trackline: 1.62 km

Final Time and Position of Sighting

Time: 14:51 WP#: 109 Lat: 35.755245 Long: -74.795795
Calculated Distance Traveled: 0.76 km

Behavior and Additional Comments

Staying sub surface between brief periods up for air.

Friday, May 4, 2012 Sighting # 22

Initial sighting on Track

Time: 15:14 WP#: 121 Lat: 35.688860 Long: -74.730110
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 39 Beaufort Sea State: 2
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 15:15 WP#: 122 Lat: 35.692604 Long: -74.734785
Species: *Unidentified Mesoplodon* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Small dorsal fin placed well back on the animals body, smooth tapered head leading to rostrum. Large body size.
Representative images used for Species ID: NA
Photographer: Erin Frame numbers: NA Spacer: NA
Calculated distance from Trackline: 0.59 km

Final Time and Position of Sighting

Time: 15:16 WP#: 123 Lat: 35.691930 Long: -74.734737
Calculated Distance Traveled: 0.08 km

Behavior and Additional Comments

A single observation of animal before it dove from the surface.

Friday, May 4, 2012 Sighting # 23

Initial sighting on Track

Time: 15:18 WP#: 125 Lat: 35.686349 Long: -74.689301
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 39 Beaufort Sea State: 2
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 15:22 WP#: 126 Lat: 35.985520 Long: -74.688836
Species: *Tursiops truncatus* Numbers (Low/High/Best): 26 / 35 / 30
Features used in Species ID: Uniform grey body coloration except for white peduncle region
Robust body appearance.
Representative images used for Species ID: 301 & 304
Photographer: Erin Frame numbers: 301 - 313 Spacer: 314
Calculated distance from Trackline: 0.10 km

Final Time and Position of Sighting

Time: 15:23 WP#: 127 Lat: 35.688322 Long: -74.685446
Calculated Distance Traveled: 0.40 km

Behavior and Additional Comments

Large group traveling together - broke into smaller more dense groups. Lot of subsurface travel
White peduncles clearly visible.

Friday, May 4, 2012 Sighting # 24

Initial sighting on Track

Time: 15:25 WP#: 129 Lat: 35.688786 Long: -74.608397
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 39 Beaufort Sea State: 1
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 15:26 WP#: 130 Lat: 35.682618 Long: -74.603401
Species: *Unidentified Mesoplodon* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Small dorsal fin placed well back on the animals body, smooth
tapered head leading to rostrum. Large body size.
Representative images used for Species ID: NA
Photographer: Erin Frame numbers: NA Spacer: NA
Calculated distance from Trackline: 0.82 km

Final Time and Position of Sighting

Time: 15:26 WP#: 131 Lat: 35.691484 Long: -74.603619
Calculated Distance Traveled: 0.99 km

Behavior and Additional Comments

Beaked whale observed diving. Assumed location of animal.

Friday, May 4, 2012 Sighting # 25

Initial sighting on Track

Time: 15:44 WP#: 136 Lat: 35.620164 Long: -74.677944
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 38 Beaufort Sea State: 2
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 15:45 WP#: 137 Lat: 35.621951 Long: -74.681484
Species: *Tursiops truncatus* Numbers (Low/High/Best): 44 / 50 / 48
Features used in Species ID: Uniform grey coloration except for white region around peduncle. Robust body appearance and dorsal fin.
Representative images used for Species ID: 320
Photographer: Erin Frame numbers: 315 -323 Spacer: 324
Calculated distance from Trackline: 0.38 km

Final Time and Position of Sighting

Time: 15:50 WP#: 138 Lat: 35.626328 Long: -74.684078
Calculated Distance Traveled: 0.54 km

Behavior and Additional Comments

Multiple groups - slow travel just below the surface. Group surfacing quickly and frequently then diving again. White peduncles present. Four groups of ~11.

Friday, May 4, 2012 Sighting # 26

Initial sighting on Track

Time: 15:52 WP#: 140 Lat: 35.620905 Long: -74.770941
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 38 Beaufort Sea State: 2
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 15:53 WP#: 141 Lat: 35.625957 Long: -74.760278
Species: *Tursiops truncatus* Numbers (Low/High/Best): 7 / 10 / 8
Features used in Species ID: Uniform grey coloration except for white region on peduncle. Robust body appearance.
Representative images used for Species ID: 326
Photographer: Erin Frame numbers: 325 -331 Spacer: 332
Calculated distance from Trackline: 1.12 km

Final Time and Position of Sighting

Time: 15:57 WP#: 142 Lat: 35.610554 Long: -74.764056
Calculated Distance Traveled: 1.75 km

Behavior and Additional Comments

Multiple groups interacting with one another along a current line. Groups were disperse with lots of splashing at the surface with considerable time spent deep below the surface.

Friday, May 4, 2012 Sighting # 27

Initial sighting on Track

Time: 15:59 WP#: 144 Lat: 35.619474 Long: -74.809895
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 38 Beaufort Sea State: 2
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 16:03 WP#: 145 Lat: 35.620312 Long: -74.795580
Species: *Tursiops truncatus* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Uniform grey coloration, robust body appearance.

Representative images used for Species ID: 336
Photographer: Erin Frame numbers: 333 - 338 Spacer: 339
Calculated distance from Trackline: 1.30 km

Final Time and Position of Sighting

Time: 16:03 WP#: 146 Lat: 35.617900 Long: -74.796766
Calculated Distance Traveled: 0.29 km

Behavior and Additional Comments

Initial sighting of two animals, white peduncles clearly visible.

Friday, May 4, 2012 Sighting # 28

Initial sighting on Track

Time: 16:10 WP#: 150 Lat: 35.619620 Long: -75.072721
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Blow
On/Off Effort: On Trackline: 38 Beaufort Sea State: 2
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 16:11 WP#: 151 Lat: 35.629127 Long: -75.069973
Species: *Megaptera novaeangliae* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Large white pectoral fins white nodules on them.
Small dorsal fin, large and deeply divided caudal flippers.
Representative images used for Species ID: NA
Photographer: Erin Frame numbers: NA Spacer: NA
Calculated distance from Trackline: 1.09 km

Final Time and Position of Sighting

Time: 16:23 WP#: 152 Lat: 35.616406 Long: -75.085432
Calculated Distance Traveled: 1.99 km

Behavior and Additional Comments

Animal at surface then dove quickly and was not relocated.

Friday, June 8, 2012 Sighting # 1

Initial sighting on Track

Time: 10:17 WP#: 6 Lat: 34.521601 Long: -75.651604
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 20 Beaufort Sea State: 4
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 10:18 WP#: 7 Lat: 34.535699 Long: -75.645087
Species: *Unidentified Delphinid* Numbers (Low/High/Best): 8 / 8 / 8
Features used in Species ID: N/A

Representative images used for Species ID: N/A
Photographer: Ryan Frame numbers: N/A Spacer: N/A
Calculated distance from Trackline: 1.68 km

Final Time and Position of Sighting

Time: 10:32 WP#: 8 Lat: 34.534933 Long: -75.642230
Calculated Distance Traveled: 0.28 km

Behavior and Additional Comments

No photos, no resight. Estimates of location.

Friday, June 8, 2012 Sighting # 2

Initial sighting on Track

Time: 11:47 WP#: 20 Lat: 34.734383 Long: -75.513334
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 23 Beaufort Sea State: 3
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 11:49 WP#: 21 Lat: 34.723967 Long: -75.511635
Species: *Tursiops truncatus* Numbers (Low/High/Best): 20 / 28 / 25
Features used in Species ID: Uniform gray robust animal with white peduncles

Representative images used for Species ID: 10, 11, 17, 18
Photographer: Ryan Frame numbers: 1 - 24 Spacer: 25
Calculated distance from Trackline: 1.17 km

Final Time and Position of Sighting

Time: 11:59 WP#: 22 Lat: 34.729783 Long: -75.507934
Calculated Distance Traveled: 0.73 km

Behavior and Additional Comments

Logging at the surface, 2 groups one with about 8 and the other with 12+. No travel

Friday, June 8, 2012 Sighting # 3

Initial sighting on Track

Time: 14:38 WP#: 34 Lat: 34.764822 Long: -75.417480
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 24 Beaufort Sea State: 2
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 14:39 WP#: 35 Lat: 34.769632 Long: -75.416677
Species: *Tursiops truncatus* Numbers (Low/High/Best): 12 / 17 / 15
Features used in Species ID: Large robust uniform gray animals with white peduncles

Representative images used for Species ID: 32, 42-44, 49, 50
Photographer: Ryan Frame numbers: 26 - 62 Spacer: 63
Calculated distance from Trackline: 0.54 km

Final Time and Position of Sighting

Time: 14:42 WP#: 36 Lat: 34.769668 Long: -75.418812
Calculated Distance Traveled: 0.20 km

Behavior and Additional Comments

Hanging just below the surface, regular surfacing, not traveling, facing different directions.

Friday, June 8, 2012 Sighting # 4

Initial sighting on Track

Time: 15:35 WP#: 48 Lat: 34.805102 Long: -75.212544
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 26 Beaufort Sea State: 1
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 15:37 WP#: 49 Lat: 34.811290 Long: -75.211198
Species: *Grampus griseus* Numbers (Low/High/Best): 7 / 10 / 8
Features used in Species ID: Light gray to white bodied animals with scarring and a blunt head

Representative images used for Species ID: 64, 73, 84, 85
Photographer: Ryan Frame numbers: 64 - 113 Spacer: 114
Calculated distance from Trackline: 0.70 km

Final Time and Position of Sighting

Time: 15:42 WP#: 50 Lat: 34.807190 Long: -75.208041
Calculated Distance Traveled: 0.54 km

Behavior and Additional Comments

Milling just below the surface, rolling around, staying in a tight group.

Friday, June 8, 2012 Sighting # 5

Initial sighting on Track

Time: 15:43 WP#: 52 Lat: 34.795875 Long: -75.193204
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 26 Beaufort Sea State: 1
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 15:47 WP#: 53 Lat: 34.802065 Long: -75.194170
Species: *Stenella clymene* Numbers (Low/High/Best): 50 / 75 / 65
Features used in Species ID: Long rostrum with black down the middle and sides, lighter gray coloration running down the sides of body from nose to posterior dorsal fin
Representative images used for Species ID: 181, 197, 210, 211, 248
Photographer: Ryan Frame numbers: 115 - 264 Spacer: 265
Calculated distance from Trackline: 0.69 km

Final Time and Position of Sighting

Time: 15:57 WP#: 54 Lat: 34.803351 Long: -75.196037
Calculated Distance Traveled: 0.22 km

Behavior and Additional Comments

Lots of splashing, huge spaced out group, short burst out of the water. Calf present

Friday, June 8, 2012 Sighting # 6

Initial sighting on Track

Time: 15:59 WP#: 56 Lat: 34.747912 Long: -75.138176
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 26 Beaufort Sea State: 1
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 16:02 WP#: 57 Lat: 34.747765 Long: -75.130554
Species: *Unidentified Mesoplodon* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Far sitting dorsal fin, small pectorals
Representative images used for Species ID: 273-275
Photographer: Ryan Frame numbers: 266 - 278 Spacer: 279
Calculated distance from Trackline: 0.70 km

Final Time and Position of Sighting

Time: 16:02 WP#: 58 Lat: 34.750346 Long: -75.126887
Calculated Distance Traveled: 0.44 km

Behavior and Additional Comments

One individual was smaller than the other, staying close together.

Saturday, June 9, 2012 Sighting # 1

Initial sighting on Track

Time: 9:11 WP#: 4 Lat: 35.210545 Long: -74.975975
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Blow
On/Off Effort: On Trackline: 32 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 9:15 WP#: 5 Lat: 35.205705 Long: -74.956640
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 8 / 10 / 9
Features used in Species ID: Large square head, black body with large dorsal fin ~1/3 back animals body. Pectorals to to before dorsal fin.
Representative images used for Species ID: 6 & 7
Photographer: Erin Frame numbers: 1 - 11 Spacer: 12
Calculated distance from Trackline: 1.83 km

Final Time and Position of Sighting

Time: 9:24 WP#: 6 Lat: 35.221070 Long: -74.973535
Calculated Distance Traveled: 2.30 km

Behavior and Additional Comments

A couple of groups observed - circled on a pair of animals, one larger than the other.
Pair showed normal surfacing behavior with no signs of avoidance.

Saturday, June 9, 2012 Sighting # 2

Initial sighting on Track

Time: 10:23 WP#: 17 Lat: 35.342726 Long: -74.887691
Vertical Angle: 2 Horizontal Bearing in Degrees: 110 Sighting Cue: Body
On/Off Effort: On Trackline: 34 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 10:24 WP#: 18 Lat: 35.343964 Long: -74.889252
Species: *Tursiops truncatus* Numbers (Low/High/Best): 11 / 12 / 11
Features used in Species ID: Robust body appearance, uniform grey coloration, broad dorsal fin.
Representative images used for Species ID: 14, 16, 17, 20
Photographer: Erin Frame numbers: 13 - 21 Spacer: 22
Calculated distance from Trackline: 0.20 km

Final Time and Position of Sighting

Time: 10:31 WP#: 19 Lat: 35.334858 Long: -74.902508
Calculated Distance Traveled: 1.57 km

Behavior and Additional Comments

2 groups one of 3-4 individuals and another of 8.
Groups spent lots of time below the surface. While at the surface displayed energenic surfacings causing lost of disturbance.

Saturday, June 9, 2012 Sighting # 3

Initial sighting on Track

Time: 10:33 WP#: 21 Lat: 35.342101 Long: -74.863121
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 34 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 10:39 WP#: 22 Lat: 35.335487 Long: -74.876690
Species: *Tursiops truncatus* Numbers (Low/High/Best): 34 / 35 / 34
Features used in Species ID: Robust body appearance, uniform grey coloration, large dorsal fin.

Representative images used for Species ID: 24, 28, 31, 33
Photographer: Erin Frame numbers: 23 - 33 Spacer: 34
Calculated distance from Trackline: 1.43 km

Final Time and Position of Sighting

Time: 10:39 WP#: 23 Lat: 35.336707 Long: -74.879624
Calculated Distance Traveled: 0.30 km

Behavior and Additional Comments

Two groups with 15 animals in each plus a few outliers around each sub-group.

Saturday, June 9, 2012 Sighting # 4

Initial sighting on Track

Time: 11:01 WP#: 27 Lat: 35.411169 Long: -74.502101
Vertical Angle: 1 Horizontal Bearing in Degrees: 100 Sighting Cue: Body
On/Off Effort: On Trackline: 35 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 11:04 WP#: 29 Lat: 35.412325 Long: -74.494889
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Large body size, head conical shaped, small pectoral fins, dorsal fin small and placed far back on the animals body.
Representative images used for Species ID: 35 & 37
Photographer: Erin Frame numbers: 35 - 40 Spacer: 41
Calculated distance from Trackline: 0.67 km

Final Time and Position of Sighting

Time: 11:10 WP#: 30 Lat: 35.414586 Long: -74.494338
Calculated Distance Traveled: 0.26 km

Behavior and Additional Comments

White head to animals. Two animals of different sizes.

Saturday, June 9, 2012 Sighting # 5

Initial sighting on Track

Time: 11:19 WP#: 33 Lat: 35.410281 Long: -74.853305
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 35 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 11:20 WP#: 34 Lat: 35.409601 Long: -74.851604
Species: *Tursiops truncatus* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Uniform grey coloration, robust body and dorsal fin.

Representative images used for Species ID: 44
Photographer: Erin Frame numbers: 42 - 44 Spacer: 45
Calculated distance from Trackline: 0.17 km

Final Time and Position of Sighting

Time: 11:31 WP#: 35 Lat: 35.413182 Long: -74.843687
Calculated Distance Traveled: 0.82 km

Behavior and Additional Comments

A pair of animals spending considerable time below the surface. Spent time locating and positioning plane in order to get photographs.

Friday, June 8, 2012 Sighting # 6

Initial sighting on Track

Time: 13:41 WP#: 46 Lat: 36.123836 Long: -74.425623
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 45 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 13:45 WP#: 47 Lat: 36.128285 Long: -74.414388
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 5 / 10 / 8
Features used in Species ID: Large black bodied animals with square heads, large broad based dorsal fin place ~1/3 back the animals body. Pectoral fins do not extend past start of dorsal fin.
Representative images used for Species ID: 65, 67, 71, 73, 75
Photographer: Erin Frame numbers: 46 - 60 Spacer: 77
Calculated distance from Trackline: 1.12 km

Final Time and Position of Sighting

Time: 13:56 WP#: 50 Lat: 36.124848 Long: -74.422104
Calculated Distance Traveled: 0.69 km

Behavior and Additional Comments

Single group of pilot whales staying submerged during initial observation.

Saturday, June 9, 2012 Sighting # 7

Initial sighting on Track

Time: 13:41 WP#: 46 Lat: 36.123836 Long: -74.425623
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: Off Trackline: 45 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 13:46 WP#: 48 Lat: 36.131861 Long: -74.410493
Species: *Grampus griseus* Numbers (Low/High/Best): 6 / 8 / 7
Features used in Species ID: Tall slender dorsal fins, long thin pectorals, rostrum with crease in center. Animals with various scarring patterns across their bodies.
Representative images used for Species ID: 51, 52, 55, 56, 60
Photographer: Erin Frame numbers: 61 - 76 Spacer: 77
Calculated distance from Trackline: 1.63 km

Final Time and Position of Sighting

Time: 13:56 WP#: 50 Lat: 36.124848 Long: -74.422104
Calculated Distance Traveled: 1.30 km

Behavior and Additional Comments

Animals observed while circling on Sighting #6

Saturday, June 9, 2012 Sighting # 8

Initial sighting on Track

Time: 14:07 WP#: 54 Lat: 36.018529 Long: -74.471665
Vertical Angle: 2 Horizontal Bearing in Degrees: 100 Sighting Cue: Blow
On/Off Effort: On Trackline: 44 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 14:08 WP#: 55 Lat: 36.058991 Long: -74.471143
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Large dark bodied animals with lighter region from area of pectoral fins to dorsal surface, around dorsal fin to along peduncle. Large square head. Broad based dorsal fin.
Representative images used for Species ID: 79, 81, 86
Photographer: Erin Frame numbers: 78 - 88 Spacer: 89
Calculated distance from Trackline: 4.50 km

Final Time and Position of Sighting

Time: 14:13 WP#: 56 Lat: 36.058537 Long: -74.464624
Calculated Distance Traveled: 0.59 km

Behavior and Additional Comments

Animals surfacing with front 1/3 of body exiting water with large exhales that were clearly visible.

Saturday, June 9, 2012 Sighting # 9

Initial sighting on Track

Time: 14:19 WP#: 58 Lat: 36.048791 Long: -74.642529
Vertical Angle: 2 Horizontal Bearing in Degrees: 100 Sighting Cue: Blow
On/Off Effort: On Trackline: 44 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 14:20 WP#: 59 Lat: 36.048126 Long: -74.642296
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 30 / 35 / 31
Features used in Species ID: Large square head, dark bodied except for lighter pigmentstion from pectorals to peduncle, broad based dorsal fin ~1/3 back the animals body.
Representative images used for Species ID: 90, 97, 99, 106, 113
Photographer: Erin Frame numbers: 90 - 113 Spacer: 114
Calculated distance from Trackline: 0.08 km

Final Time and Position of Sighting

Time: 14:24 WP#: 60 Lat: 36.056512 Long: -74.642864
Calculated Distance Traveled: 0.93 km

Behavior and Additional Comments

Two groups, one of ~20 animals hanging at the surface and the second group of ~15 animals hanging below the surface.

Saturday, June 9, 2012 Sighting # 10

Initial sighting on Track

Time: 14:27 WP#: 62 Lat: 36.047013 Long: -74.733772
Vertical Angle: 3 Horizontal Bearing in Degrees: 110 Sighting Cue: Splash
On/Off Effort: On Trackline: 44 Beaufort Sea State: 3
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 14:33 WP#: 63 Lat: 36.049014 Long: -74.720814
Species: *Tursiops truncatus* Numbers (Low/High/Best): 31 / 28 / 29
Features used in Species ID: Uniform grey coloration, robust body appearance, white peduncle coloration on peduncle.
Representative images used for Species ID: 124, 125, 131, 136, 137
Photographer: Erin Frame numbers: 115 - 139 Spacer: 140
Calculated distance from Trackline: 1.19 km

Final Time and Position of Sighting

Time: 14:36 WP#: 64 Lat: 36.051145 Long: -74.725803
Calculated Distance Traveled: 0.51 km

Behavior and Additional Comments

Densely packed group splashing while surfacing. Upon circling animals decreased travel speed and formed a more closely packed group that showed slow travel at the surface.

Animals displayed white peduncles.

Saturday, June 9, 2012 Sighting # 11

Initial sighting on Track

Time: 15:03 WP#: 71 Lat: 35.978561 Long: -74.659583
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Jump
On/Off Effort: On Trackline: 43 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 15:04 WP#: 72 Lat: 35.958967 Long: -74.654650
Species: *Tursiops truncatus* Numbers (Low/High/Best): 20 / 23 / 21
Features used in Species ID: Robust body appearance, uniform grey coloration.

Representative images used for Species ID: 143, 145, 148
Photographer: Erin Frame numbers: 141 - 149 Spacer: 150
Calculated distance from Trackline: 2.22 km

Final Time and Position of Sighting

Time: 15:08 WP#: 73 Lat: 35.967823 Long: -74.652794
Calculated Distance Traveled: 1.00 km

Behavior and Additional Comments

Animals traveling on either side of a sargassum line with lots of splashing at the surface. Animals were well dispersed from one another but all were exhibiting similar behavior.

Saturday, June 9, 2012 Sighting # 12

Initial sighting on Track

Time: 15:11 WP#: 75 Lat: 35.983204 Long: -74.510706
Vertical Angle: 3 Horizontal Bearing in Degrees: 110 Sighting Cue: Body
On/Off Effort: On Trackline: 43 Beaufort Sea State: 3
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 15:16 WP#: 76 Lat: 35.996854 Long: -74.512985
Species: *Tursiops truncatus* Numbers (Low/High/Best): 18 / 25 / 22
Features used in Species ID: Robust body appearance, white peduncle coloration, uniform grey

Representative images used for Species ID: 162, 165, 170
Photographer: Erin Frame numbers: 151 - 173 Spacer: 174
Calculated distance from Trackline: 1.53 km

Final Time and Position of Sighting

Time: 15:26 WP#: 77 Lat: 35.995329 Long: -74.508584
Calculated Distance Traveled: 0.43 km

Behavior and Additional Comments

Group traveling at moderate speed at the surface. Changed behavior by diving from the surface to ~30ft depth then reappeared in a dense group traveling much slower just below the surface. Animals displayed white peduncles.

Saturday, June 9, 2012 Sighting # 13

Initial sighting on Track

Time: 15:42 WP#: 81 Lat: 35.913096 Long: -74.634989
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 42 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 15:43 WP#: 82 Lat: 35.922541 Long: -74.638361
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Dark bodied animals, large square head, broad based dorsal fin placed ~1/3 back the animals body.
Representative images used for Species ID: 175 & 179
Photographer: Erin Frame numbers: 175 - 180 Spacer: 181
Calculated distance from Trackline: 1.09 km

Final Time and Position of Sighting

Time: 15:45 WP#: 83 Lat: 35.918940 Long: -74.630591
Calculated Distance Traveled: 0.81 km

Behavior and Additional Comments

Pair of animals of unequal length.

Saturday, June 9, 2012 Sighting # 14

Initial sighting on Track

Time: 15:51 WP#: 85 Lat: 35.909150 Long: -74.823631
Vertical Angle: 1 Horizontal Bearing in Degrees: 100 Sighting Cue: Body
On/Off Effort: On Trackline: 42 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 15:54 WP#: 86 Lat: 35.914315 Long: -74.814962
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 10 / 12 /11
Features used in Species ID: Dark bodied animals, large square head, broad based dorsal fin placed ~1/3 back the animals body.
Representative images used for Species ID: 188
Photographer: Erin Frame numbers: 182 - 188 Spacer: 189
Calculated distance from Trackline: 0.97 km

Final Time and Position of Sighting

Time: 16:00 WP#: 87 Lat: 35.914920 Long: -74.822184
Calculated Distance Traveled: 0.65 km

Behavior and Additional Comments

Two groups logging at the surface, hanging vertical in the water column with their heads at surface and tails deeper.

Sunday, June 10, 2012 Sighting # 1

Initial sighting on Track

Time: 10:52 WP#: 88 Lat: 35.831550 Long: -74.975112
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 41 Beaufort Sea State: 2
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 10:55 WP#: 89 Lat: 35.834870 Long: -74.987720
Species: *Tursiops truncatus* Numbers (Low/High/Best): 7 / 10 / 8
Features used in Species ID: Robust, uniform gray animals

Representative images used for Species ID: 17, 20, 21, 24, 36
Photographer: Ryan Frame numbers: 1 - 45 Spacer: 46
Calculated distance from Trackline: 1.20 km

Final Time and Position of Sighting

Time: 11:00 WP#: 90 Lat: 35.835809 Long: -74.989839
Calculated Distance Traveled: 0.22 km

Behavior and Additional Comments

Tight group, not traveling fast. Lots of rolling.

Sunday, June 10, 2012 Sighting # 2

Initial sighting on Track

Time: 11:08 WP#: 93 Lat: 35.831262 Long: -74.671073
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Blow
On/Off Effort: On Trackline: 41 Beaufort Sea State: 2
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 11:08 WP#: 94 Lat: 35.823113 Long: -74.674842
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 6 / 10 / 7
Features used in Species ID: Large black animals with blunt heads and large dorsal fins

Representative images used for Species ID: 49, 50, 55, 59, 72
Photographer: Ryan Frame numbers: 47 - 75 Spacer: 76
Calculated distance from Trackline: 0.97 km

Final Time and Position of Sighting

Time: 11:13 WP#: 95 Lat: 35.824732 Long: -74.675158
Calculated Distance Traveled: 0.18 km

Behavior and Additional Comments

Two groups, individuals staying a body length or more apart.

Sunday, June 10, 2012 Sighting # 3

Initial sighting on Track

Time: 11:20 WP#: 99 Lat: 35.836200 Long: -74.370563
Vertical Angle: 3 Horizontal Bearing in Degrees: 110 Sighting Cue: Splash
On/Off Effort: On Trackline: 41 Beaufort Sea State: 4
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 11:21 WP#: 100 Lat: 35.830699 Long: -74.380440
Species: *Tursiops truncatus* Numbers (Low/High/Best): 30 / 45 / 40
Features used in Species ID: Robust, uniform gray animals
Representative images used for Species ID: 87, 93, 94
Photographer: Ryan Frame numbers: 77 - 132 Spacer: 133
Calculated distance from Trackline: 1.08 km

Final Time and Position of Sighting

Time: 11:29 WP#: 101 Lat: 35.833018 Long: -74.370434
Calculated Distance Traveled: 0.94 km

Behavior and Additional Comments

Traveling just below the surface, lots of splashing.

Sunday, June 10, 2012 Sighting # 4

Initial sighting on Track

Time: 11:47 WP#: 106 Lat: 35.763063 Long: -74.833116
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 40 Beaufort Sea State: 3
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 11:53 WP#: 107 Lat: 35.767227 Long: -74.830361
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 10 / 15 / 12
Features used in Species ID: Large black to dark gray animals with a blunt head and large dorsal fin
Representative images used for Species ID: 136
Photographer: Ryan Frame numbers: 134 - 142 Spacer: 143
Calculated distance from Trackline: 0.53 km

Final Time and Position of Sighting

Time: 12:04 WP#: 108 Lat: 35.764918 Long: -74.806705
Calculated Distance Traveled: 2.15 km

Behavior and Additional Comments

Just below the surface not surfacing frequently.

Sunday, June 10, 2012 Sighting # 5

Initial sighting on Track

Time: 13:53 WP#: 117 Lat: 35.689403 Long: -74.806818
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 39 Beaufort Sea State: 2
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 13:54 WP#: 118 Lat: 35.689751 Long: -74.809128
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 38 / 50 / 45
Features used in Species ID: Large dark gray to black animal with blunt heads and large dorsal fin with light gray suspenders
Representative images used for Species ID: 155
Photographer: Ryan Frame numbers: 153 - 190 Spacer: 191
Calculated distance from Trackline: 0.21 km

Final Time and Position of Sighting

Time: 14:01 WP#: 119 Lat: 35.690589 Long: -74.792155
Calculated Distance Traveled: 1.54 km

Behavior and Additional Comments

Logging at the surface, 4 different subgroups. There were also a group of hammerhead sharks and manta rays in the area.

Sunday, June 10, 2012 Sighting # 6

Initial sighting on Track

Time: 14:08 WP#: 123 Lat: 35.691800 Long: -74.554676
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 39 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 14:09 WP#: 124 Lat: 35.689615 Long: -74.553820
Species: *Tursiops truncatus* Numbers (Low/High/Best): 28 / 38 / 35
Features used in Species ID: Robust uniform gray animals with white peduncles
Representative images used for Species ID: 197, 198, 212, 231
Photographer: Ryan Frame numbers: 192 - 238 Spacer: 239
Calculated distance from Trackline: 0.26 km

Final Time and Position of Sighting

Time: 14:13 WP#: 125 Lat: 35.687696 Long: -74.545975
Calculated Distance Traveled: 0.74 km

Behavior and Additional Comments

Tightly packed group, traveling just under the surface. Two subgroups

Sunday, June 10, 2012 Sighting # 7

Initial sighting on Track

Time: 14:31 WP#: 129 Lat: 35.622672 Long: -74.661796
Vertical Angle: 2 Horizontal Bearing in Degrees: 45 Sighting Cue: Splash
On/Off Effort: On Trackline: 38 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 14:32 WP#: 130 Lat: 35.622873 Long: -74.662187
Species: *Stenella frontalis* Numbers (Low/High/Best): 20 / 30 / 25
Features used in Species ID: Slender, light gray body with blaze ending at mid dorsal fin
Representative images used for Species ID: 244-246, 251, 270, 277
Photographer: Ryan Frame numbers: 240 - 292 Spacer: 293
Calculated distance from Trackline: 0.04 km

Final Time and Position of Sighting

Time: 14:49 WP#: 131 Lat: 35.627143 Long: -74.680992
Calculated Distance Traveled: 1.77 km

Behavior and Additional Comments

Traveling fast just beneath the surface, 2 groups

Sunday, June 10, 2012 Sighting # 8

Initial sighting on Track

Time: 14:52 WP#: 133 Lat: 35.623620 Long: -74.768107
Vertical Angle: 2 Horizontal Bearing in Degrees: 100 Sighting Cue: Body
On/Off Effort: On Trackline: 38 Beaufort Sea State: 3
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: N/A WP#: N/A Lat: N/A Long: N/A
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Grey body, white scaring, brownish colored head, small pectorals, dorsal fin set way back on body
Representative images used for Species ID: N/A
Photographer: N/A Frame numbers: N/A Spacer: N/A
Calculated distance from Trackline: N/A

Final Time and Position of Sighting

Time: 14:56 WP#: 134 Lat: 35.614247 Long: -74.760269
Calculated Distance Traveled: N/A

Behavior and Additional Comments

No resight, white bodied, brown peduncle and fluke, possible Zca

Sunday, June 10, 2012 Sighting # 9

Initial sighting on Track

Time: 15:26 WP#: 144 Lat: 35.550242 Long: -74.568120
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 37 Beaufort Sea State: 3
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 15:27 WP#: 145 Lat: 35.557147 Long: -74.574964
Species: *Tursiops truncatus* Numbers (Low/High/Best): 25 / 40 / 35
Features used in Species ID: Robust, uniform gray animal

Representative images used for Species ID: 299, 300, 305, 308, 309, 320, 321
Photographer: Ryan Frame numbers: 294 - 323 Spacer: 324
Calculated distance from Trackline: 0.99 km

Final Time and Position of Sighting

Time: 15:30 WP#: 146 Lat: 35.554908 Long: -74.567186
Calculated Distance Traveled: 0.75 km

Behavior and Additional Comments

2 groups, lots of splashing, traveling just below the surface, some scattered.

Sunday, June 10, 2012 Sighting # 10

Initial sighting on Track

Time: 15:35 WP#: 148 Lat: 35.549766 Long: -74.456180
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 37 Beaufort Sea State: 3
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 15:34 WP#: 149 Lat: 35.556768 Long: -74.461219
Species: *Stenella clymene* Numbers (Low/High/Best): 80 / 115 / 100
Features used in Species ID: Sharp pointed rostrum with black down center and edges

Representative images used for Species ID: 334, 337, 350, 351, 353, 355-357, 359, 362, 374
Photographer: Ryan Frame numbers: 325 - 379 Spacer: 380
Calculated distance from Trackline: 0.90 km

Final Time and Position of Sighting

Time: 15:39 WP#: 150 Lat: 35.560398 Long: -74.453310
Calculated Distance Traveled: 0.82 km

Behavior and Additional Comments

Swimming in a tight circle, lots of bellies up, then scattered. Four groups of about 20+ each

Thursday, August 30, 2012 Sighting # 1

Initial sighting on Track

Time: 10:10 WP#: 5 Lat: 34.54738 Long: -75.536078
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 21 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 10:14 WP#: 6 Lat: 34.54913 Long: -75.543718
Species: *Unidentified Mesoplodon* Numbers (Low/High/Best): 3 / 3 / 3
Features used in Species ID: Robust body, small dorsal and pectoral fins, tapered head to rostrum

Representative images used for Species ID: NA
Photographer: Erin Frame numbers: NA Spacer: NA
Calculated distance from Trackline: 0.73 km

Final Time and Position of Sighting

Time: 10:17 WP#: 7 Lat: 34.54519 Long: -75.54737
Calculated Distance Traveled: 0.55 km

Behavior and Additional Comments

Final position is assumed location, animals only sighted once.
Brownish body coloration, big bodies with small pectoral fins. All animals uniform in color and size.

Thursday, August 30, 2012 Sighting # 2

Initial sighting on Track

Time: 13:44 WP#: 28 Lat: 35.61682 Long: -74.881575
Vertical Angle: 2 Horizontal Bearing in Degrees: 45 Sighting Cue: Splash
On/Off Effort: On Trackline: 38 Beaufort Sea State: 2
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 13:45 WP#: 29 Lat: 35.60842 Long: -74.87663
Species: *Tursiops truncatus* Numbers (Low/High/Best): 23 / 35 / 33
Features used in Species ID: Robust, uniform grey animal

Representative images used for Species ID: 7, 10, 12, 13
Photographer: Erin Frame numbers: 1 - 22 Spacer: 23
Calculated distance from Trackline: 1.04 km

Final Time and Position of Sighting

Time: 13:47 WP#: 30 Lat: 35.61097 Long: -74.882123
Calculated Distance Traveled: 0.57 km

Behavior and Additional Comments

Multiple lines of animals, at least two calves within the groups.

Thursday, August 30, 2012 Sighting # 3

Initial sighting on Track

Time: 13:50 WP#: 32 Lat: 35.62127 Long: -74.79565
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 38 Beaufort Sea State: 2
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 13:53 WP#: 33 Lat: 35.62725 Long: -74.80044
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 16 / 20 / 18
Features used in Species ID: Black body, light colored suspenders, blunt head

Representative images used for Species ID: 24 & 26
Photographer: Erin Frame numbers: 24 - 28 Spacer: 29
Calculated distance from Trackline: 0.79 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Multiple small, densely packed groups hanging at the surface.

Thursday, August 30, 2012 Sighting # 4

Initial sighting on Track

Time: 13:57 WP#: 36 Lat: 35.62037 Long: -74.6580
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 38 Beaufort Sea State: 2
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 13:59 WP#: 37 Lat: 35.61976 Long: -74.659026
Species: *Tursiops truncatus* Numbers (Low/High/Best): 8 / 10 / 11
Features used in Species ID: Robust, uniform grey

Representative images used for Species ID: 31, 33, 37, 41
Photographer: Erin Frame numbers: 30 - 40 Spacer: 42
Calculated distance from Trackline: 0.11 km

Final Time and Position of Sighting

Time: 14:03 WP#: 39 Lat: 35.63127 Long: -74.66035
Calculated Distance Traveled: 1.29 km

Behavior and Additional Comments

Initial sighting of traveling group at the surface. Group split with some animals taking up bow riding of a passing cargo vessel while other potion of group continued slow travel along boats wake.

Thursday, August 30, 2012 Sighting # 5

Initial sighting on Track

Time: 13:57 WP#: 36 Lat: 35.62037 Long: -74.65800
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 38 Beaufort Sea State: 2
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 14:01 WP#: 38 Lat: 35.63028 Long: -74.66576
Species: *Grampus griseus* Numbers (Low/High/Best): 5 / 7 / 6
Features used in Species ID: Grey, blunt head with cleft in the middle, white scaring

Representative images used for Species ID: 47
Photographer: Erin Frame numbers: 42 - 49 Spacer: 50
Calculated distance from Trackline: 1.31 km

Final Time and Position of Sighting

Time: 14;03 WP#: 39 Lat: 35.63127 Long: -74.66035
Calculated Distance Traveled: 0.50 km

Behavior and Additional Comments

Group of Risso's not mixed with bottlenose dolphin in sighting 4 but in the same area and both species were detected at the same time and by the same sighting que.

Thursday, August 30, 2012 Sighting # 6

Initial sighting on Track

Time: 14:07 WP#: 41 Lat: 35.62076 Long: -74.51007
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Blow
On/Off Effort: On Trackline: 38 Beaufort Sea State: 3
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 14:08 WP#: 42 Lat: 35.61773 Long: -74.507810
Species: *Tursiops truncatus* Numbers (Low/High/Best): 7 / 10 / 9
Features used in Species ID: Robust, uniform grey

Representative images used for Species ID: 52 & 54
Photographer: Erin Frame numbers: 51 - 55 Spacer: 56
Calculated distance from Trackline: 0.39 km

Final Time and Position of Sighting

Time: 14:11 WP#: 43 Lat: 35.62206 Long: -74.50497
Calculated Distance Traveled: 0.55 km

Behavior and Additional Comments

Multiple groups of 2 or 3 animals all showing slow travel at the surface.

Thursday, August 30, 2012 Sighting # 7

Initial sighting on Track

Time: 14:27 WP#: 48 Lat: 35.69867 Long: -74.69707
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 39 Beaufort Sea State: 2
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 14:27 WP#: 49 Lat: 35.69240 Long: -74.69460
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Grey animal, white scaring on body, brownish head, dorsal fin set far back on body, short pectorals
Representative images used for Species ID: 59 & 60
Photographer: Erin Frame numbers: 57 - 60 Spacer: 61
Calculated distance from Trackline: 0.73 km

Final Time and Position of Sighting

Time: 14:32 WP#: 50 Lat: 35.69805 Long: -74.68947
Calculated Distance Traveled: 0.78 km

Behavior and Additional Comments

Light white body coloration except for darker caudal area. Upon initial sighting animal surfaced a few times before diving. The animal later resurfaced only taking a single break before diving again.

Thursday, August 30, 2012 Sighting # 8

Initial sighting on Track

Time: 14;35 WP#: 52 Lat: 35.692521 Long: -74.808789
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 39 Beaufort Sea State: 2
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 14:38 WP#: 53 Lat: 35.69167 Long: -74.800817
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 40 / 42 / 41
Features used in Species ID: Black body, lighter colored suspenders, blunt head
Representative images used for Species ID: 62 & 65
Photographer: Erin Frame numbers: 62 - 68 Spacer: 69
Calculated distance from Trackline: 0.73 km

Final Time and Position of Sighting

Time: 14:38 WP#: 54 Lat: 35.692998 Long: -74.797710
Calculated Distance Traveled: 0.32 km

Behavior and Additional Comments

Three groups of animals all slowing slow travel at the surface. Groups sizes of 24, 10 and 6.

Thursday, August 30, 2012 Sighting # 9

Initial sighting on Track

Time: 14:59 WP#: 62 Lat: 35.76324 Long: -74.81079
Vertical Angle: 2 Horizontal Bearing in Degrees: 60 Sighting Cue: Body
On/Off Effort: On Trackline: 40 Beaufort Sea State: 2
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 15:00 WP#: 63 Lat: 35.755539 Long: -74.809280
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 4 / 4 / 4
Features used in Species ID: Black body, lighter colored suspenders, blunt head

Representative images used for Species ID: 71 & 74
Photographer: Erin Frame numbers: 70 - 77 Spacer: 78
Calculated distance from Trackline: 0.87 km

Final Time and Position of Sighting

Time: 15:03 WP#: 64 Lat: 35.75629 Long: -74.80721
Calculated Distance Traveled: 0.20 km

Behavior and Additional Comments

Animals hanging at the surface.

Thursday, August 30, 2012 Sighting # 10

Initial sighting on Track

Time: 15:07 WP#: 66 Lat: 35.76158 Long: -74.65722
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 40 Beaufort Sea State: 2
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 15:08 WP#: 67 Lat: 35.76149 Long: -74.65969
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 14 / 16 / 15
Features used in Species ID: Black body, lighter colored suspenders, blunt head

Representative images used for Species ID: 79 & 84
Photographer: Erin Frame numbers: 79 - 85 Spacer: 86
Calculated distance from Trackline: 0.22 km

Final Time and Position of Sighting

Time: 15:09 WP#: 68 Lat: 35.76468 Long: -74.66097
Calculated Distance Traveled: 0.37 km

Behavior and Additional Comments

Mainly single animals spaced well apart from one another, a few pairs or trios.

Thursday, August 30, 2012 Sighting # 11

Initial sighting on Track

Time: 15:13 WP#: 72 Lat: 35.76187 Long: -74.515866
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 40 Beaufort Sea State: 2
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 15:13 WP#: 73 Lat: 35.75882 Long: -74.52516
Species: *Grampus griseus* Numbers (Low/High/Best): 4 / 4 / 4
Features used in Species ID: Grey body, blunt head with cleft in middle, white scaring

Representative images used for Species ID: 92 & 93
Photographer: Erin Frame numbers: 87 - 98 Spacer: 99
Calculated distance from Trackline: 0.90 km

Final Time and Position of Sighting

Time: 15:13 WP#: 74 Lat: 35.76408 Long: -74.50678
Calculated Distance Traveled: 1.76 km

Behavior and Additional Comments

Light coloration due to scarring.

Thursday, August 30, 2012 Sighting # 12

Initial sighting on Track

Time: 15:23 WP#: 78 Lat: 35.83240 Long: -74.403074
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 41 Beaufort Sea State: 3
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 15:27 WP#: 79 Lat: 35.82854 Long: -74.398137
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 4 / 4 / 4
Features used in Species ID: Light grey body, white scaring, brownish head, small pectorals
dorsal fin way back on body
Representative images used for Species ID: 113, 126, 130
Photographer: Erin Frame numbers: 100 - 134 Spacer: 135
Calculated distance from Trackline: 0.62 km

Final Time and Position of Sighting

Time: 15:27 WP#: 80 Lat: 35.83020 Long: -74.40101
Calculated Distance Traveled: 0.32 km

Behavior and Additional Comments

Animals took between 3 - 4 breaths before diving together, no resight.

Thursday, August 30, 2012 Sighting # 13

Initial sighting on Track

Time: 15:33 WP#: 83 Lat: 35.83470 Long: -74.647235
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 41 Beaufort Sea State: 1
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 15:34 WP#: 84 Lat: 35.83518 Long: -74.64317
Species: *Tursiops truncatus* Numbers (Low/High/Best): 16 / 20 / 18
Features used in Species ID: Robust, uniform grey animal
Representative images used for Species ID: 137 & 138
Photographer: Erin Frame numbers: 136 - 143 Spacer: 144
Calculated distance from Trackline: 0.37 km

Final Time and Position of Sighting

Time: 15:37 WP#: 85 Lat: 35.83469 Long: -74.636906
Calculated Distance Traveled: 0.57 km

Behavior and Additional Comments

Some animals swimming on their sides, splashing, then grouped together and began directional travel.

Thursday, August 30, 2012 Sighting # 14

Initial sighting on Track

Time: 15:38 WP#: 87 Lat: 35.83362 Long: -74.689910
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 41 Beaufort Sea State: 1
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 15:34 WP#: 84 Lat: 35.841997 Long: -74.688174
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Light grey, white scaring, brownish head, small pectorals, dorsal fin set way back on body
Representative images used for Species ID: 146 & 147
Photographer: Erin Frame numbers: 145 - 148 Spacer: 149
Calculated distance from Trackline: 0.94 km

Final Time and Position of Sighting

Time: 15:40 WP#: 89 Lat: 35.837108 Long: -74.693020
Calculated Distance Traveled: 0.70 km

Behavior and Additional Comments

Thursday, August 30, 2012 Sighting # 15

Initial sighting on Track

Time: 15:42 WP#: 91 Lat: 35.83268 Long: -74.80357
Vertical Angle: 2 Horizontal Bearing in Degrees: 60 Sighting Cue: Body
On/Off Effort: On Trackline: 41 Beaufort Sea State: 1
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 15:44 WP#: 92 Lat: 35.83423 Long: -74.833176
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 7 / 7 / 7
Features used in Species ID: Black body, lighter suspenders, blunt head, large dorsal fin

Representative images used for Species ID: 150 & 151
Photographer: Erin Frame numbers: 150 - 156 Spacer: 157
Calculated distance from Trackline: 2.7 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Two groups, one of 3 and one of 4.

Friday, September 21, 2012 Sighting # 1

Initial sighting on Track

Time: 10:44 WP#: 11 Lat: 34.676398 Long: -75.565940
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Blow
On/Off Effort: On Trackline: 22 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 10:48 WP#: 12 Lat: 34.669830 Long: -75.566572
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 3 / 5 / 5
Features used in Species ID: Dark gray to black body with blunt head

Representative images used for Species ID: 158, 159, 167
Photographer: Ryan Frame numbers: 158 - 170 Spacer: 171
Calculated distance from Trackline: 0.73 km

Final Time and Position of Sighting

Time: 10:54 WP#: 13 Lat: 34.667600 Long: -75.578843
Calculated Distance Traveled: 1.15 km

Behavior and Additional Comments

Came up for a quick breath, traveling fast, skimming the surface. Young trailing behind.

Friday, September 21, 2012 Sighting # 2

Initial sighting on Track

Time: 15:28 WP#: 43 Lat: 34.895679 Long: -75.069660
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 28 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 15:29 WP#: 43 Lat: 34.897389 Long: -75.069119
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Large white body with tan peduncle and fluke

Representative images used for Species ID: 173, 175
Photographer: Ryan Frame numbers: 172 - 178 Spacer: 179
Calculated distance from Trackline: 0.20 km

Final Time and Position of Sighting

Time: 15:34 WP#: 44 Lat: 34.890760 Long: -75.065921
Calculated Distance Traveled: 0.79 km

Behavior and Additional Comments

Beaked whales, one smaller and gray while the larger is white

Friday, November 30, 2012 Sighting # 1

Initial sighting on Track

Time: 12:41 WP#: 5 Lat: 35.044073 Long: -75.015596
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 30 Beaufort Sea State: 4
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 12:46 WP#: 6 Lat: 35.041624 Long: -75.008259
Species: *Tursiops truncatus* Numbers (Low/High/Best): 13 / 13 / 13
Features used in Species ID: Uniform grey, robust animals, white peduncles
Representative images used for Species ID: 4, 7
Photographer: Ryan Frame numbers: 1 - 13 Spacer: 14
Calculated distance from Trackline: 0.72 km

Final Time and Position of Sighting

Time: 12:56 WP#: 7 Lat: 35.035101 Long: -75.018943
Calculated Distance Traveled: 1.21 km

Behavior and Additional Comments

2 groups (one of 3 and one of 10), spread out when we circled, not staying on the surface long

Friday, November 30, 2012 Sighting # 2

Initial sighting on Track

Time: 13:19 WP#: 15 Lat: 35.111311 Long: -74.967855
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 31 Beaufort Sea State: 4
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 13:23 WP#: 16 Lat: 35.111504 Long: -74.976190
Species: *Unidentified Mesoplodon* Numbers (Low/High/Best): 3 / 3 / 3
Features used in Species ID: Long body, dorsal fin set way back on body, uniform greyish brown long rostrum
Representative images used for Species ID: N/A
Photographer: Ryan Frame numbers: N/A Spacer: N/A
Calculated distance from Trackline: 0.76 km

Final Time and Position of Sighting

Time: 13:34 WP#: 17 Lat: 35.118230 Long: -74.974261
Calculated Distance Traveled: 0.77 km

Behavior and Additional Comments

Spaced out, logging at the surface, dove when we circled, no photos

Friday, November 30, 2012 Sighting # 3

Initial sighting on Track

Time: 13:19 WP#: 15 Lat: 35.111311 Long: -74.967855
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: Off Trackline: 31 Beaufort Sea State: 4
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 13:23 WP#: 16 Lat: 35.111504 Long: -74.976190
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 5 / 5 / 5
Features used in Species ID: Long body, dorsal fin small and set way back on body, white scaring down body, brown head, long rostrum
Representative images used for Species ID: 51, 52, 53, 73, 78
Photographer: Ryan Frame numbers: 15 - 79 Spacer: 80
Calculated distance from Trackline: 0.76 km

Final Time and Position of Sighting

Time: 13:34 WP#: 17 Lat: 35.118230 Long: -74.974261
Calculated Distance Traveled: 0.77 km

Behavior and Additional Comments

Swimming close together, changing directions

Friday, November 30, 2012 Sighting # 4

Initial sighting on Track

Time: 13:54 WP#: 22 Lat: 35.206940 Long: -75.008217
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 32 Beaufort Sea State: 3
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: N/A WP#: N/A Lat: N/A Long: N/A
Species: *Tursiops truncatus* Numbers (Low/High/Best): 2 / 4 / 4
Features used in Species ID: Uniform grey animals, white peduncles
Representative images used for Species ID: N/A
Photographer: N/A Frame numbers: N/A Spacer: N/A
Calculated distance from Trackline: N/A

Final Time and Position of Sighting

Time: N/A WP#: N/A Lat: N/A Long: N/A
Calculated Distance Traveled: N/A

Behavior and Additional Comments

No resight

Friday, November 30, 2012 Sighting # 5

Initial sighting on Track

Time: 14:33 WP#: 27 Lat: 35.148825 Long: -74.442816
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 33 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 14:34 WP#: 28 Lat: 35.154434 Long: -74.441113
Species: *Physeter macrocephalus* Numbers (Low/High/Best): 6 / 6 / 6
Features used in Species ID: Large, robust, blunt head, grey, blow forward

Representative images used for Species ID: 93, 107, 118, 119, 147, 149
Photographer: Ryan Frame numbers: 81 - 162 Spacer: 163
Calculated distance from Trackline: 0.64 km

Final Time and Position of Sighting

Time: 14:46 WP#: 29 Lat: 35.147380 Long: -74.445225
Calculated Distance Traveled: 0.87 km

Behavior and Additional Comments

3 logging at the surface, swimming a body length apart with juvenile in the middle. Juvenile minke whale was also swimming with them, just ahead of them and below the surface. Three more pma off in the distance

Friday, November 30, 2012 Sighting # 6

Initial sighting on Track

Time: 14;33 WP#: 27 Lat: 35.148825 Long: -74.442816
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: Off Trackline: 33 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 14:34 WP#: 28 Lat: 35.154434 Long: -74.441113
Species: *Balaenoptera acutorostrata* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Black body, short white pectorals

Representative images used for Species ID: 143, 144, 145
Photographer: Ryan Frame numbers: 81 - 162 Spacer: 163
Calculated distance from Trackline: 0.64 km

Final Time and Position of Sighting

Time: 14:46 WP#: 29 Lat: 35.147380 Long: -74.445225
Calculated Distance Traveled: 0.69 km

Behavior and Additional Comments

Traveling with sperm whales, staying just below the surface

Friday, November 30, 2012 Sighting # 7

Initial sighting on Track

Time: 14:51 WP#: 31 Lat: 35.206940 Long: -74.298909
Vertical Angle: 1 Horizontal Bearing in Degrees: 100 Sighting Cue: Body
On/Off Effort: On Trackline: 33 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: N/A WP#: N/A Lat: N/A Long: N/A
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 5 / 5 / 5
Features used in Species ID: Long body, dorsal fin sits way back on the body, white scaring

Representative images used for Species ID: N/A
Photographer: N/A Frame numbers: N/A Spacer: N/A
Calculated distance from Trackline: N/A

Final Time and Position of Sighting

Time: 14:58 WP#: 34 Lat: 35.200557 Long: -74.685430
Calculated Distance Traveled: N/A

Behavior and Additional Comments

No resight

Friday, November 30, 2012 Sighting # 8

Initial sighting on Track

Time: 15:20 WP#: 40 Lat: 35.340172 Long: -74.877815
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 34 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 15:22 WP#: 41 Lat: 35.330792 Long: -74.878582
Species: *Tursiops truncatus* Numbers (Low/High/Best): 15 / 20 / 17
Features used in Species ID: Uniform grey animals, white peduncles

Representative images used for Species ID: 164, 166, 167, 172, 176
Photographer: Ryan Frame numbers: 164 - 191 Spacer: 192
Calculated distance from Trackline: 1.05 km

Final Time and Position of Sighting

Time: 15:27 WP#: 42 Lat: 35.334733 Long: -74.880740
Calculated Distance Traveled: 0.48 km

Behavior and Additional Comments

Some logging, some swimming all different directions, jumping

Friday, November 30, 2012 Sighting # 9

Initial sighting on Track

Time: 15:29 WP#: 44 Lat: 35.332009 Long: -74.785398
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 34 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: N/A WP#: N/A Lat: N/A Long: N/A
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 4 / 4 / 4
Features used in Species ID: Long body, dorsal fin sits way back, long rostrum, white scaring down body
Representative images used for Species ID: N/A
Photographer: N/A Frame numbers: N/A Spacer: N/A
Calculated distance from Trackline: N/A

Final Time and Position of Sighting

Time: 15:34 WP#: 45 Lat: 35.337687 Long: -74.773168
Calculated Distance Traveled: N/A

Behavior and Additional Comments

in line formation, no resight

Saturday, December 1, 2012 Sighting # 1

Initial sighting on Track

Time: 10:04 WP#: 12 Lat: 35.482147 Long: -74.638990
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 37 Beaufort Sea State: 4
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 10:09 WP#: 13 Lat: 35.483571 Long: -74.646833
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Light coloration, small pectoral and dorsal fin, ~20ft long.

Representative images used for Species ID: NA
Photographer: Erin Frame numbers: NA Spacer: NA
Calculated distance from Trackline: 0.73 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

Animal with light body coloration with slightly darker head. Tapered head small pectoral and dorsal fin.

Saturday, December 1, 2012 Sighting # 2

Initial sighting on Track

Time: 10:35 WP#: 20 Lat: 35.553940 Long: -74.792848
Vertical Angle: 4 Horizontal Bearing in Degrees: 90 Sighting Cue: Spalsh
On/Off Effort: On Trackline: 38 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 10:36 WP#: 21 Lat: 35.559816 Long: -74.792280
Species: *Stenella frontalis* Numbers (Low/High/Best): 24 / 28 / 26
Features used in Species ID: Alternating light and dark coloration to body, slight spotting along body, some animals with white tips to the rostrum.
Representative images used for Species ID: 4 & 11
Photographer: Erin Frame numbers: 1-29 Spacer: 30
Calculated distance from Trackline: 0.66 km

Final Time and Position of Sighting

Time: 10:41 WP#: 22 Lat: 35.566214 Long: -74.794487
Calculated Distance Traveled: 0.74 km

Behavior and Additional Comments

Two groups of animals close together, lots of splashing while at the surface before diving out of sight. More animals were observed as we circled the initial groups. A few animals demonstrated tail slapping behavior during our observations.

Saturday, December 1, 2012 Sighting # 3

Initial sighting on Track

Time: 10:49 WP#: 25 Lat: 35.554109 Long: -74.451652
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 38 Beaufort Sea State: 4
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 10:59 WP#: 26 Lat: 35.559542 Long: -74.461530
Species: *Tursiops truncatus* Numbers (Low/High/Best): 2 / 2 / 2
Features used in Species ID: Robust body appearance, grey coloration lighter blaze to behind dorsal fin.
Representative images used for Species ID: 37 & 38
Photographer: Erin Frame numbers: 31-41 Spacer: 42
Calculated distance from Trackline: 1.08 km

Final Time and Position of Sighting

Time: 11:01 WP#: 27 Lat: 35.551972 Long: -74.460779
Calculated Distance Traveled: 0.84 km

Behavior and Additional Comments

Single animal with lighter grey head and thorax and lighter peduncle region. Animal surfaced quickly then spent extended time below the surface. Two additional animals also observed, potentially a juvenile as it was ~3/4 the adults size.

Saturday, December 1, 2012 Sighting # 4

Initial sighting on Track

Time: 11:04 WP#: 30 Lat: 35.548079 Long: -74.359471
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 38 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 11:05 WP#: 31 Lat: 35.541047 Long: -74.357903
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Large square head, black body coloration with lighter suspenders before dorsal fin, large dorsal fin ~1/3 back the body
Representative images used for Species ID: 44, 45 & 50
Photographer: Erin Frame numbers: 43-42 Spacer: 53
Calculated distance from Trackline: 0.79 km

Final Time and Position of Sighting

Time: 11:06 WP#: 32 Lat: 35.545466 Long: -74.355275
Calculated Distance Traveled: 0.55 km

Behavior and Additional Comments

Animal creating large disturbance while surfacing, definite direction to travel, animal not at rest at surface.

Saturday, December 1, 2012 Sighting # 5

Initial sighting on Track

Time: 13:06 WP#: 43 Lat: 36.118932 Long: -74.497152
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 45 Beaufort Sea State: 3
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 13:10 WP#: 44 Lat: 36.121488 Long: -74.505460
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 3 / 3 / 3
Features used in Species ID: Black body coloration, large square head, dorsal fin placed ~1/3 down animals body.
Representative images used for Species ID: 54 & 55
Photographer: Erin Frame numbers: 54 & 55 Spacer: 56
Calculated distance from Trackline: 0.80 km

Final Time and Position of Sighting

Time: 13:15 WP#: 45 Lat: 36.127240 Long: -74.499386
Calculated Distance Traveled: 0.84 km

Behavior and Additional Comments

Three animals swimming as singles with large distances between them. Definite direction to travel.

Saturday, December 1, 2012 Sighting # 6

Initial sighting on Track

Time: 13:18 WP#: 47 Lat: 36.120238 Long: -74.353226
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 45 Beaufort Sea State: 2
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 13:20 WP#: 48 Lat: 36.121955 Long: -74.363954
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 5 / 5 / 5
Features used in Species ID: Black body, large dorsal fin placed ~1/3 back on animals body.
Representative images used for Species ID: 57
Photographer: Erin Frame numbers: 57 & 58 Spacer: 59
Calculated distance from Trackline: 0.98 km

Final Time and Position of Sighting

Time: 13:24 WP#: 49 Lat: 36.132564 Long: -74.368132
Calculated Distance Traveled: 1.24 km

Behavior and Additional Comments

One group of three plus two outlier animals.

Saturday, December 1, 2012 Sighting # 7

Initial sighting on Track

Time: 14:05 WP#: 59 Lat: 35.973787 Long: -74.671210
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 43 Beaufort Sea State: 3
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 14:16 WP#: 60 Lat: 35.970768 Long: -74.670173
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 5 / 5 / 5
Features used in Species ID: Black body coloration, square head and large dorsal fin ~1/3 back animals body.
Representative images used for Species ID: NA
Photographer: Erin Frame numbers: NA Spacer: NA
Calculated distance from Trackline: 0.35 km

Final Time and Position of Sighting

Time: NA WP#: NA Lat: NA Long: NA
Calculated Distance Traveled: NA

Behavior and Additional Comments

A well dispersed group of animals showing hard surfacing then diving out of sight. Definite dedicated traveling behavior. Difficult to photograph.

Saturday, December 1, 2012 Sighting # 8

Initial sighting on Track

Time: 14:25 WP#: 63 Lat: 35.973536 Long: -74.323910
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 43 Beaufort Sea State: 3
Observer: Ryan Observer side: Left

Actual Time and Position of Sighting

Time: 14:25 WP#: 64 Lat: 35.973986 Long: -74.328506
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 12 / 14 / 13
Features used in Species ID: Black body, square head large dorsal fin placed ~1/3 way back animals body.
Representative images used for Species ID: 65 & 66
Photographer: Erin Frame numbers: 60-68 Spacer: 69
Calculated distance from Trackline: 0.42 km

Final Time and Position of Sighting

Time: 14:28 WP#: 65 Lat: 35.977343 Long: -74.324014
Calculated Distance Traveled: 0.55 km

Behavior and Additional Comments

All animal in one closely packed grouping showing slow travel at the surface, easier to photograph.

Saturday, December 1, 2012 Sighting # 9

Initial sighting on Track

Time: 14:32 WP#: 67 Lat: 35.902945 Long: -74.440059
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 42 Beaufort Sea State: 3
Observer: Erin Observer side: Right

Actual Time and Position of Sighting

Time: 14:36 WP#: 68 Lat: 35.903755 Long: -74.436792
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 3 / 3 / 3
Features used in Species ID: Black body, large square head, large dorsal fin placed ~1/3 the way back animals body.
Representative images used for Species ID: 73 & 74
Photographer: Erin Frame numbers: 70-74 Spacer: 75
Calculated distance from Trackline: 0.31 km

Final Time and Position of Sighting

Time: 14:36 WP#: 69 Lat: 35.898889 Long: -74.436404
Calculated Distance Traveled: 0.54 km

Behavior and Additional Comments

Animals well spaced apart from one another.

Sunday, December 2, 2012 Sighting # 1

Initial sighting on Track

Time: 9:02 WP#: 3 Lat: 34.747658 Long: -75.930301
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 20 Beaufort Sea State: 2
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 9:03 WP#: 4 Lat: 34.745702 Long: -75.932835
Species: *Megaptera novaeangliae* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Large black, baleen while with white pectorals

Representative images used for Species ID: 9, 23
Photographer: Ryan Frame numbers: 1-37 Spacer: 38
Calculated distance from Trackline: 0.32 km

Final Time and Position of Sighting

Time: 9:12 WP#: 5 Lat: 34.750012 Long: -75.939570
Calculated Distance Traveled: 0.78 km

Behavior and Additional Comments

Hanging just below the surface, some deeper dives. Not surfacing much

Sunday, December 2, 2012 Sighting # 2

Initial sighting on Track

Time: 9:21 WP#: 8 Lat: 34.546350 Long: -75.665174
Vertical Angle: 1 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 20 Beaufort Sea State: 3
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 9:23 WP#: 9 Lat: 34.550714 Long: -75.661606
Species: *Tursiops truncatus* Numbers (Low/High/Best): 6 / 6 / 6
Features used in Species ID: Uniform grey animals, robust, white peduncles

Representative images used for Species ID: 46-49, 52
Photographer: Ryan Frame numbers: 39 - 53 Spacer: 54
Calculated distance from Trackline: 0.59 km

Final Time and Position of Sighting

Time: 9:31 WP#: 10 Lat: 34.541610 Long: -75.667585
Calculated Distance Traveled: 1.15 km

Behavior and Additional Comments

Traveling, jumping, deeper dives, feeding, evasive

Sunday, December 2, 2012 Sighting # 3

Initial sighting on Track

Time: 9:36 WP#: 9 Lat: 34.446008 Long: -75.527835
Vertical Angle: 1 Horizontal Bearing in Degrees: 100 Sighting Cue: Body
On/Off Effort: On Trackline: 20 Beaufort Sea State: 3
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 9:37 WP#: 12 Lat: 34.449417 Long: -75.524725
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 8 / 8 / 8
Features used in Species ID: Long white body, brown head, dorsal fin set way back on body

Representative images used for Species ID: 55, 62
Photographer: Ryan Frame numbers: 55 - 84 Spacer: 85
Calculated distance from Trackline: 0.47 km

Final Time and Position of Sighting

Time: 9:40 WP#: 13 Lat: 34.447233 Long: -75.533096
Calculated Distance Traveled: 0.81 km

Behavior and Additional Comments

Logging, doing deep dives, staying 2-3 body lengths apart

Sunday, December 2, 2012 Sighting # 4

Initial sighting on Track

Time: 9:42 WP#: 15 Lat: 34.406405 Long: -75.482010
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 20 Beaufort Sea State: 3
Observer: Ryan Observer side: Right

Actual Time and Position of Sighting

Time: 9:43 WP#: 16 Lat: 34.408173 Long: -75.489960
Species: *Unidentified Mesoplodon* Numbers (Low/High/Best): 4 / 4 / 4
Features used in Species ID: Long grey/brown body, long rostrum, dorsal fin way back on body

Representative images used for Species ID: 88, 89, 93, 94
Photographer: Ryan Frame numbers: 86 - 105 Spacer: 106
Calculated distance from Trackline: 0.76 km

Final Time and Position of Sighting

Time: 9:45 WP#: 17 Lat: 34.402725 Long: -75.492281
Calculated Distance Traveled: 0.64 km

Behavior and Additional Comments

Hanging way below the surface, doing deeper dives

Sunday, December 2, 2012 Sighting # 5

Initial sighting on Track

Time: 10:11 WP#: 26 Lat: 34.733215 Long: -75.775983
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 21 Beaufort Sea State: 3
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 10:12 WP#: 27 Lat: 34.723346 Long: -75.782118
Species: *Stenella frontalis* Numbers (Low/High/Best): 65 / 95 / 85
Features used in Species ID: Alternating light and dark pattern down body

Representative images used for Species ID: 107, 108, 129, 147, 167, 175
Photographer: Ryan Frame numbers: 107 -176 Spacer: 177
Calculated distance from Trackline: 1.23 km

Final Time and Position of Sighting

Time: 10:18 WP#: 28 Lat: 34.722061 Long: -75.786974
Calculated Distance Traveled: 0.47 km

Behavior and Additional Comments

Traveling fast in a group, 1-2 body lengths apart. Quick to hit the surface, traveling just below.

Sunday, December 2, 2012 Sighting # 6

Initial sighting on Track

Time: 10:27 WP#: 33 Lat: 34.816387 Long: -75.749344
Vertical Angle: 3 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 22 Beaufort Sea State: 2
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 10:28 WP#: 34 Lat: 34.819990 Long: -75.746810
Species: *Tursiops truncatus* Numbers (Low/High/Best): 4 / 7 / 6
Features used in Species ID: Robust, grey animals with white peduncles

Representative images used for Species ID: 180, 181, 200, 202
Photographer: Ryan Frame numbers: 178 - 203 Spacer: 204
Calculated distance from Trackline: 0.47 km

Final Time and Position of Sighting

Time: 10:30 WP#: 35 Lat: 34.825046 Long: -75.742448
Calculated Distance Traveled: 0.69 km

Behavior and Additional Comments

Traveling, moving different directions, staying just below the surface

Sunday, December 2, 2012 Sighting # 7

Initial sighting on Track

Time: 10:37 WP#: 39 Lat: 34.678187 Long: -75.565476
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 22 Beaufort Sea State: 3
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 10:38 WP#: 40 Lat: 34.682574 Long: -75.562758
Species: *Tursiops truncatus* Numbers (Low/High/Best): 4 / 4 / 4
Features used in Species ID: Robust, grey animals with white peduncles

Representative images used for Species ID: 209, 210, 217, 219, 223, 234, 235
Photographer: Ryan Frame numbers: 205 - 242 Spacer: 243
Calculated distance from Trackline: 0.55 km

Final Time and Position of Sighting

Time: 10:39 WP#: 41 Lat: 34.686739 Long: -75.565582
Calculated Distance Traveled: 0.53 km

Behavior and Additional Comments

Swimming just below the surface, feeding, staying close together

Sunday, December 2, 2012 Sighting # 8

Initial sighting on Track

Time: 10:43 WP#: 43 Lat: 34.594281 Long: -75.454063
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Splash
On/Off Effort: On Trackline: 22 Beaufort Sea State: 3
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 10:44 WP#: 44 Lat: 34.600899 Long: -75.457848
Species: *Globicephala macrorhynchus* Numbers (Low/High/Best): 9 / 12 / 10
Features used in Species ID: Black body, blunt head, large dorsal fin

Representative images used for Species ID: 244, 256, 257, 258
Photographer: Ryan Frame numbers: 244 - 271 Spacer: 272
Calculated distance from Trackline: 0.81 km

Final Time and Position of Sighting

Time: 10:46 WP#: 45 Lat: 34.602325 Long: -75.448891
Calculated Distance Traveled: 0.84 km

Behavior and Additional Comments

Hitting the surface hard and fast, traveling spaced out

Sunday, December 2, 2012 Sighting # 9

Initial sighting on Track

Time: 11:04 WP#: 49 Lat: 34.639317 Long: -75.389857
Vertical Angle: 1 Horizontal Bearing in Degrees: 60 Sighting Cue: Body
On/Off Effort: On Trackline: 23 Beaufort Sea State: 3
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 11:05 WP#: 50 Lat: 34.643750 Long: -75.394300
Species: *Ziphius cavirostris* Numbers (Low/High/Best): 5 / 5 / 5
Features used in Species ID: Long white body, brown head, dorsal fin way down body

Representative images used for Species ID: N/A
Photographer: Ryan Frame numbers: N/A Spacer: N/A
Calculated distance from Trackline: 0.64 km

Final Time and Position of Sighting

Time: 11:09 WP#: 51 Lat: 34.639347 Long: -75.392130
Calculated Distance Traveled: 0.53 km

Behavior and Additional Comments

No photos
Logging at the surface, dove when we flew over

Sunday, December 2, 2012 Sighting # 10

Initial sighting on Track

Time: 13:10 WP#: 60 Lat: 34.890417 Long: -75.586209
Vertical Angle: 2 Horizontal Bearing in Degrees: 45 Sighting Cue: Body
On/Off Effort: On Trackline: 24 Beaufort Sea State: 1
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 13:11 WP#: 61 Lat: 34.884608 Long: -75.560403
Species: *Stenella frontalis* Numbers (Low/High/Best): 75 / 100 / 80
Features used in Species ID: Alternating light and dark pattern down body

Representative images used for Species ID: 280, 291, 300-302, 312, 324, 330, 335, 357
Photographer: Ryan Frame numbers: 273 - 400 Spacer: 401
Calculated distance from Trackline: 2.44 km

Final Time and Position of Sighting

Time: 13:22 WP#: 62 Lat: 34.892888 Long: -75.553198
Calculated Distance Traveled: 1.13 km

Behavior and Additional Comments

Large group, traveling fast, jumping, darting different directions

Sunday, December 2, 2012 Sighting # 11

Initial sighting on Track

Time: 13:27 WP#: 66 Lat: 34.774250 Long: -75.425548
Vertical Angle: 2 Horizontal Bearing in Degrees: 60 Sighting Cue: Splash
On/Off Effort: On Trackline: 24 Beaufort Sea State: 2
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 13:28 WP#: 67 Lat: 34.777744 Long: -75.423560
Species: *Tursiops truncatus* Numbers (Low/High/Best): 10 / 15 / 10
Features used in Species ID: Robust, grey animals with white peduncles

Representative images used for Species ID: 410, 414, 418, 419
Photographer: Ryan Frame numbers: 402 - 420 Spacer: 421
Calculated distance from Trackline: 0.43 km

Final Time and Position of Sighting

Time: 13:30 WP#: 68 Lat: 34.779807 Long: -75.419636
Calculated Distance Traveled: 0.43 km

Behavior and Additional Comments

Spaced into 2 groups, traveling

Sunday, December 2, 2012 Sighting # 12

Initial sighting on Track

Time: 14:05 WP#: 78 Lat: 35.027097 Long: -75.629516
Vertical Angle: 2 Horizontal Bearing in Degrees: 90 Sighting Cue: Body
On/Off Effort: On Trackline: 25 Beaufort Sea State: 1
Observer: Erin Observer side: Left

Actual Time and Position of Sighting

Time: 14:12 WP#: 79 Lat: 35.019581 Long: -75.633433
Species: *Megaptera novaeangliae* Numbers (Low/High/Best): 1 / 1 / 1
Features used in Species ID: Black body, baleen whale, dorsal fin

Representative images used for Species ID: 423, 426, 451, 476, 486
Photographer: Ryan Frame numbers: 422 - 506 Spacer: 507
Calculated distance from Trackline: 0.91 km

Final Time and Position of Sighting

Time: 14:44 WP#: 80 Lat: 35.023768 Long: -75.644898
Calculated Distance Traveled: 1.14 km

Behavior and Additional Comments

At first glace looked like a right whale. Animal never fanned his white pectorals. Slow travel, longer dives, hanging below the surface, staying on dives for 10-15 min

The Sighting Summary Sheet

The Sighting Summary, adapted from the Sighting Data Sheet used in the field, integrates data gathered in the field with results from lab analyses to provide a full summary of each marine mammal sighting (note – this sheet only deals with marine mammal sightings). A Sighting Summary is to be completed for all sightings, including sightings made while off-effort during transits between survey legs, as well as sighting cues that never led to a sighting that was relocated.

The Sighting Summary sheet is broken into four sections; "Initial Sighting on Track", "Time and Position of Sighting", "Final Time and Position of Sighting", and "Behavior and Additional Comments". Each section and sub-heading will be detailed below.

Initial Sighting on Track

Time*:* The time the "break track" GPS way-point was taken.
WP#: GPS way-point number of the break track.
Lat/Long: The latitude and longitude associated with the break track way-point.
Track Line: The track line surveyed when the sighting was made.
On/Off Effort: Whether the sighting was made during an active survey track line (*i.e*. on effort) or during transit BETWEEN track lines (*i.e*. off effort). Sightings made during off effort transit to and from the range are NOT included in the sighting summaries.
Sighting Cue: Whether the initial sighting was a splash, a breach or body part.
Vertical Angle: Vertical "angle" between 1 and 4, the lower edge of view ("1") to the horizon ("4"). A subjective and relative measure of how far away from the track line the initial sighting occurred.
Horizontal Bearing in Degrees: The horizontal degrees from front to back (0 to 180) at which the sighting occurred.
Observer: Three lettered initial of the observer who made the sighting.
Observer Side: On which side of the plane in the direction of travel the sighting occurred.

Time and Position of Sighting

Time*:* The time the GPS way-point was taken while relocating animals and circling above.
WP#: GPS way-point number of the sighting.
Lat/Long: The latitude and longitude associated with the way point obtained while circling over animals.
Beaufort Sea State: The sea state observed during the sighting.
Species: Scientific binomial name of the marine mammal species involved in the sighting. When species identity could not be established unequivocally, the next higher taxonomic level to which identity could be established was used. If a cetacean was identified as a dolphin but images obtained during the encounter were not sufficient to establish species ID, the designation "unidentified delphinid" or "*T. truncatus*/*S. frontalis*" is used. If the animal could be ID'd as a cetacean only, then "unidentified cetacean" is used. If a large body was observed but it could not be established whether a cetacean, fish/shark or turtle was involved in the sighting, the designation "unidentified marine vertebrate" is used.
Criteria used to identify species: Which species specific diagnostic features were used in classifying a sighting to species (see information on diagnosis of species).
Best images used for species ID: The images obtained during the sighting that best displayed the features used to establish species.
Numbers (Low/ High/ Best): Low, high, and best estimate of number of animals involved in the sighting.
Calves observed? Whether any calves were observed during the encounter. A conservative measure is used, in that only animals roughly half the size of the associated larger animal (the presumed mother) are designated as calves.
Calculated Distance from Track Line: The distances between the break track waypoint (2.0) and the initial position of each sighting (2.4) is calculated using the online software Scripts Movable

Type (http://www.movable-type.co.uk/scripts/latlong.html). Since there is a bias in estimating the location of a group of mobile marine mammals from a fast moving airplane, the distances calculated between break track and sighting are rounded to 0.1 km.
Photographer: Three lettered initials of observer seated in the right camera seat.
Card #: Memory card on which the photos from the particular sighting was made.
Frame Numbers: Starting and ending frame number.
Spacer: Image used to separate sighting to clarify when one sighting ends and the next begins. Image typically of interior of plane or a 45 degree angle shot of the horizon. If taking a shot of the interior of the plane, put the camera focus setting on "manual", take the picture, then immediately set it back to "automatic".

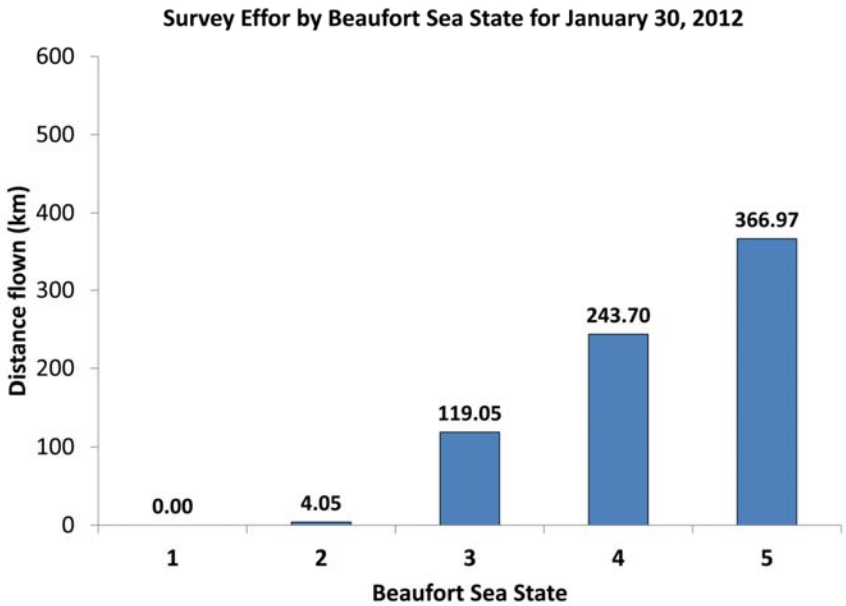
Final Time and Position of Sighting

Time: WP#: Lat: Long: Calculated Distance traveled: ➔ see section above.

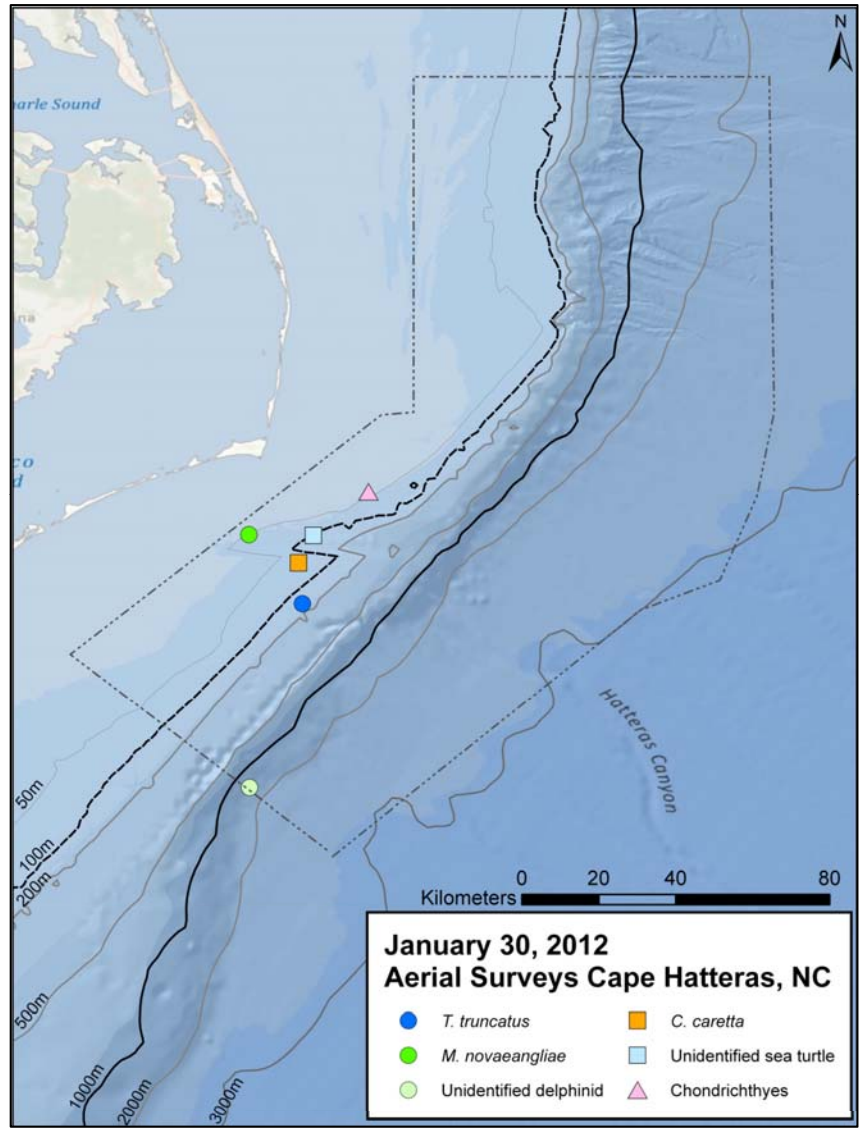
Behavior and Additional Comments

Any behavioral notes obtained during the sighting (*e.g.* group formation, relative travel speed, feeding events or presumed copulation attempts, presence of other cetaceans or sharks in or around the animal(s) in the sighting, interaction with inanimate objects such marine debris). This section also includes notes on altitude of the survey plane during the encounter as well as any indications (or lack thereof) of the animal(s) reacting to the presence of the plane.

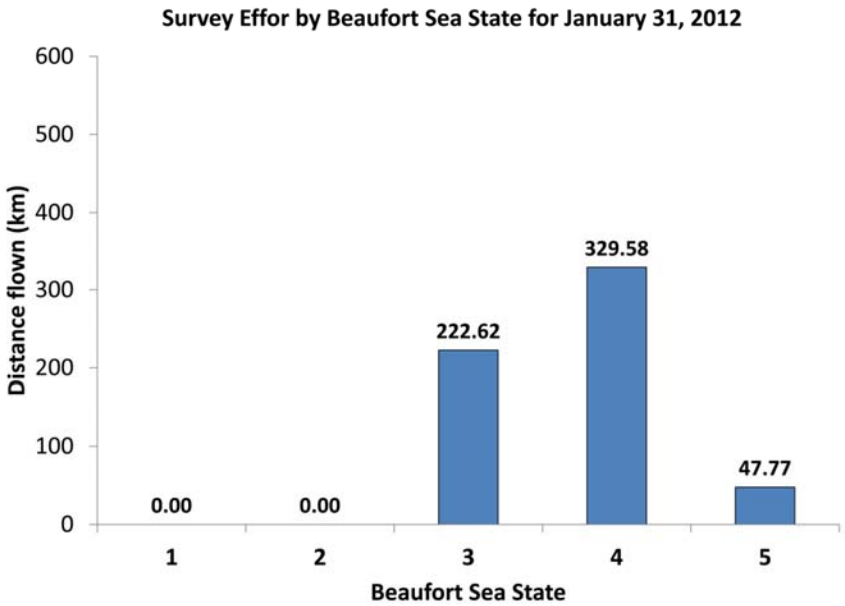
January 30, 2012



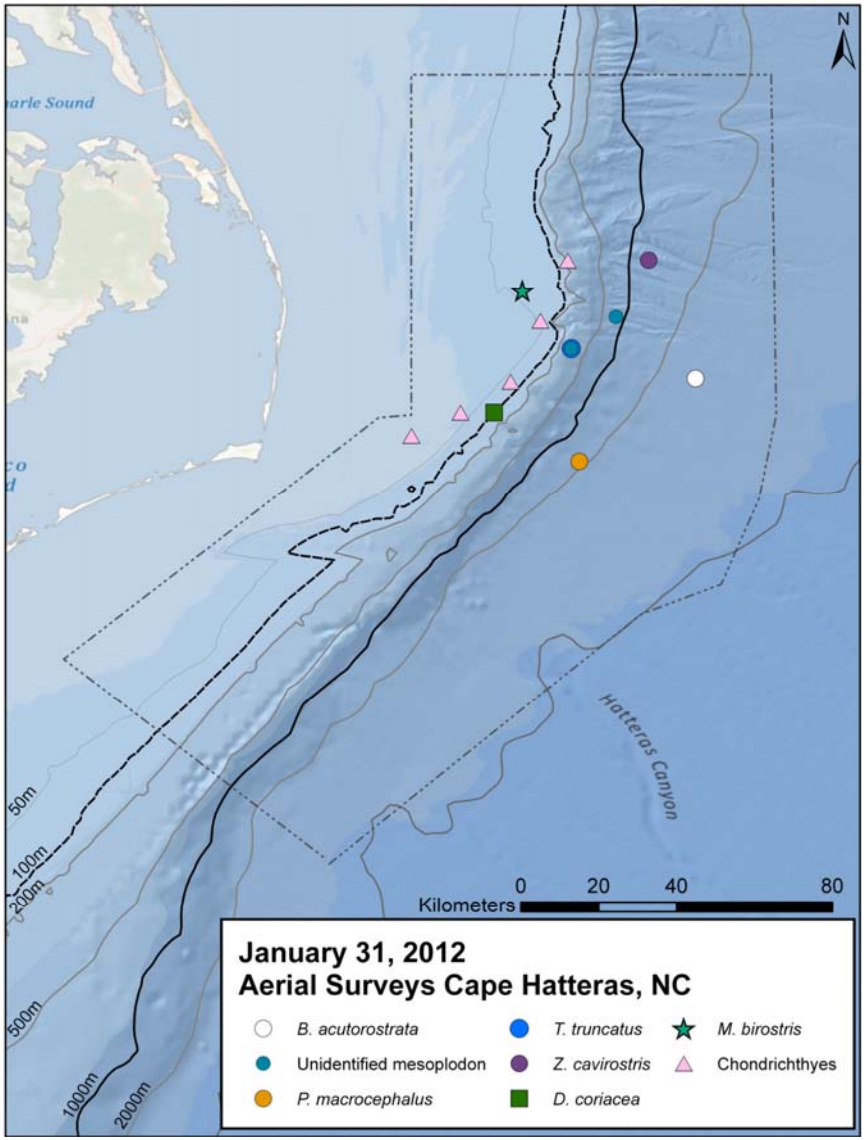
Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number
Megaptera novaeangliae	1	1	4	25
Tursiops truncatus	1	3	4	25
Unidentified delphinid	1	1	4	20
Caretta caretta	1	1	3	26
Unidentified sea turtle	1	1	3	27
Unidentified chondrichthyes	1	1	3	29



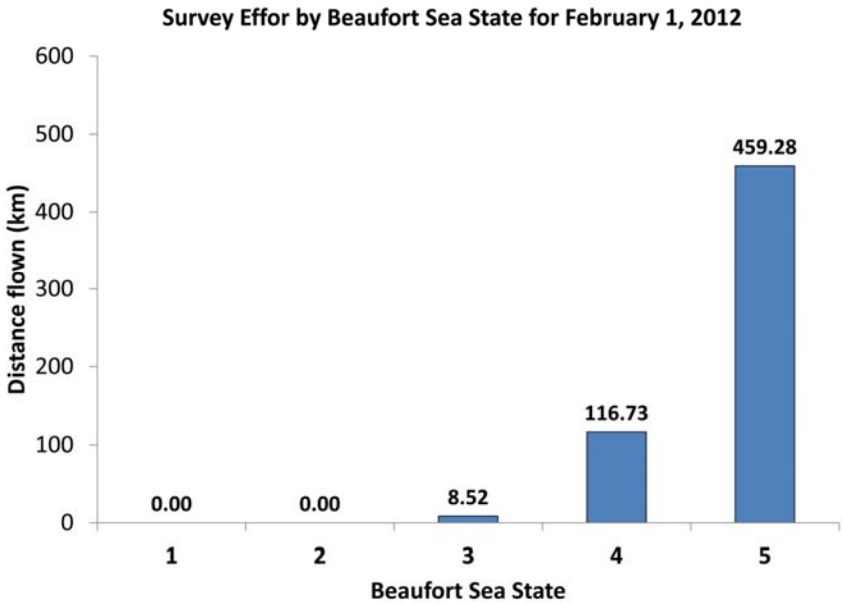
January 31, 2012



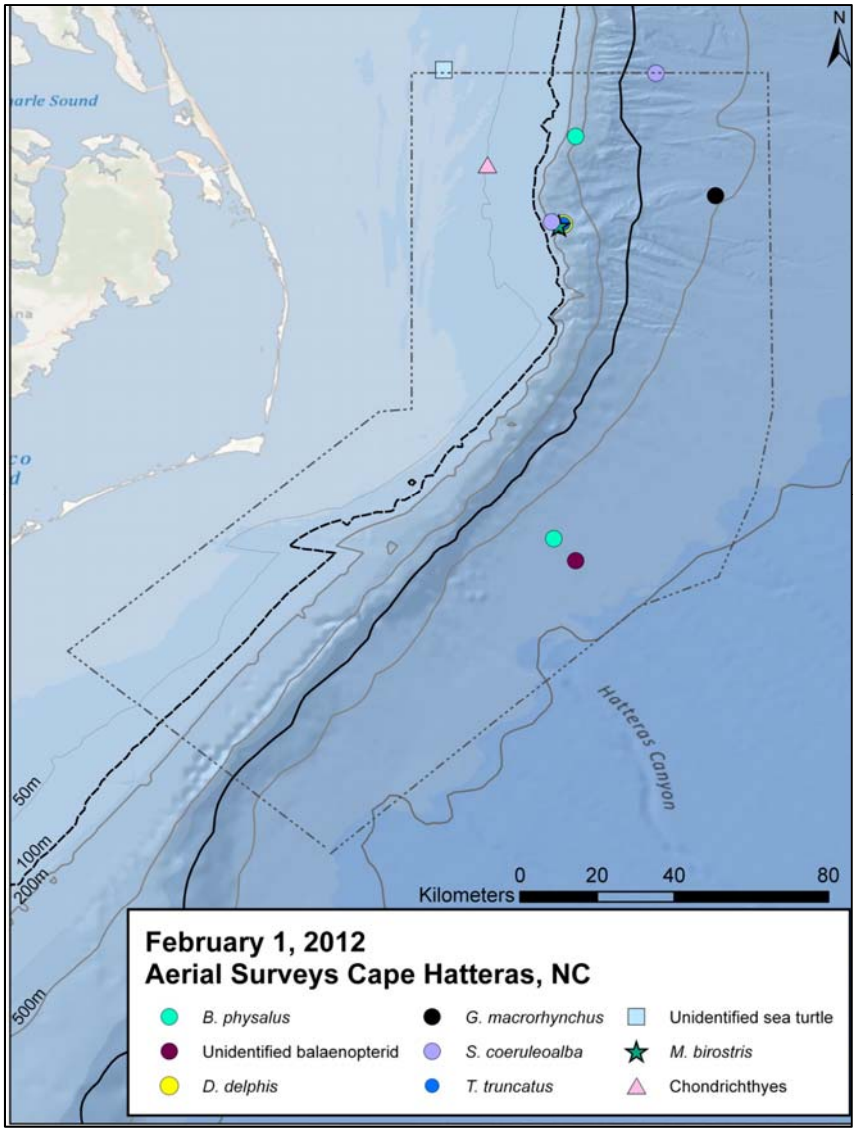
Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number
Balaenoptera acutorostrata	1	2	4	35
Delphinus delphis	1	1	3	34
Unidentified mesoplodon	1	4	4	37
Unidentified mesoplodon	1	3	4	36
Physeter macrocephalus	1	1	3	33
Tursiops truncatus	1	6	4	36
Ziphius cavirostris	1	1	4	39
Manta birostris	1	1	4	38
Unidentified chodrichthyes	5	6	3 to 4	-



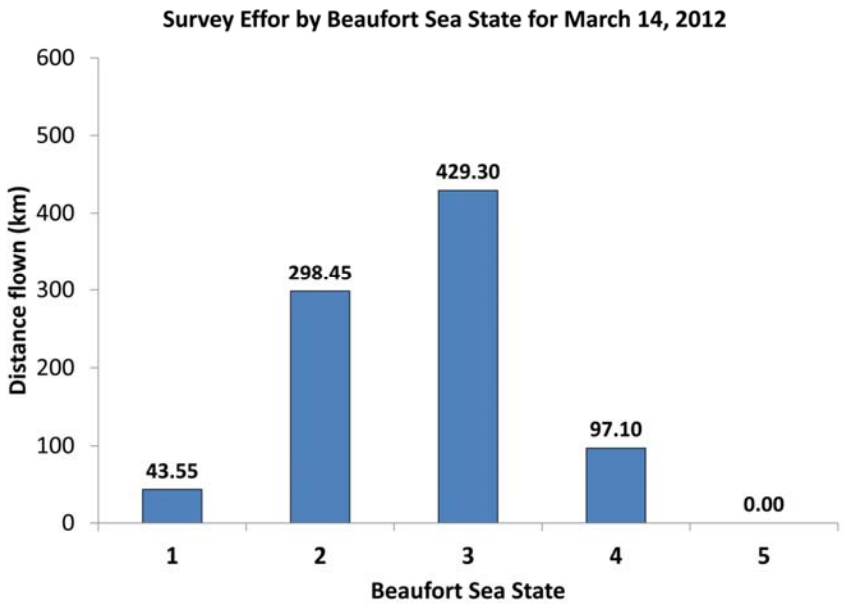
February 1, 2012



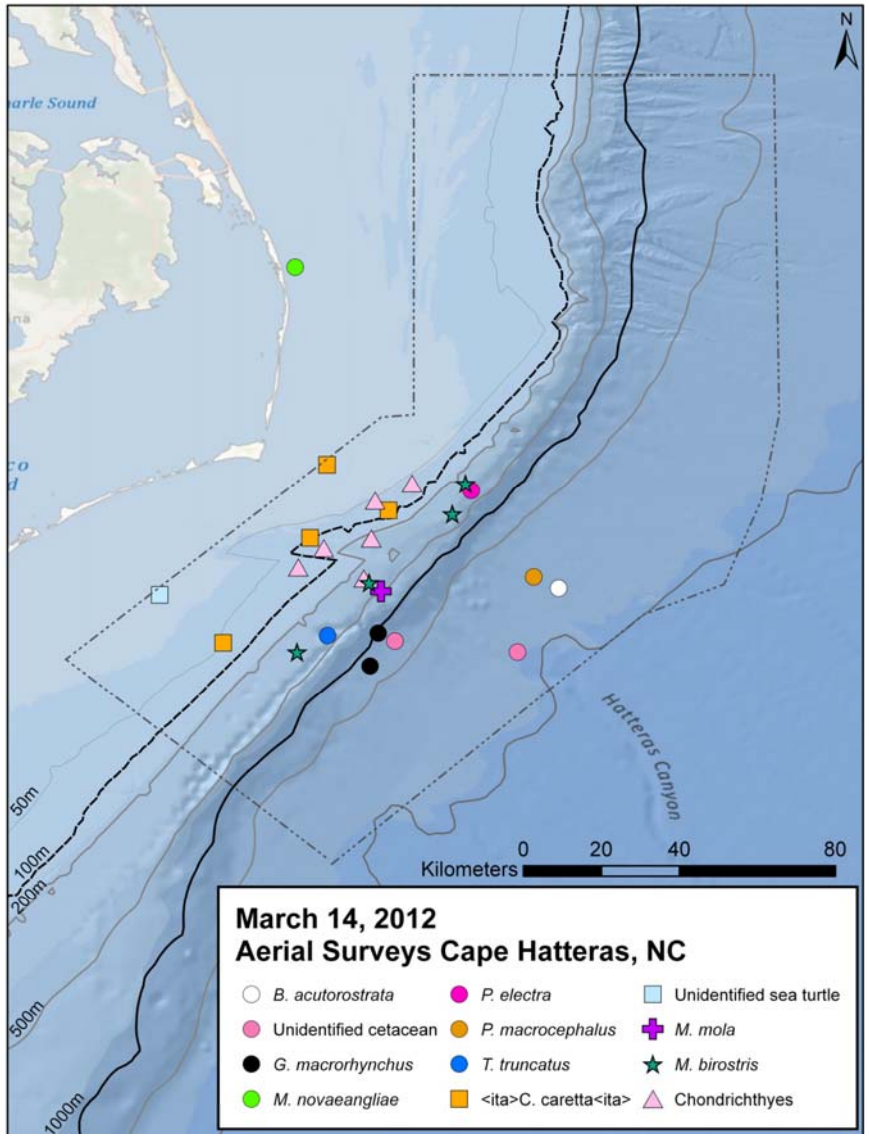
Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number
Unidentified balaenopterid	1	1	5	31
Balaenoptera physalus	1	1	5	43
Balaenoptera physalus	1	2	5	31
Delphinus delphis	1	18	5	40
Globicephala macrorhynchus	1	15	5	41
Globicephala macrorhynchus	1	4	5	40
Stenella coeruleoalba	1	450	4	45
Stenella coeruleoalba	1	250	5	40
Tursiops truncatus	1	9	5	40
Unidentified sea turtle	1	1	3	45
Manta birostris	1	1	5	40
Unidentified chondrichetheyes	1	1	5	42



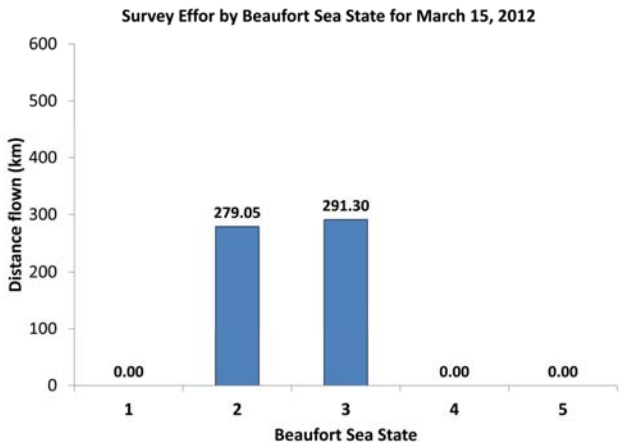
March 14, 2012



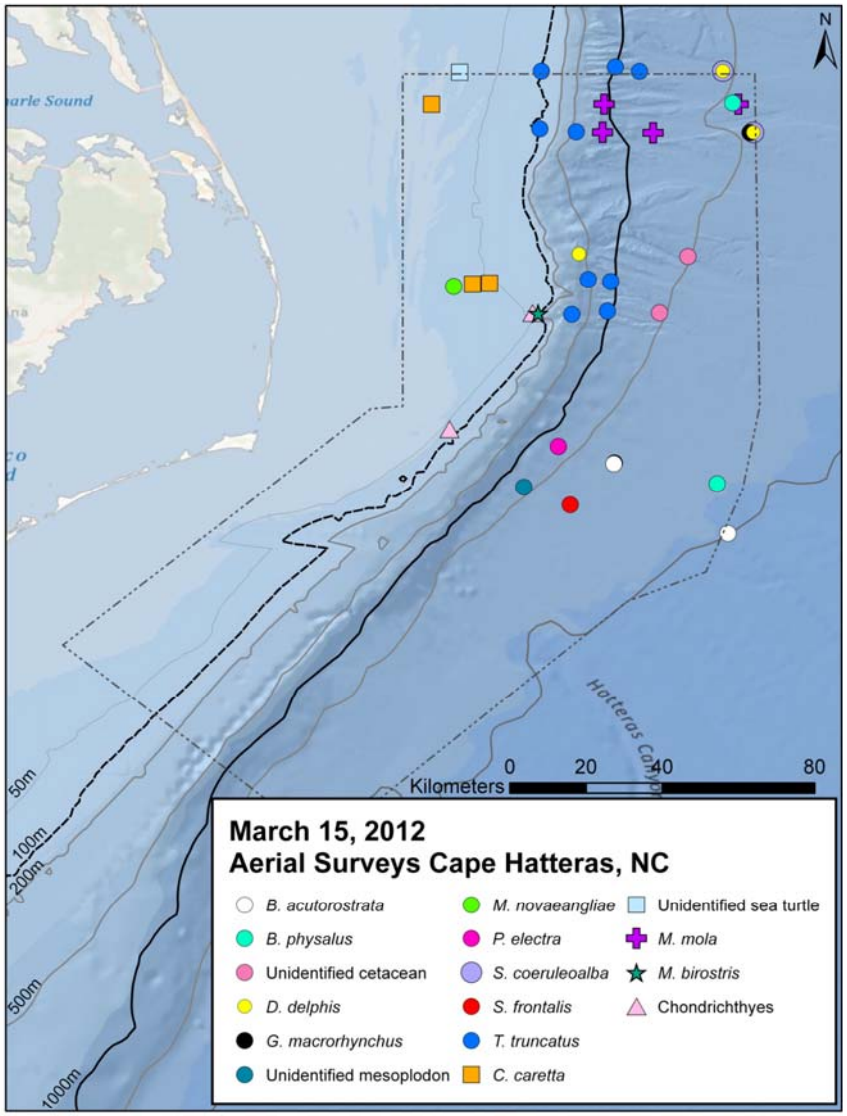
Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number
Balaenoptera acutorostrata	1	2	2	30
Unidentified cetacean	1	1	2	26
Unidentified cetacean	1	1	2	28
Globicephala macrorhynchus	1	21	3	25
Globicephala macrorhynchus	1	16	2	26
Megaptera novaeangliae	1	1	2	inshore
Peponocephala electra	1	185	2	31
Physeter macrocephalus	1	1	2	30
Tursiops truncatus	1	14	3	25
Caretta caretta	4	5	1 to 3	-
Unidentified sea turtle	1	1	3	23
Mola mola	1	1	2	27
Manta birostris	4	4	2 to 3	-
Unidentified chondrichthyes	6	10	1 to 3	-



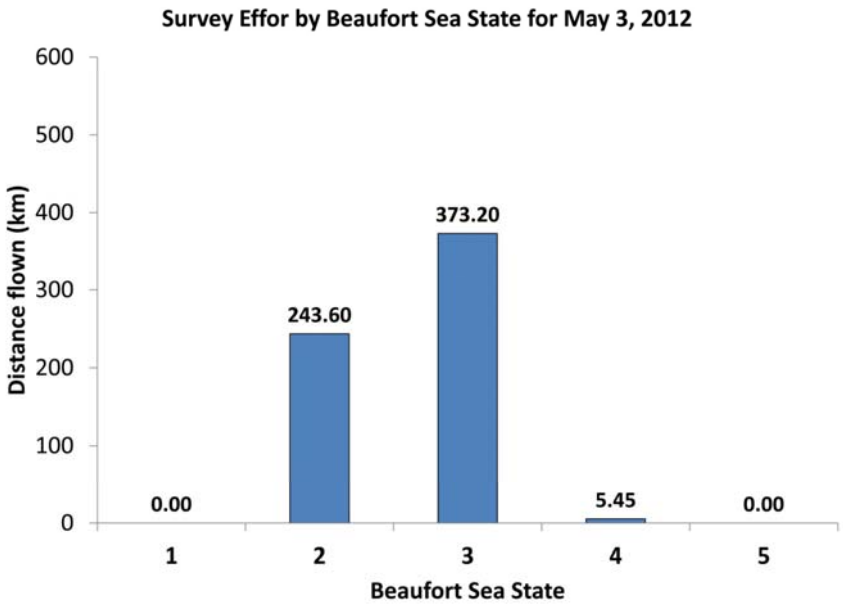
March 15, 2012



Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number	
Balaenoptera acutorostrata	1	2	2	-	*
Balaenoptera acutorostrata	1	2	2	33	*
Balaenoptera physalus	1	1	2	33	
Balaenoptera physalus	1	3	2	44	
Unidentified cetacean	1	1	3	37	
Delphinus delphis	1	75	3	45	
Delphinus delphis	1	110	3	43	*
Delphinus delphis	1	125	3	39	
Globicephala macrorhynchus	1	25	2	33	
Globicephala macrorhynchus	1	18	3	43	
Unidentified Mesoplodon	1	3	2	32	
Megaptera novaeangliae	1	1	3	38	Δ
Peponocephala electra	1	210	2	33	
Stenella coeruleoalba	1	75	3	45	
Stenella coeruleoalba	1	110	3	43	*
Stenella frontalis	1	26	2	32	
Tursiops truncatus	1	28	3	37	
Tursiops truncatus	1	8	3	37	
Tursiops truncatus	1	35	3	38	
Tursiops truncatus	1	40	3	38	
Tursiops truncatus	1	8	3	45	
Tursiops truncatus	1	4	2	45	
Tursiops truncatus	1	26	2	45	
Tursiops truncatus	1	20	3	43	
Tursiops truncatus	1	15	3	43	
Unidentified cetacean	1	2	3	39	
Caretta caretta	3	5	3	-	
Unidentified sea turtle	1	1	3	45	
Mola mola	4	6	2	-	
Manta birostris	1	1	3	37	
Unidentified chondrichthyes	2	2	2 to 3	-	

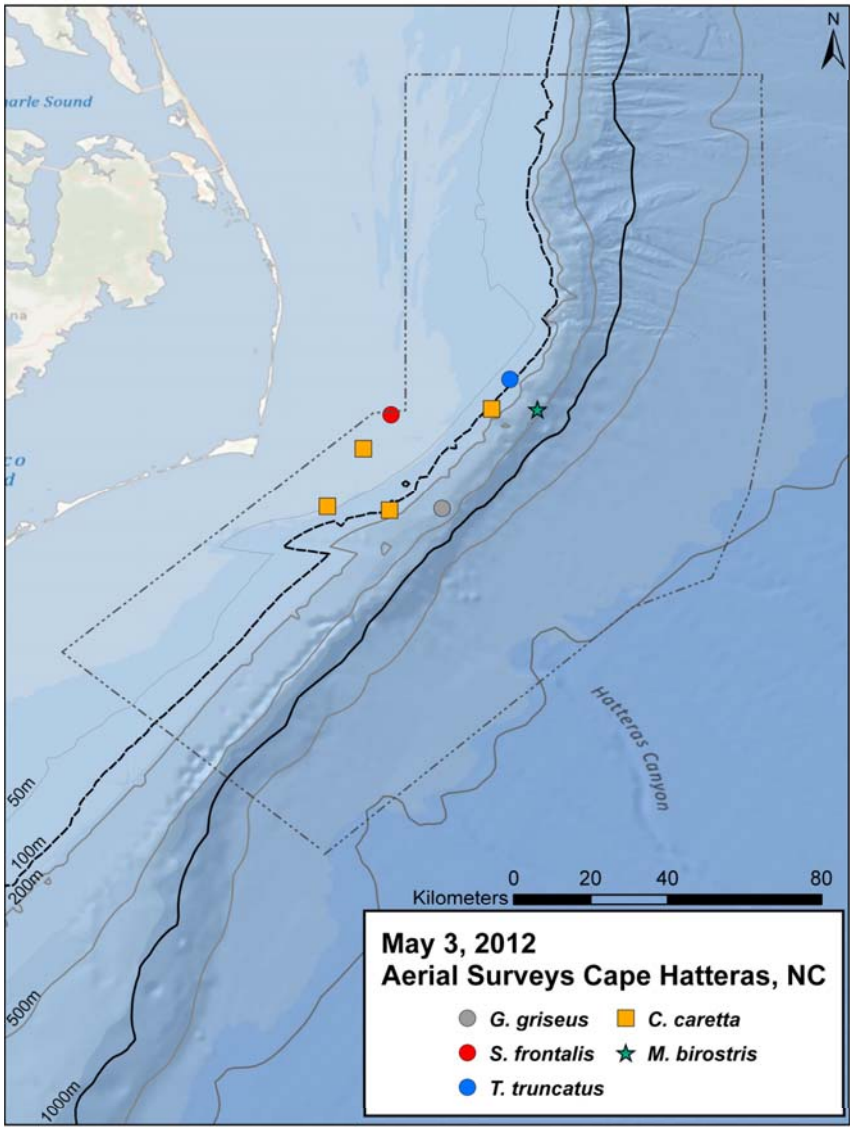


May 3, 2012

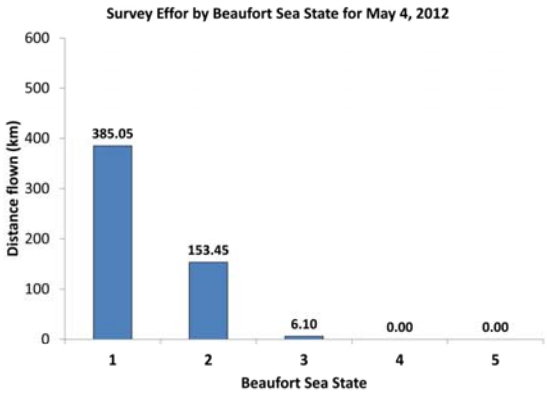


Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number
Grampus griseus	1	13	2	32
Stenella frontalis	1	19	3	-
Tursiops truncatus	1	4	3	37
Caretta caretta	4	4	2	-
Manta birostris	1	1	3	34

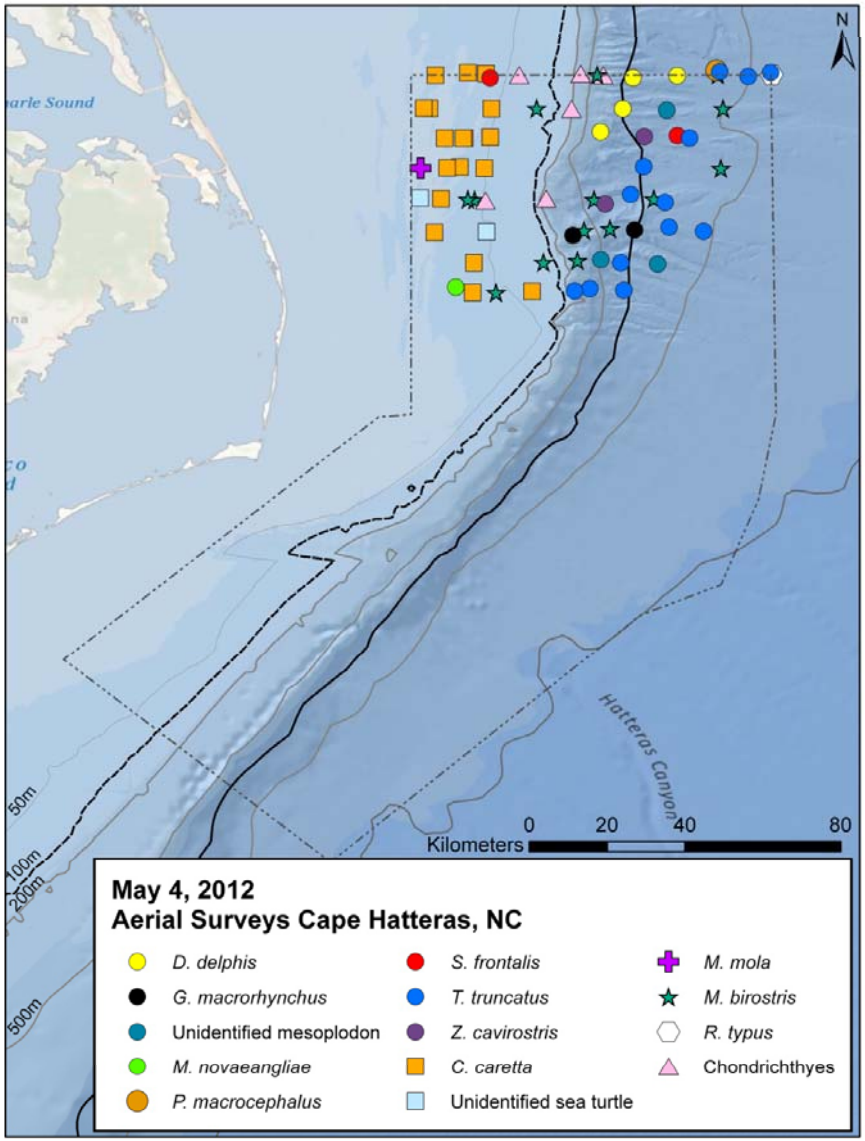
*



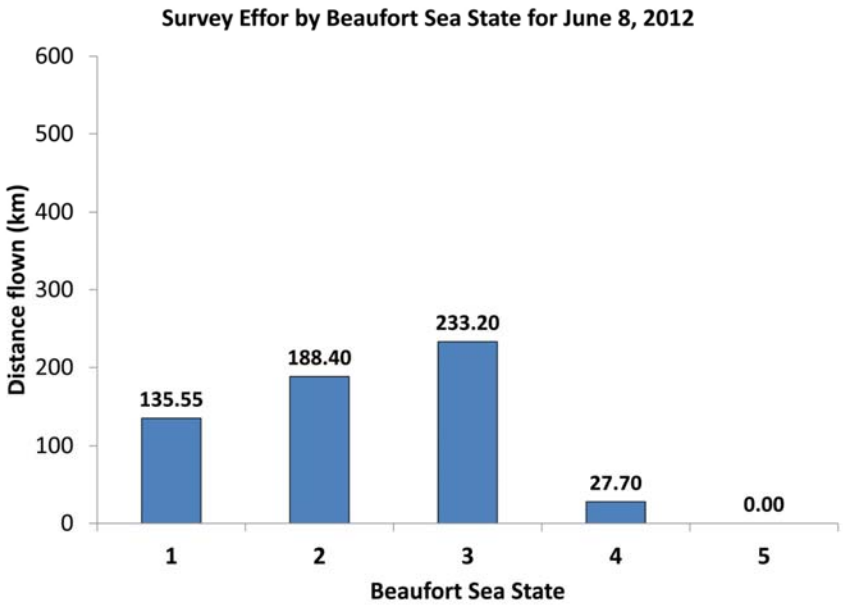
May 4, 2012



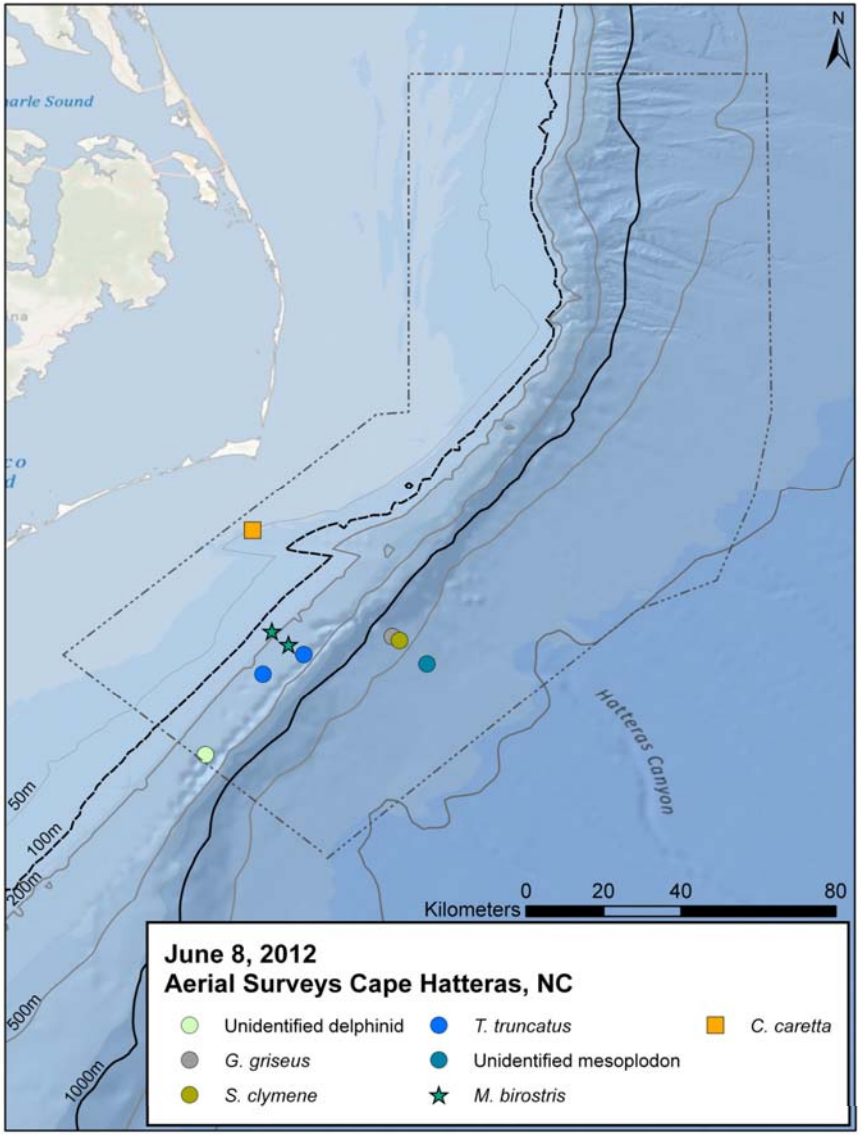
Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number
Delphinus delphis	1	37	1	45
Delphinus delphis	1	40	1	45
Delphinus delphis	1	45	1	44
Delphinus delphis	1	225	1	43
Globicephala macrorhynchus	1	5	1	40
Globicephala macrorhynchus	1	11	1	40
Unidentified mesoplodon	1	1	1	44
Unidentified mesoplodon	1	1	2	39
Unidentified mesoplodon	1	1	1	39
Megaptera novaeangliae	1	1	2	38
Physeter macrocephalus	1	2	1	45
Stenella frontalis	1	48	1	45
Stenella frontalis	1	58	1	43
Tursiops truncatus	1	7	1	45 *
Tursiops truncatus	1	39	1	45
Tursiops truncatus	1	8	1	45 *
Tursiops truncatus	1	13	1	43
Tursiops truncatus	1	23	1	42
Tursiops truncatus	1	32	1	41
Tursiops truncatus	1	40	1	41
Tursiops truncatus	1	34	1	40
Tursiops truncatus	1	50	1	40
Tursiops truncatus	1	30	2	39
Tursiops truncatus	1	48	2	38
Tursiops truncatus	1	8	2	38
Tursiops truncatus	1	2	2	38
Physeter macrocephalus	1	2	1	43
Physeter macrocephalus	1	3	1	41
Caretta caretta	18	35	1 to 3	-
Unidentified sea turtle	2	2	1 to 2	-
Mola mola	2	2	1	-
Manta birostris	14	24	1 to 2	-
Unidentified chondrichthyes	7	17	2 to 3	-



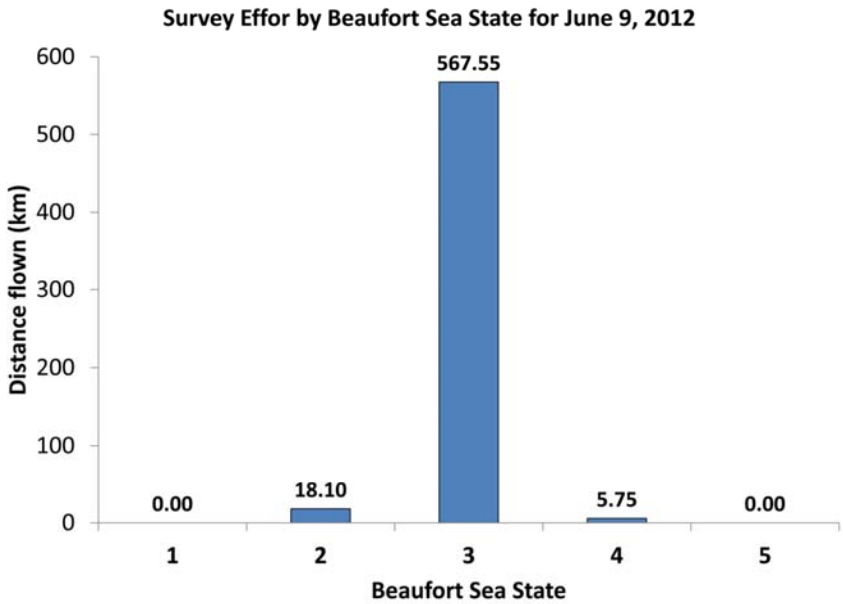
June 8, 2012



Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number
Unidentified delphinid	1	8	4	20
Grampus griseus	1	8	1	26
Unidentified mesoplodon	1	2	1	26
Stenella clymene	1	65	1	26
Tursiops truncatus	1	25	3	23
Tursiops truncatus	1	15	2	24
Caretta caretta	1	2	2	26
Manta birostris	2	2	2	24

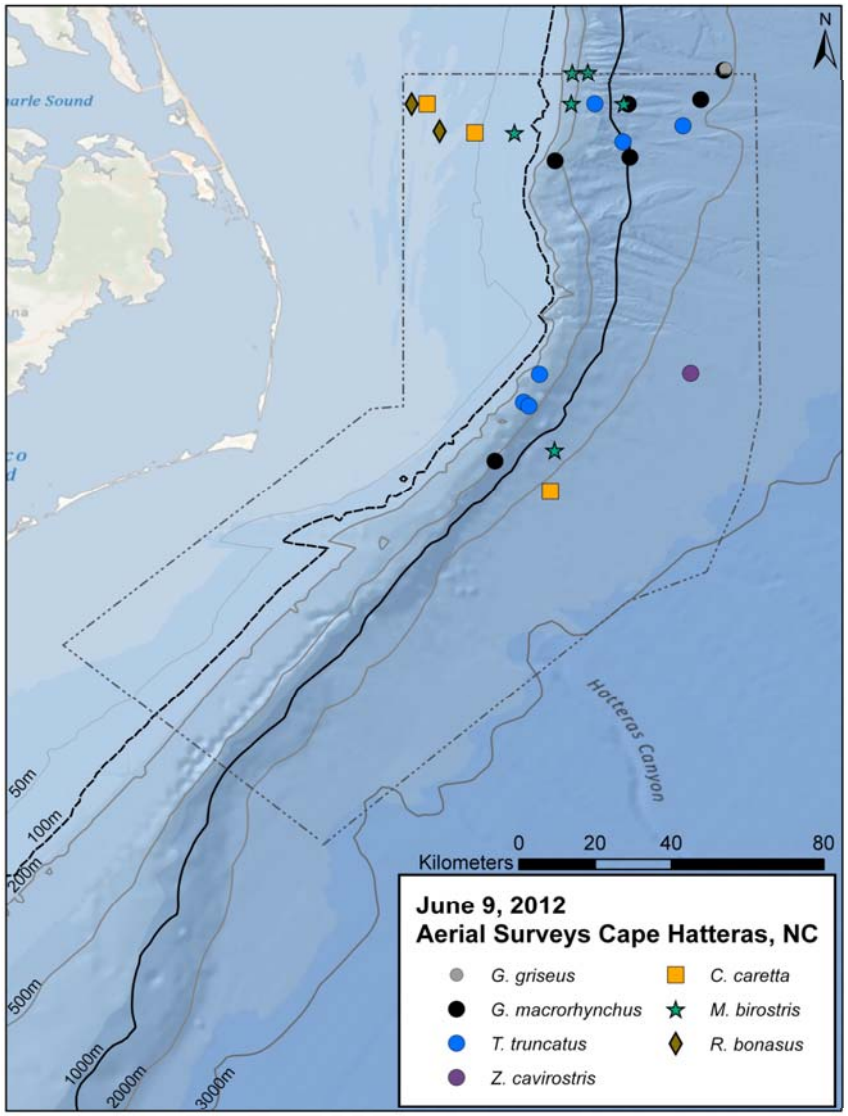


June 9, 2012

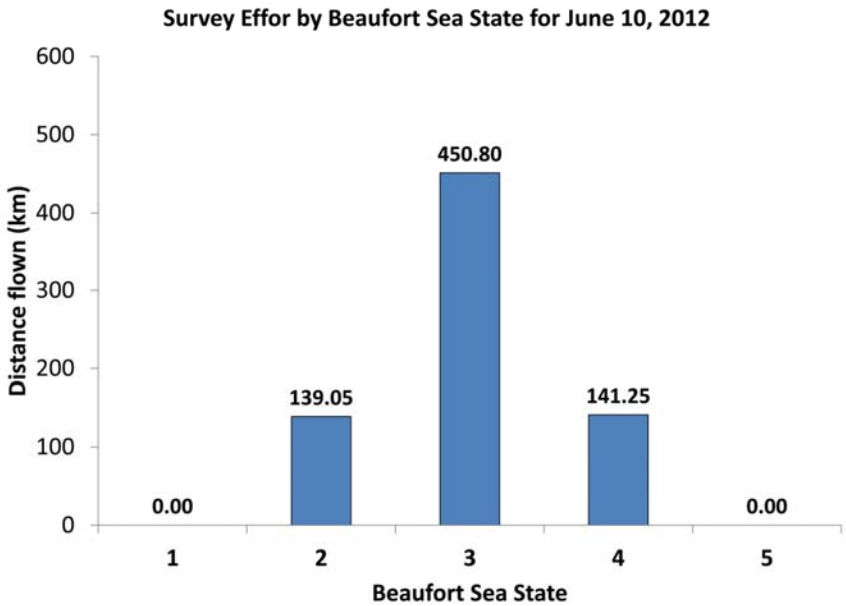


Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number
Grampus griseus	1	7	3	45
Globicephala macrorhynchus	1	9	3	32
Globicephala macrorhynchus	1	8	3	45
Globicephala macrorhynchus	1	2	3	44
Globicephala macrorhynchus	1	31	3	44
Globicephala macrorhynchus	1	2	3	42
Globicephala macrorhynchus	1	11	3	42
Tursiops truncatus	1	11	3	34
Tursiops truncatus	1	34	3	34
Tursiops truncatus	1	2	3	35
Tursiops truncatus	1	29	3	44
Tursiops truncatus	1	21	3	43
Tursiops truncatus	1	22	3	43
Ziphius cavirostris	1	2	3	35
Caretta caretta	3	3	3	-
Manta birostris	6	9	3	-
Rhino bonasus	2	215	3	-

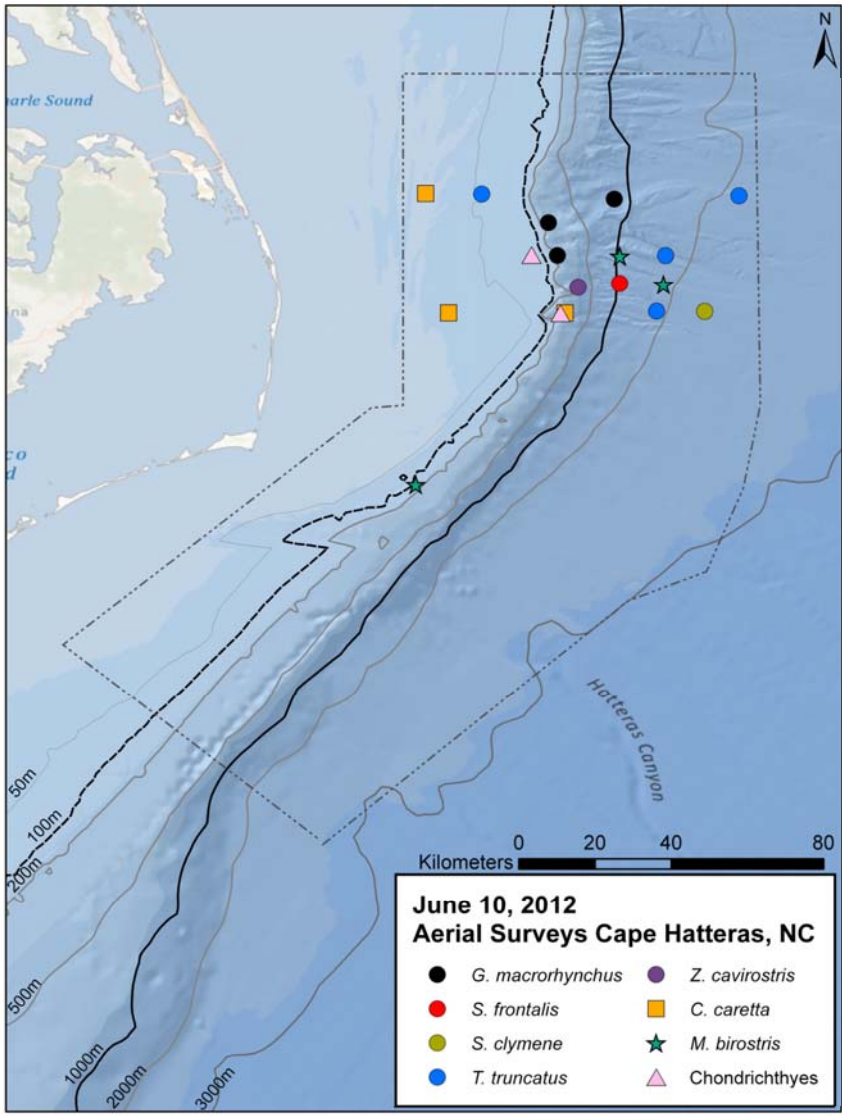
*



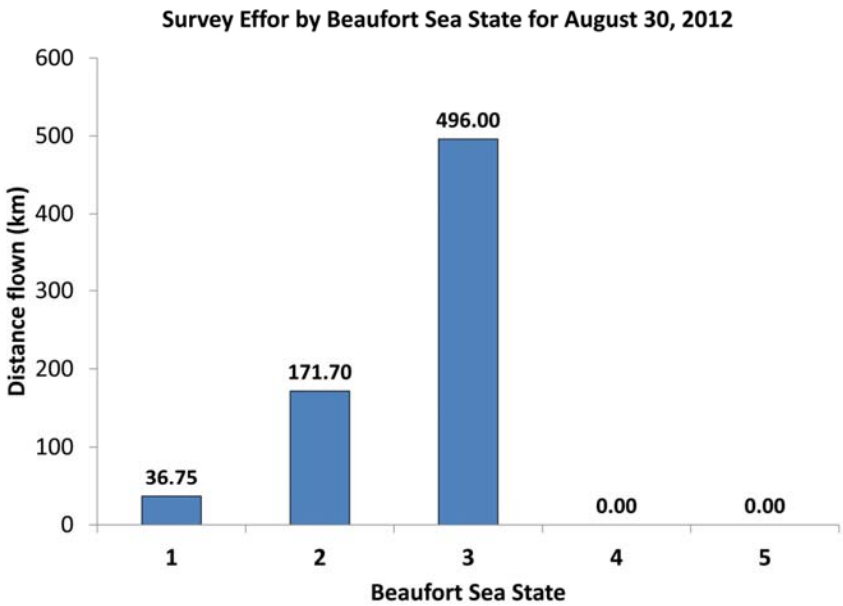
June 10, 2012

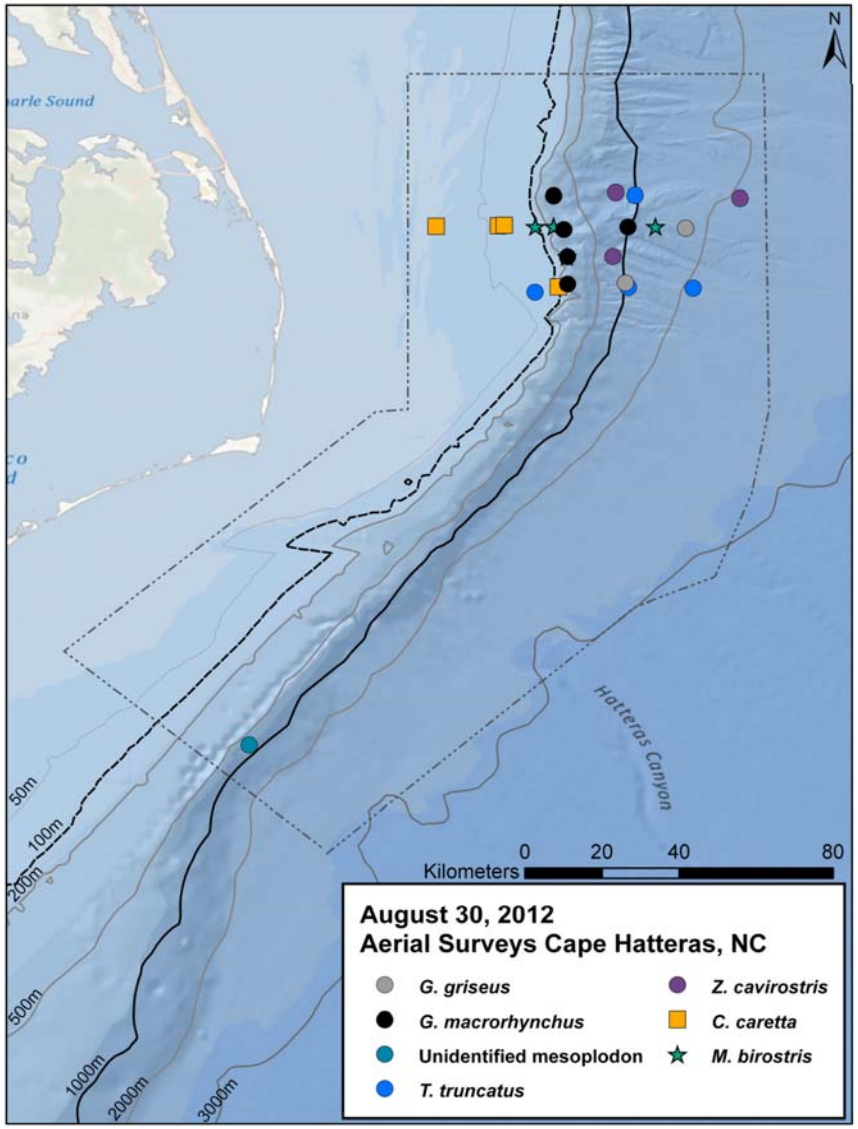


Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number
Globicephala macrorhynchus	1	7	2	41
Globicephala macrorhynchus	1	12	3	40
Globicephala macrorhynchus	1	45	2	39
Stenella clymene	1	100	3	37
Stenella frontalis	1	25	3	38
Tursiops truncatus	1	8	2	41
Tursiops truncatus	1	40	4	41
Tursiops truncatus	1	35	3	39
Tursiops truncatus	1	35	3	37
Ziphius cavirostris	1	1	3	38
Caretta caretta	3	3	2 to 3	-
Manta birostris	3	3	2 to 4	-
Unidentified chondrichthyes	2	2	2 to 3	-



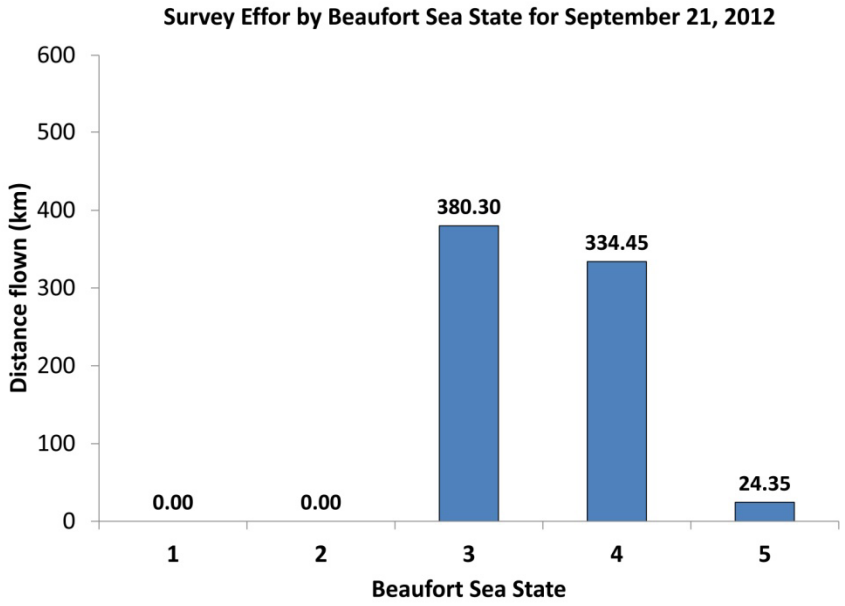
August 30, 2012



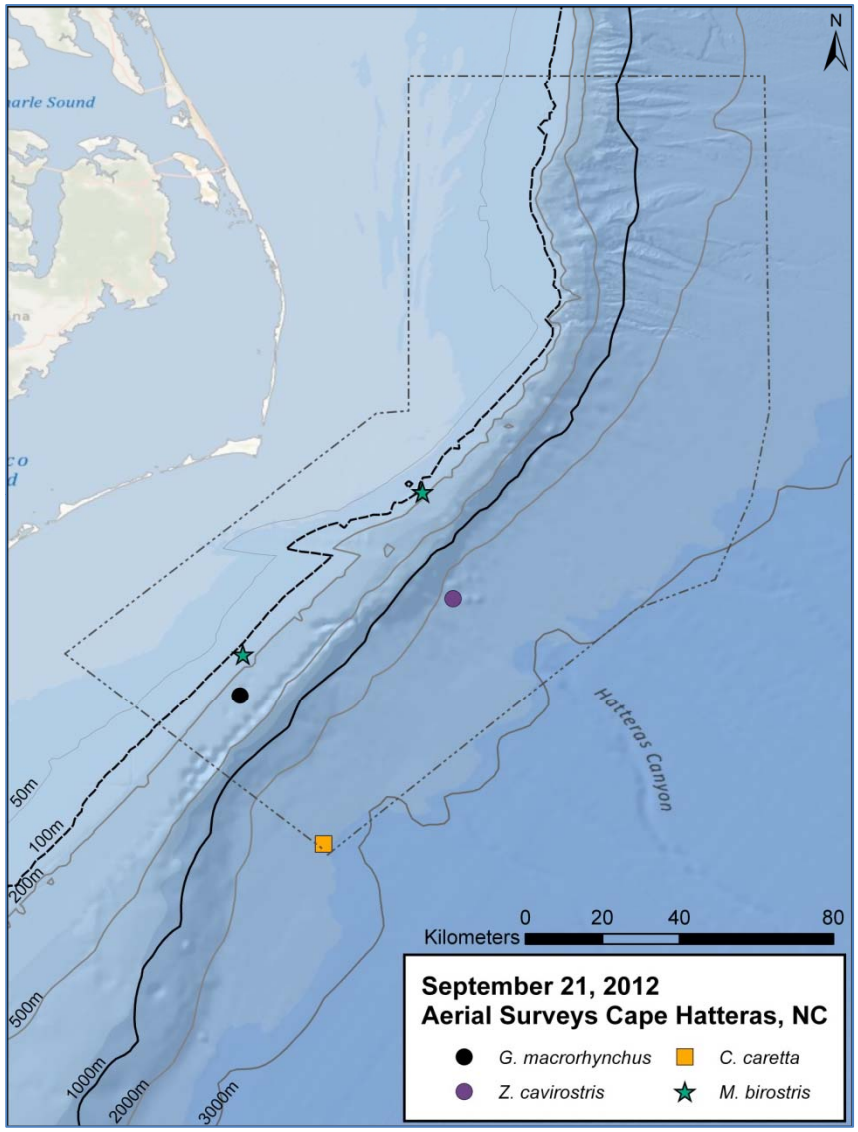


Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number
Grampus griseus	1	6	2	38
Grampus griseus	1	4	3	40
Globicephala macrorhynchus	1	18	2	38
Globicephala macrorhynchus	1	41	2	39
Globicephala macrorhynchus	1	4	2	40
Globicephala macrorhynchus	1	15	2	40
Globicephala macrorhynchus	1	7	1	41
Unidentified Mesoplodon	1	3	3	21
Tursiops truncatus	1	33	2	38
Tursiops truncatus	1	11	2	38
Tursiops truncatus	1	9	3	38
Tursiops truncatus	1	18	1	41
Ziphius cavirostris	1	1	2	39
Ziphius cavirostris	1	4	3	41
Ziphius cavirostris	1	1	1	41
Caretta caretta	4	4	2 to 3	-
Manta birostris	4	5	2	-

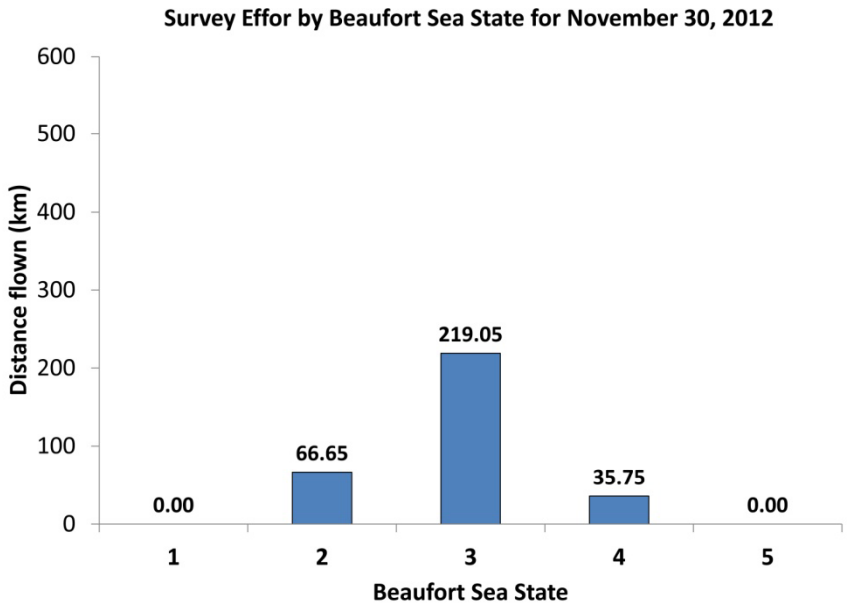
September 21, 2012



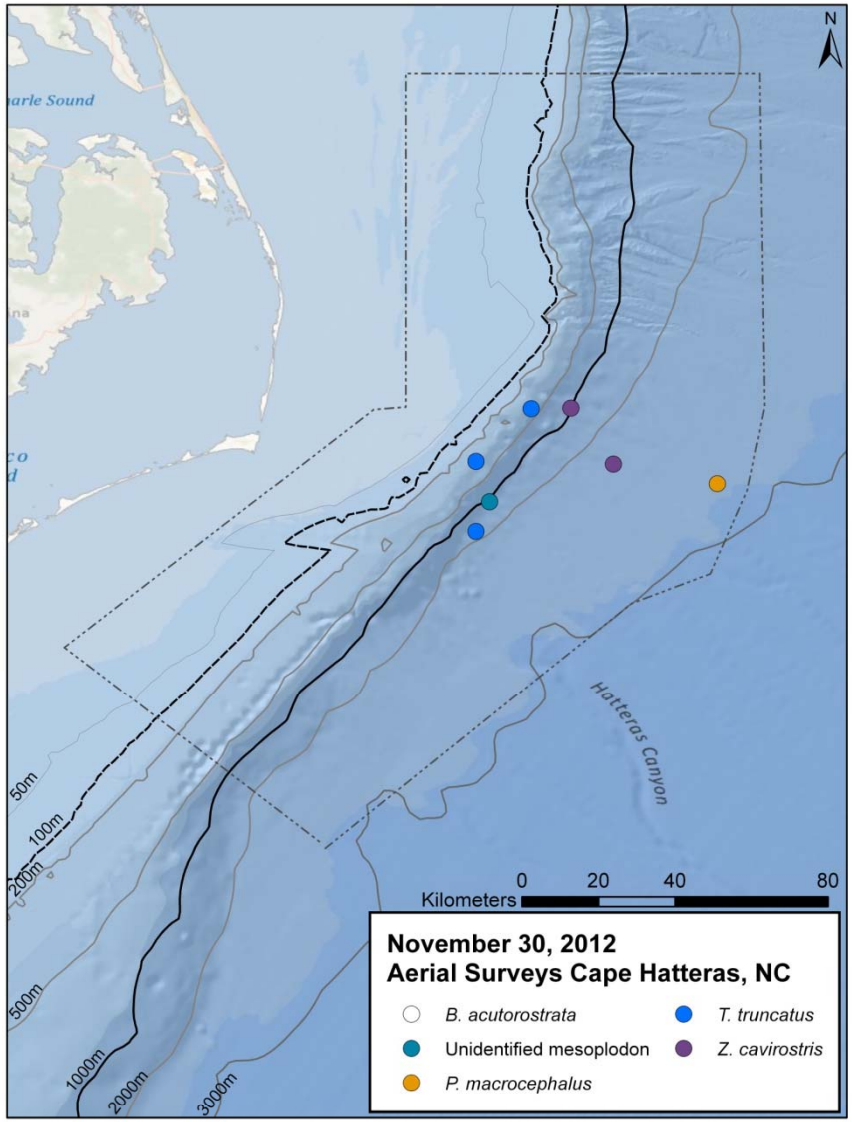
Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number
Globicephala macrorhynchus	1	5	3	22
Ziphius cavirostris	1	2	3	28
Caretta caretta	1	1	4	20
Manta birostris	2	3	3	-



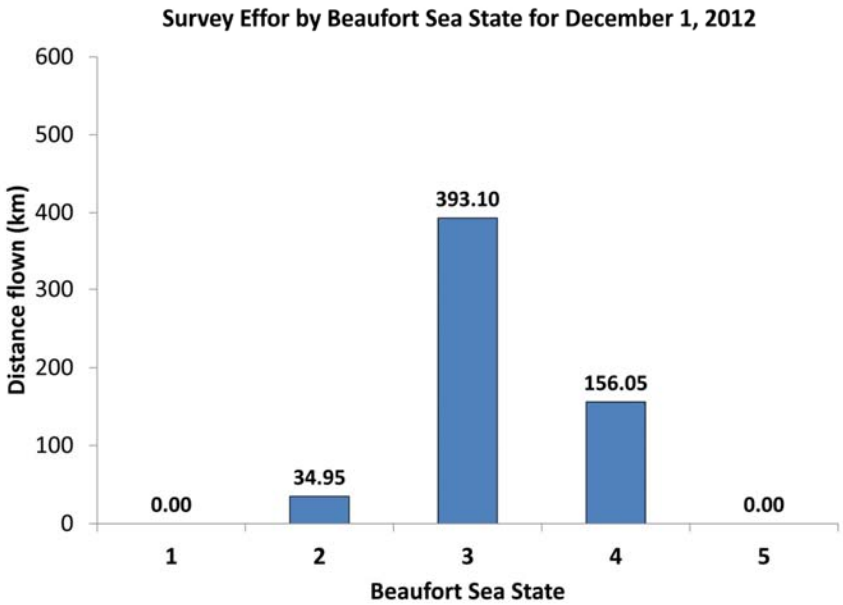
November 30, 2012



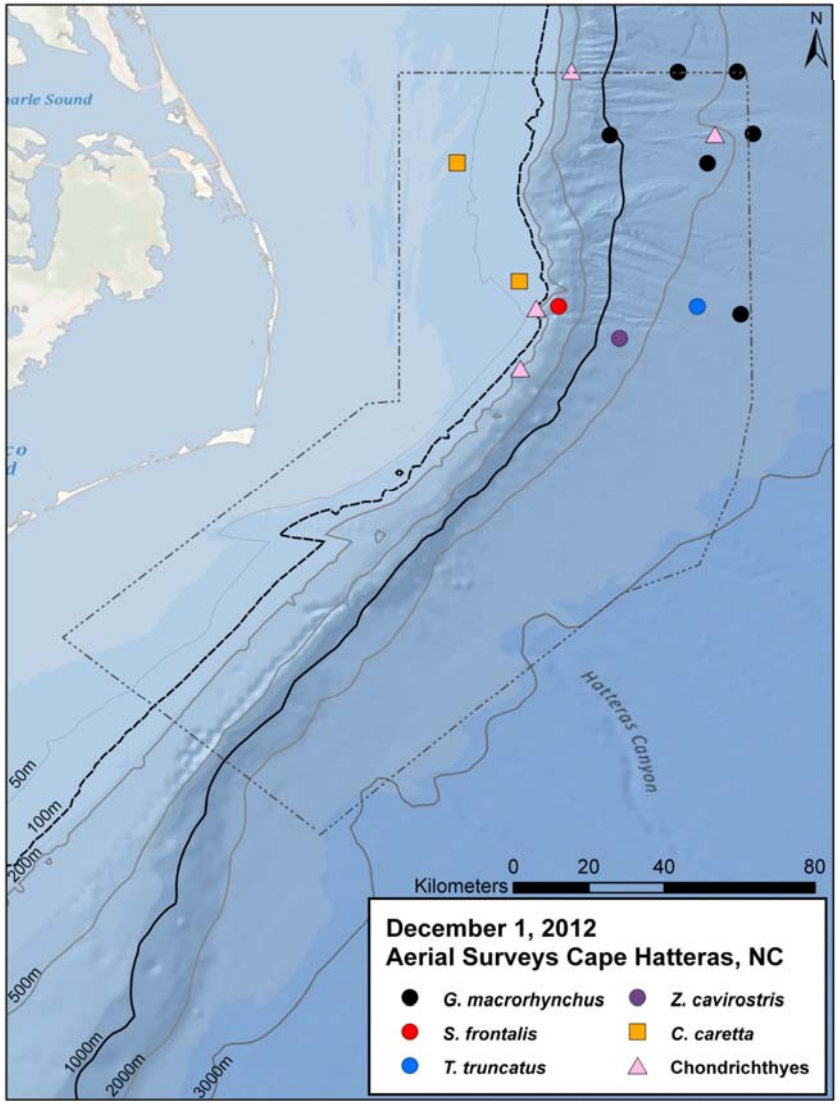
Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number	
Balaenoptera acutorostrata	1	1	3	33	*
Unidentified mesoplodon	1	3	4	31	
Physeter macrocephalus	1	6	3	33	
Tursiops truncatus	1	13	4	30	
Tursiops truncatus	1	4	3	32	
Tursiops truncatus	1	17	3	34	
Ziphius cavirostris	1	5	4	31	*
Ziphius cavirostris	1	5	3	33	
Ziphius cavirostris	1	4	3	34	



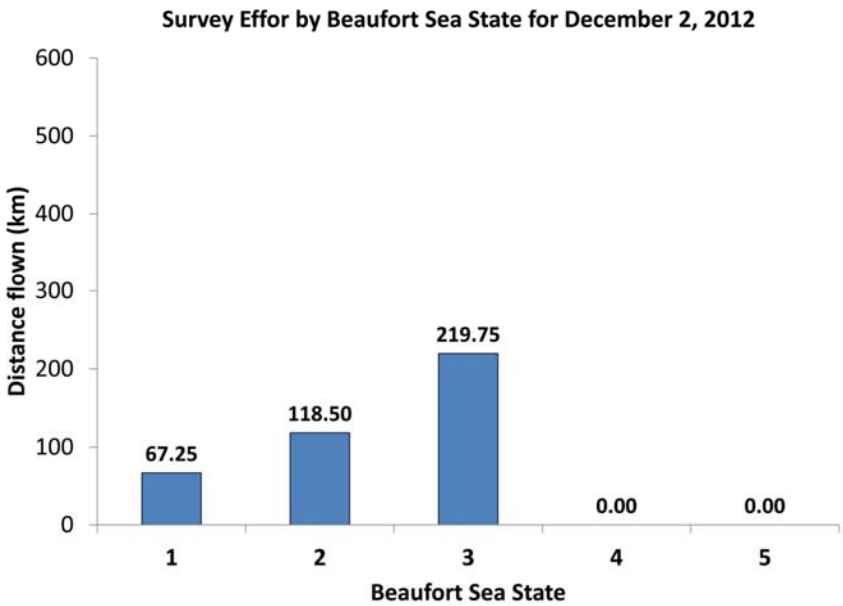
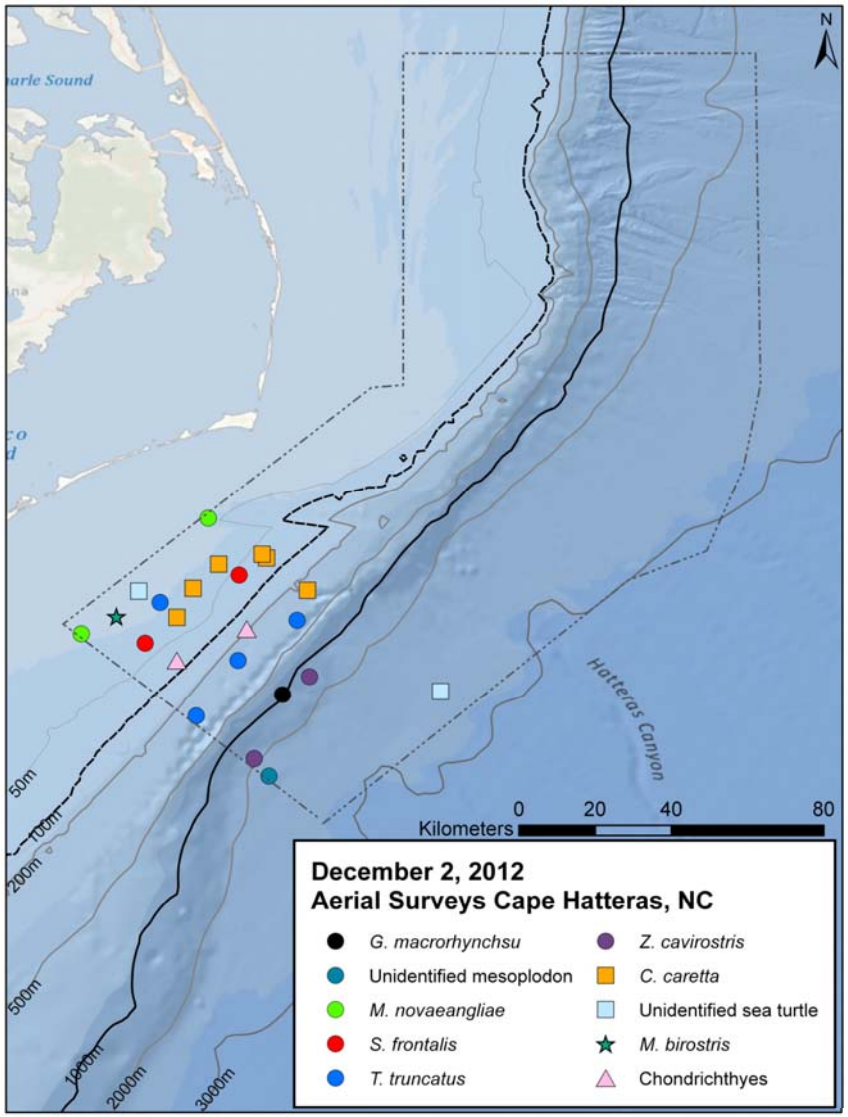
December 1, 2012



Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number
Globicephala macrorhynchus	1	1	3	38
Globicephala macrorhynchus	1	3	3	45
Globicephala macrorhynchus	1	5	2	45
Globicephala macrorhynchus	1	5	3	43
Globicephala macrorhynchus	1	13	3	43
Globicephala macrorhynchus	1	3	3	42
Stenella frontalis	1	26	3	38
Tursiops truncatus	1	2	4	38
Ziphius cavirostris	1	1	4	37
Caretta caretta	2	2	3 to 4	-
Unidentified chondrichthyes	4	5	3	-



December 2, 2012



Species	Number of Sightings	Number of Individuals	Beaufort Sea State	Line Number
Globicephala macrorhynchus	1	10	3	22
Unidentified mesoplodon	1	4	3	20
Megaptera novaeangliae	1	1	2	20
Megaptera novaeangliae	1	1	1	25
Stenella frontalis	1	85	3	21
Stenella frontalis	1	80	1	24
Tursiops truncatus	1	6	3	20
Tursiops truncatus	1	6	2	22
Tursiops truncatus	1	4	3	22
Tursiops truncatus	1	10	2	24
Ziphius cavirostris	1	8	3	20
Ziphius cavirostris	1	5	3	23
Caretta caretta	6	6	1 to 2	-
Unidentified sea turtle	2	2	1 to 2	-
Manta birostris	1	1	1	21
Unidentified chondrichthyes	2	2	2 to 3	1