

**APPENDIX IV: Table A. Surveys**

Survey Number	Year	Season	Platform	Track line length (km)	Area	Agency/Program	Analysis	Corrected for g(0)	Reference
1	1982	year-round	plane (AT-11; 1978-1982)	211,585	Cape Hatteras, NC to Nova Scotia, continental shelf and shelf edge waters	CETAP	Line-transect analyses of distance data	N	(CETAP 1982)
2	1990	Aug	ship (Chapman)	2,067	Cape Hatteras, NC to Southern New England, North wall of the Gulf Stream	NEC	One team data analyzed by DISTANCE.	N	(NMFS 1990)
3	1991	Jul-Aug	ship (Abel-J)	1,962	Gulf of Maine, lower Bay of Fundy, southern Scotian Shelf	NEC	Two independent team data analyzed with modified direct-duplicate method.	Y	(Palka 1995)
4	1991	Aug	boat (Sneak Attack)	640	inshore bays of Maine	NEC	One team data analyzed by DISTANCE.	Y	(Palka 1995)
5	1991	Aug-Sep	plane 1(AT-11)	9,663	Cape Hatteras, NC to Nova Scotia, continental shelf and shelf edge waters	NEC/SEC	One team data analyzed by DISTANCE.	N	(NMFS 1991)
6	1991	Aug-Sep	plane 2 (Twin Otter)		Cape Hatteras, NC to Nova Scotia, continental shelf and shelf edge waters	NEC/SEC	One team data analyzed by DISTANCE.	N	(NMFS 1991)
7	1991	Jun-Jul	ship (Chapman)	4,032	Cape Hatteras to Georges Bank, between 200 and 2,000m isobaths	NEC	One team data analyzed by DISTANCE.	N	(Waring <i>et al.</i> 1992; Waring 1998)
8	1992	Jul-Sep	ship (Abel-J)	3,710	N. Gulf of Maine and lower Bay of Fundy	NEC	Two independent team data analyzed with modified direct-duplicate method.	Y	(Smith <i>et al.</i> 1993)
9	1993	Jun-Jul	ship (Delaware II)	1,874	S. edge of Georges Bank, across the Northeast Channel, to the SE. edge of the Scotian Shelf	NEC	One team data analyzed by DISTANCE.		(NMFS 1993)
10	1994	Aug-Sep	ship (Relentless)	534	shelf edge and slope waters of Georges Bank	NEC	One team data analyzed by DISTANCE.	N	(NMFS 1994)
11	1995	Aug-Sep	plane (Skymaster)	8,427	Gulf of St. Lawrence	DFO	One team data analyzed using quenouille's jackknife bias reduction procedure that modeled the	N	(Kingsley and Reeves 1998)

							left truncated sighting curve		
12	1995	Jul-Sep	2 ships (Abel-J and Pelican) and plane (Twin Otter)	32,600	Virginia to the mouth of the Gulf of St. Lawrence	NEC	Ship: two independent team data analyzed with modified direct-duplicate method. Plane: one team data analyzed by DISTANCE.	Ship: Y. Plane: Y (only harbor porpoise) N (rest of species)	(Palka 1996)
13	1996	Jul-Aug	plane	3,993	Northern Gulf of St. Lawrence	DFO	Quenouille's jackknife bias reduction procedure on line-transect methods that modeled the left truncated sighting curve	N	(Kingsley and Reeves 1998)
14	1998	Jul-Aug	ship	4,163	south of Maryland	SEC	One team data analyzed by DISTANCE.	N	(Mullin and Fulling 2003)
15	1998	Aug-Sep	plane (1995 and 1998)		Gulf of St. Lawrence	DFO			(Kingsley and Reeves 1998)
16	1998	Jul-Sep	ship (Abel-J) and plane (Twin Otter)	15,900	north of Maryland	NEC	Ship: two independent team data analyzed with the modified direct-duplicate or Palka & Hammond analysis methods, depending on the presence of responsive movement. Plane: one team data analyzed by DISTANCE.	Y	
17	1999	Jul-Aug	ship (Abel-J) and plane (Twin Otter)	6,123	south of Cape Cod to mouth of Gulf of St. Lawrence	NEC	Ship: two independent team data analyzed with modified direct-duplicate or Palka & Hammond analysis methods, depending on the presence of responsive movement. Plane: circle-back data pooled with aerial data collected in 1999, 2002, 2004, 2006, 2007, and 2008 to calculate pooled g(0)'s and year-species specific abundance estimates for all years except 2008.	Y	

18	2002	Jul-Aug	plane (Twin Otter)	7,465	Georges Bank to Maine	NEC	Same as for plane in survey 15.	Y	(Palka 2006)
19	2002	Feb-Apr	ship (Gunter)	4,592	SE US continental shelf Delaware - Florida	SEC	One team data analyzed by DISTANCE.	N	(Garrison <i>et al.</i> 2003)
20	2002	Jun-Jul	plane	6,734	Florida to New Jersey	SEC	Two independent team data analyzed with modified direct-duplicate method.	Y	(Garrison 2003)
21	2004	Jun-Aug	ship (Gunter)	5,659	Florida to Maryland	SEC	Two-independent-team data analyzed with modified direct-duplicate method.	Y	(Garrison <i>et al.</i> in prep)
22	2004	Jun-Aug	ship (Endeavor) and plane (Twin Otter)	10,761	Maryland to Bay of Fundy	NEC	Same methods used in survey 15.	Y	(Palka 2006)
23	2006	Aug	plane (Twin Otter)	10,676	Georges Bank to Bay of Fundy	NEC	Same as for plane in survey 15.	Y	Palka (in prep)
24	2007	Aug	ship (Bigelow) and plane (Twin Otter)	8,195	Georges Bank to Bay of Fundy	NEC	Ship: Tracker data analyzed by DISTANCE. Plane: same as for plane in survey 15.	Y	Palka (in prep)
25	2007	July-Aug	plane	46,804	Canadian waters from Nova Scotia to Newfoundland	DFO	uncorrected counts	N	(Lawson and Gosselin 2009)
26	2008	Aug	plane (Twin Otter)	6,267	NY to Maine in US waters	NEC	Same as for plane in survey 15.	Y	Palka (in prep)
27	2001	May-June	plane	na	Maine coast	NEC/UM	corrected counts	N	(Gilbert <i>et al.</i> 2005)
28	1999	March	plane	na	Cape Cod	NEC	uncorrected counts	N	(Barlas 1999)
29	1983 - 1986	1983 (Fall) 1984 (Winter, Spring, Summer) 1985 (Summer, Fall) 1986 (Winter)	plane (Beechcraft D-18S modified with a bubblenose)	103,490 total 25,627 (bays and sounds) 36,685 (coastal) 41,178 (outer continental shelf, OCS)	northern Gulf of Mexico bays and sounds, coastal waters from shoreline to 18-m isobath, and OCS waters from 18-m isobath to 9.3 km past the 18-m isobath	SEC	One team data analyzed with Line-transect theory	N	(Scott <i>et al.</i> 1989)
30	1991-1994	Apr- June	ship (Oregon II)	22,041	northern Gulf of Mexico from 200 m to U.S. EEZ	SEC	One team data analyzed by DISTANCE	N	(Hansen <i>et al.</i> 1995)
31	1992-1993	Sep-Oct	plane (Twin Otter)	5,578 (bays and sounds)	northern Gulf of Mexico bays and sounds, coastal waters	GOME X92 GOME X93	One team data analyzed by DISTANCE	N	(Blaylock and Hoggard 1994)

				4,806 (coastal) 7,678 (outer continental shelf, OCS)	from shoreline to 18-m isobath, and OCS waters from 18-m isobath to 9.3 km past the 18-m isobath				
32	1994	Sep-Nov	plane (Twin Otter)	1,155 (bays and sounds) 1,953 (coastal) 1,879 (outer continental shelf, OCS)	northern Gulf of Mexico bays and sounds, coastal waters from shoreline to 18-m isobath, and OCS waters from 18-m isobath to 9.3 km past the 18-m isobath	GOME X94	One team data analyzed by DISTANCE	N	NMFS unpub. data
33	1996-1997, 1999-2001	Apr-June	ship (Oregon II and Gunter)	12,162	northern Gulf of Mexico from 200 m to U.S. EEZ	SEC	One team data analyzed by DISTANCE	N	(Mullin and Fulling 2004)
34	1998-2001	end Aug-early Oct	ship (Gunter and Oregon II)	2,196	northern Gulf of Mexico outer continental shelf (OCS, 20-200 m)	SEC	One team data analyzed by DISTANCE	N	(Fulling <i>et al.</i> 2003)
35	2003-2004	Jun-Aug (2003) Apr-Jun (2004)	ship (Gunter)	10,933	northern Gulf of Mexico from 200 m to U.S. EEZ	SEC	One team data analyzed by DISTANCE	N	(Mullin 2007)
36	2004	12-13 Jan	helicopter		Sable Island	DFO	Pup count	na	(Bowen <i>et al.</i> 2007)
37	2004		plane		Gulf of St Lawrence and Nova Scotia Eastern Shore	DFO	Pup count		(Hammill 2005)
38	2009	10 June – 13 August	ship	4,600	northern Gulf of Mexico from 200m to U.S. EEZ	SEC			

**APPENDIX IV: Table B. Abundance estimates – "Survey Number" refers to surveys described in Table A. "Best" estimate for each species in bold font.**

Species	Stock	Year	Nbest	CV	Survey Number	Notes
Humpback Whale	Gulf of Maine	1992	501			minimum pop'n size estimated from photo-ID data
		1993	652	0.29		YONAH sampling (Clapham <i>et al.</i> 2003)
		1997	497			minimum pop'n size estimated from photo-ID data
		1999	902	0.45	17	
		2002	521	0.67	18	
		2004	359	0.75	22	
		<b>2006</b>	<b>847</b>	<b>0.55</b>	<b>23</b>	
Fin Whale	Western	1995	2,200	0.24	12	

	North Atlantic	1999	2,814	0.21	18			
		2002	2,933	0.49	18			
		2004	1,925	0.55	22			
		2006	2,269	0.37	23			
		2007	1,352	0.26	25			
		<b>2007</b>	<b>3,985</b>	<b>0.24</b>	<b>23+25</b>			
Sei Whale	Nova Scotia	1977	1,393-2,248			based on tag-recapture data (Mitchell and Chapman 1977)		
		1977	870			based on census data (Mitchell and Chapman 1977)		
		1982	280		1			
		2002	71	1.01	21			
		<b>2004</b>	<b>386</b>	<b>0.85</b>	<b>23</b>			
		2006	207	0.62	24			
Minke Whale	Canadian East Coast	1982	320	0.23	1			
		1992	2,650	0.31	3+8			
		1993	330	0.66	9			
		1995	2,790	0.32	12			
		1995	1,020	0.27	11			
		1996	620	0.52	13			
		1999	2,998	0.19	17			
		2002	756	0.9	18			
		2004	600	0.61	22			
		<b>2006</b>	<b>3,312</b>	<b>0.74</b>	<b>23</b>			
		2007	3,242		25			
		2007	5,675		38			
				2007	8,987	0.32	23+25	
		Sperm Whale	North Atlantic	1982	219	0.36	1	
1990	338			0.31	2			
1991	736			0.33	7			
1991	705			0.66	6			
1991	337			0.5	5			
1993	116			0.4	9			
1994	623			0.52	10			
1995	2,698			0.67	12			
1998	2,848			0.49	16			
1998	1,181			0.51	14			
2004	2,607			0.57	22			
2004	2,197			0.47	21			
				<b>2004</b>	<b>4,804</b>	<b>0.38</b>	<b>21+22</b>	<b>Estimate summed from north and south surveys</b>
Kogia spp.	Western North Atlantic	1998	115	0.61	16			
		1998	580	0.57	14			
		2004	358	0.44	22			
		2004	37	0.75	21			
		<b>2004</b>	<b>395</b>	<b>0.4</b>	<b>21+22</b>	<b>Estimate summed from north and south surveys</b>		

Beaked Whales	Western North Atlantic	1982	120	0.71	1	
		1990	442	0.51	2	
		1991	262	0.99	7	
		1991	370	0.65	6	
		1991	612	0.73	5	
		1993	330	0.66	9	
		1994	99	0.64	10	
		1995	1,519	0.69	12	
		1998	2,600	0.4	16	
		1998	541	0.55	14	
		2004	2,839	0.78	22	
		2004	674	0.36	21	
		<b>2004</b>	<b>3,513</b>	<b>0.63</b>	<b>21+22</b>	<b>Estimate summed from north and south surveys</b>
		2006	922	1.47	23	
Risso's Dolphin	Western North Atlantic	1982	4,980	0.34	1	
		1991	11,017	0.58	7	
		1991	6,496	0.74	5	
		1991	16,818	0.52	6	
		1993	212	0.62	9	
		1995	5,587	1.16	12	
		1998	18,631	0.35	17	
		1998	9,533	0.5	15	
		1998	28,164	0.29	15+17	Estimate summed from north and south surveys
		2002	69,311	0.76	18	
		2004	15,053	0.78	21	
		2004	5,426	0.54	22	
		<b>2004</b>	<b>20,479</b>	<b>0.59</b>	<b>21+22</b>	<b>Estimate summed from north and south surveys</b>
2006	14,408	0.38	23			
Pilot Whale	Western North Atlantic	1951	50,000			Derived from catch data from 1951-1961 drive fishery (Mitchell 1974)
		1975	43,000-96,000			Derived from population models (Mercer 1975)
		1982	11,120	0.29	1	
		1991	3,636	0.36	7	
		1991	3,368	0.28	5	
		1991	5,377	0.53	6	
		1993	668	0.55	9	
		1995	8,176	0.65	12	
		1995	9,776	0.55	12+16	Sum of US (#12) and Canadian (#16) surveys
		1998	1,600	0.65	16	
		1998	9,800	0.34	17	
		1998	5,109	0.41	15	
		2002	5,408	0.56	18	
		2004	15,728	0.34	22	
2004	15,411	0.43	21			

		<b>2004</b>	<b>31,139</b>	<b>0.27</b>	<b>21+22</b>	<b>Estimate summed from north and south surveys</b>
		2006	26,535	0.35	23	
		2007	6,134		25	
Atlantic white-sided Dolphin	Western North Atlantic	1982	28,600	0.21	1	
		1992	20,400	0.63	2+7	
		1993	729	0.47	9	
		1995	27,200	0.43	12	
		1995	11,750	0.47	11	
		1996	560	0.89	13	
		1999	51,640	0.38	17	
		2002	109,141	0.3	18	
		2004	2,330	0.8	22	
		2006	17,594	0.3	23	
		<b>2006</b>	<b>63,368</b>	<b>0.27</b>	<b>(18+23)/2</b>	<b>average of #18 and #23</b>
		2007	5,796	0.43	25	
White-beaked Dolphin	Western North Atlantic	1982	573	0.69	1	
			5,500			(Alling and Whitehead 1987)
		1982	3,486	0.22		(Alling and Whitehead 1987)
		<b>2006</b>	<b>2,003</b>	<b>0.94</b>	<b>23</b>	
		2007	1,1842		25	
		2008			26	
Common Dolphin	Western North Atlantic	1982	29,610	0.39	1	
		1991	22,215	0.4	7	
		1993	1,645	0.47	9	
		1995	6,741	0.69	12	
		1998	30,768	0.32	17	
		1998	0		15	
		2002	6,460	0.74	21	
		2004	90,547	0.24	22	
		2004	30,196	0.54	21	
		<b>2004</b>	<b>120,743</b>	<b>0.23</b>	<b>21+22</b>	<b>Estimate summed from north and south surveys</b>
2006	84,000	0.36	24			
2007	53,625	0.22	25			
Atlantic Spotted Dolphin	Western North Atlantic	1982	6,107	0.27	1	
		1995	4,772	1.27	12	
		1998	32,043	1.39	16	
		1998	14,438	0.63	14	
		2004	3,578	0.48	22	
		2004	47,400	0.45	21	
		<b>2004</b>	<b>50,978</b>	<b>0.42</b>	<b>21+22</b>	<b>Estimate summed from north and south surveys</b>
Pantropical Spotted Dolphin	Western North Atlantic	1982	6,107	0.27	1	
		1995	4,772	1.27	12	
		1998	343	1.03	16	
		1998	12,747	0.56	14	

		2004	0		22	
		2004	4,439	0.49	21	
		<b>2004</b>	<b>4,439</b>	<b>0.49</b>	<b>21+22</b>	<b>Estimate summed from north and south surveys</b>
Striped Dolphin	Western North Atlantic	1982	36,780	0.27	1	
		1995	31,669	0.73	12	
		1998	39,720	0.45	16	
		1998	10,225	0.91	14	
		2004	52,055	0.57	22	
		2004	42,407	0.53	21	
		<b>2004</b>	<b>94,462</b>	<b>0.4</b>	<b>21+22</b>	<b>Estimate summed from north and south surveys</b>
Bottlenose Dolphin	Western North Atlantic Offshore	1998	16,689	0.32	16	
		1998	13,085	0.4	14	
		2002	26,849	0.19	20	
		2002	5,100	0.41	18	
		2004	9,786	0.56	22	
		2004	44,953	0.26	21	
		<b>2004</b>	<b>81,588</b>	<b>0.17</b>	<b>20+21+22</b>	<b>Estimate summed from north and south surveys and 2002 survey</b>
Harbor Porpoise	Gulf of Maine/Bay of Fundy	1991	37,500	0.29	3	
		1992	67,500	0.23	8	
		1995	74,000	0.2	12	
		1995	12,100	0.26	11	
		1996	21,700	0.38	14	
		1999	89,700	0.22	18	survey discovered portions of the range not previously surveyed
		2002	64,047	0.48	21	
		2004	51,520	0.65	23	
		<b>2006</b>	<b>89,054</b>	<b>0.47</b>	<b>24</b>	
2007	4,862	0.31	25			
Harbor Seal	Western North Atlantic	2001	99,340	0.097	27	
Gray Seal	Western North Atlantic	1999	5,611		28	
		2001	1,731		27	
		2004	52,500	0.15	37	Gulf of St Lawrence and Nova Scotia Eastern Shore
		2004	208,720 216,490 223,220	0.14 0.11 0.08	36	Sable Island
Bryde's Whale	Northern Gulf of Mexico	1991-1994	35	1.10	30	
		1996-2001	40	0.61	33	
		<b>2003-2004</b>	<b>15</b>	<b>1.98</b>	35	
Sperm Whale	Northern Gulf of Mexico	1991-1994	530	0.31	30	
		1996-2001	1,349	0.23	33	
		<b>2003-2004</b>	<b>1,665</b>	<b>0.20</b>	35	
Kogia spp.	Northern Gulf of	1991-1994	547	0.28	30	
		1996-2001	742	0.29	33	

	Mexico	<b>2003-2004</b>	<b>453</b>	<b>0.35</b>	35	
Cuvier's Beaked Whale	Northern Gulf of Mexico	1991-1994	30	0.50	30	
		1996-2001	95	0.47	33	
		<b>2003-2004</b>	<b>65</b>	<b>0.67</b>	35	
Mesoplodon spp.	Northern Gulf of Mexico	1996-2001	106	0.41	33	
		<b>2003-2004</b>	<b>57</b>	<b>1.40</b>	35	
Killer Whale	Northern Gulf of Mexico	1991-1994	277	0.42	30	
		1996-2001	133	0.49	33	
		<b>2003-2004</b>	<b>49</b>	<b>0.77</b>	35	
False killer Whale	Northern Gulf of Mexico	1991-1994	381	0.62	30	
		1996-2001	1,038	0.71	33	
		<b>2003-2004</b>	<b>777</b>	<b>0.56</b>	35	
Short-finned Pilot Whale	Northern Gulf of Mexico	1991-1994	353	0.89	30	
		1996-2001	2,388	0.48	33	
		<b>2003-2004</b>	<b>716</b>	<b>0.34</b>	35	
Melon-headed Whale	Northern Gulf of Mexico	1991-1994	3,965	0.39	30	
		1996-2001	3,451	0.55	33	
		2003-2004	2,283	0.76	35	
Pygmy Killer Whale	Northern Gulf of Mexico	1991-1994	518	0.81	30	
		1996-2001	408	0.60	33	
		<b>2003-2004</b>	<b>323</b>	<b>0.60</b>	35	
Risso's Dolphin	Northern Gulf of Mexico	1991-1994	2,749	0.27	30	
		1996-2001	2,169	0.32	33	
		<b>2003-2004</b>	<b>1,589</b>	<b>0.27</b>	35	
Pantropical Spotted Dolphin	Northern Gulf of Mexico	1991-1994	31,320	0.20	30	
		1996-2001	91,321	0.16	33	
		<b>2003-2004</b>	<b>34,067</b>	<b>0.18</b>	35	
Striped Dolphin	Northern Gulf of Mexico	1991-1994	4,858	0.44	30	
		1996-2001	6,505	0.43	33	
		<b>2003-2004</b>	<b>3,325</b>	<b>0.48</b>	35	
Spinner Dolphin	Northern Gulf of Mexico	1991-1994	6,316	0.43	30	
		1996-2001	11,971	0.71	33	
		<b>2003-2004</b>	<b>1,989</b>	<b>0.48</b>	35	
Clymene Dolphin	Northern Gulf of Mexico	1991-1994	5,571	0.37	30	
		1996-2001	17,355	0.65	33	
		<b>2003-2004</b>	<b>6,575</b>	<b>0.36</b>	35	
Atlantic Spotted Dolphin	Northern Gulf of Mexico	1991-1994 oceanic	3,213	0.44	30	
		1996-2001 oceanic	175	0.84	33	
		1998-2001 OCS	37,611	0.28	34	This abundance estimate is from 2000-2001 surveys only. Current best population size estimate is unknown because data from the continental shelf portion of this species' range are more than 8 years old.
		2003-2004 oceanic	0	-	35	
Fraser's	Northern	1991-1994	127	0.90	30	

Dolphin	Gulf of Mexico	1996-2001	726	0.70	33	
		2003-2004	0	-	35	Current best population size estimate is unknown.
Rough-toothed Dolphin	Northern Gulf of Mexico	1991-1994 oceanic	852	0.31	30	
		1996-2001 oceanic	985	0.44	33	
		1998-2001 OCS	1,145	0.83	34	This abundance estimate is from 2000-2001 surveys only. Current best population size estimate is unknown because data from the continental shelf portion of this species' range are more than 8 years old.
		2003-2004 oceanic	1,508	0.39	35	
Bottlenose Dolphin	Northern Gulf of Mexico Oceanic	1996-2001	2,239	0.41	33	
		<b>2003-2004</b>	<b>3,708</b>	<b>0.42</b>	35	
Bottlenose Dolphin	Northern Gulf of Mexico Continental Shelf	1998-2001	17,777	0.32	34	This abundance estimate is from 2000-2001 surveys only. Current best population size estimate is unknown because data from the continental shelf are more than 8 years old.
Bottlenose Dolphin	Northern Gulf of Mexico Coastal (3 stocks)	Eastern 1994	9,912	0.12	32	
		Northern 1993	4,191	0.21	31	
		Western 1992	3,499	0.21	31	Current best population size estimate for each of these 3 stocks is unknown because data are more than 8 years old.
Bottlenose Dolphin	Northern Gulf of Mexico Bay, Sound and Estuarine (33 stocks)	St. Joseph Bay, 2005-2006	81	0.14		(Balmer <i>et al.</i> 2008)
		St. Vincent Sound, Apalachicola Bay, St. George Sound, 2008	537	0.09		(Tyson 2008)
		Remaining 31 stocks	unknown	undetermined	31	Current best population size estimate for each of these 30 stocks is unknown because data are more than 8 years old.

## REFERENCES CITED

- Alling, A.K. and H.P. Whitehead 1987. A preliminary study of the status of white-beaked dolphins, *Lagenorhynchus albirostris*, and other small cetaceans off the coast of Labrador. *Can. Field-Nat.* 101(1): 131-135.
- Balmer, B.C., R.S. Wells, S.M. Nowacek, D.P. Nowacek, L.H. Schwacke, W.A. McLellan, F.S. Scharf, T.K. Rowles, L.J. Hansen, T.R. Spradlin and D.A. Pabst 2008. Seasonal abundance and distribution patterns of common bottlenose dolphins (*Tursiops truncatus*) near St. Joseph Bay, Florida, USA. *J. Cetacean Res. Manage.* 10(2): 157-167.
- Barlas, M.E. 1999. The distribution and abundance of harbor seals (*Phoca vitulina concolor*) and gray seals (*Halichoerus grypus*) in southern New England, winter 1998-summer 1999. M.A. thesis. Graduate School of Arts and Sciences Boston University, Boston, MA. 52 pp.
- Blaylock, R.A. and W. Hoggard 1994. Preliminary estimates of bottlenose dolphin abundance in southern U.S. Atlantic and Gulf of Mexico continental shelf waters. NOAA Tech. Memo. NMFS-SEFSC-356. 10 pp.
- Bowen, W.D., J.I. McMillan and W. Blanchard 2007. Reduced population growth of gray seals at Sable Island: Evidence from pup production and age of primiparity. *Mar. Mamm. Sci.* 23: 48-64.
- CETAP 1982. A characterization of marine mammals and turtles in the mid- and north Atlantic areas of the U.S. outer continental shelf, final report. Washington, DC, Bureau of Land Management. #AA551-CT8-48 538

- pp.
- Clapham, P.J., J. Barlow, T. Cole, D. Mattila, R. Pace, D. Palka, J. Robbins and R. Seton 2003. Stock definition, abundance and demographic parameters of humpback whales from the Gulf of Maine. *J. Cetacean Res. Manage.* 5(13-22).
- Fulling, G.L., K.D. Mullin and C.W. Hubbard 2003. Abundance and distribution of cetaceans in outer continental shelf waters of the U.S. Gulf of Mexico. *Fish. Bull.* 101: 923-932.
- Garrison, L.P. 2003. Estimated bycatch of marine mammals and turtles in the U.S. Atlantic pelagic longline fleet during 2001-2002. NOAA Tech. Memo. NMFS-SEFSC-515. 52 pp.
- Garrison, L.P., S.L. Swartz, A. Martinez, C. Burks and J. Stamates 2003. A marine mammal assessment survey of the Southeast US continental shelf, February-April 2002. NOAA Tech. Memo. NMFS-SEFSC-492.
- Gilbert, J.R., G.T. Waring, K.M. Wynne and N. Guldager 2005. Changes in abundance and distribution of harbor seals in Maine, 1981-2001. *Mar. Mamm. Sci.* 21: 519-535.
- Hammill, M.O. 2005. Abundance of Northwest Atlantic grey seals in the Gulf of St. Lawrence and along the Nova Scotia Eastern Shore. Canadian Department of Fisheries and Oceans. Ottawa, Ontario. DFO Research Document 2005/036. 11 pp. [http://www.dfo-mpo.gc.ca/csas/Csas/Publications/ResDocs-DocRech/2005/2005\\_036\\_e](http://www.dfo-mpo.gc.ca/csas/Csas/Publications/ResDocs-DocRech/2005/2005_036_e).
- Hansen, L.J., K.D. Mullin and C.L. Roden 1995. Estimates of cetacean abundance in the northern Gulf of Mexico from vessel surveys. Southeast Fisheries Science Center, Miami, FL. Contribution No. MIA-94/95-25. 9 pp.
- Kingsley, M.C.S. and R.R. Reeves 1998. Aerial surveys of cetaceans in the Gulf of St. Lawrence in 1995 and 1996. *Can. J. Zool.* 76: 1529-1550.
- Lawson, J.W. and J.-F. Gosselin 2009. Distribution and preliminary abundance estimates for cetaceans seen during Canada's Marine Megafauna Survey - A component of the 2007 TNASS. *Can. Sci. Advisory Sec. Res. Doc.* 2009/031. 33 pp.
- Mercer, M.C. 1975. Modified Leslie-DeLury population models of the long-finned pilot whale (*Globicephala melana*) and annual production of the short-finned squid (*Illex illecebrosus*) based upon their interactions at Newfoundland. *J. Fish. Res. Board Can* 32(7): 1145-1154.
- Miller, C. 2003. Abundance trends and environmental habitat usage patterns of bottlenose dolphins (*Tursiops truncatus*) in lower Barataria and Caminada Bays, Louisiana. Ph.D. thesis. Louisiana State University, Baton Rouge. 125 pp.
- Mitchell, E. 1974. Present status of northwest Atlantic fin and other whale stocks. Pages 108-169 *in*: W. E. Schevill, (ed.) *The whale problem: A status report*. Harvard University Press, Cambridge, MA.
- Mitchell, E. and D.G. Chapman 1977. Preliminary assessment of stocks of northwest Atlantic sei whales (*Balaenoptera borealis*). *Rep. Int. Whal. Comm. (Special Issue)* 1: 117-120.
- Mullin, K.D. 2007. Abundance of cetaceans in the oceanic Gulf of Mexico based on 2003-2004 ship surveys. Available from: NMFS, Southeast Fisheries Science Center, P.O. Drawer 1207, Pascagoula, MS 39568, 26 pp.
- Mullin, K.D. and G.L. Fulling 2003. Abundance of cetaceans in the southern U.S. North Atlantic Ocean during summer 1998. *Fish. Bull.* 101: 603-613.
- Mullin, K.D. and G.L. Fulling 2004. Abundance of cetaceans in the oceanic northern Gulf of Mexico. *Mar. Mamm. Sci.* 20(4): 787-807.
- NMFS 1990. Cruise results, NOAA Ship CHAPMAN, Cruise No. 90-05. Marine Mammal Sighting Survey. National Marine Fisheries Service. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026. 5 pp.
- NMFS 1991. Northeast cetacean aerial survey and inter-platform study. National Marine Fisheries Service. NOAA-NMFS-SEFSC and NEFSC. 4 pp.
- NMFS 1993. Cruise results, NOAA ship DELAWARE II, Cruise No. DEL 93-06, Marine Mammal Survey. National Marine Fisheries Service. NOAA NMFS NEFSC, Woods Hole Laboratory, Woods Hole, MA, 5 pp.
- NMFS 1994. Cruise results, NOAA ship RELENTLESS, Cruise No. RS 9402, Marine Mammal Survey/Warm Core Ring Study. National Marine Fisheries Service. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-102. 8 pp.
- Palka, D.L. 1995. Abundance estimate of Gulf of Maine harbor porpoise. *Rep. Int. Whal. Comm. (Special Issue)* 16:

27-50.

- Palka, D.L. 1996. Update on abundance of Gulf of Maine/Bay of Fundy harbor porpoises. Northeast Fish. Sci. Cent. Ref. Doc. 96-04. 35 pp. <http://www.nefsc.noaa.gov/nefsc/publications/crd/crd9604.pdf>
- Palka, D.L. 2006. Summer abundance estimates of cetaceans in US North Atlantic Navy Operating Areas. Northeast Fish. Sci. Cent. Ref. Doc. 06-03. 41 pp. <http://www.nefsc.noaa.gov/nefsc/publications/crd/crd0603/crd0603.pdf>
- Scott, G.P., D.M. Burn, L.J. Hansen and R.E. Owen 1989. Estimates of bottlenose dolphin abundance in the Gulf of Mexico from regional aerial surveys. CRD 88/89-07. Available from: NMFS, Southeast Fisheries Science Center, 75 Virginia Beach Dr., Miami, FL 33149.
- Smith, T., D. Palka and K. Bisack 1993. Biological significance of by-catch of harbor porpoise in the Gulf of Maine Demersal Gillnet Fishery. Northeast Fish. Sci. Cent. Ref. Doc. 93-23. 15 pp.
- Tyson, R.B. 2008. Abundance of bottlenose dolphins (*Tursiops truncatus*) in the Big Bend of Florida, St. Vincent Sound to Alligator Harbor. M. Sc. thesis. Florida State University, Tallahassee. 65 + ix pp.
- Waring, G.T. 1998. Results of the summer 1991 R/V Chapman marine mammal sighting survey. Northeast Fish. Sci. Cent. Ref. Doc. 98-09. 21 pp.
- Waring, G.T., C.P. Fairfield, C.M. Ruhsam and M. Sano 1992. Cetaceans associated with Gulf Stream Features off the Northeastern USA Shelf. ICES [Int. Counc. Explor. Sea] C.M. 1992/N:12.