

USA Progress report on cetacean research, May 2007 to April 2008, with statistical data for the *calendar year* 2005

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This report summarises information obtained from:

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1. SPECIES AND STOCKS STUDIED

Common name	IWC recommended scientific name	Area/stock(s)	Items referred to
Atlantic spotted dolphin	<i>Stenella frontalis</i>	Atlantic and Gulf of Mexico	2.1, 4.1, 4.3, 7.3, 8
Atlantic white-sided dolphin	<i>Lagenorhynchus acutus</i>	Western N. Atlantic	2.1, 4.2, 4.3, 7.3, 8
Blainville's beaked whale	<i>Mesoplodon densirostris</i>	Atlantic and Gulf of Mexico	4.3, 8
Bottlenose dolphin	<i>Tursiops truncatus</i>	Atlantic and Gulf of Mexico	2.1, 3.1, 4.1, 4.2, 4.3, 7.3, 8, 9
Bryde's whale	<i>Balaenoptera edeni</i>	Gulf of Mexico	2.1, 4.1, 8
Common dolphin	<i>Delphinus delphis</i>	Atlantic	2.1, 4.2, 4.3, 7.3, 8
Cuvier's beaked whale	<i>Ziphius cavirostris</i>	Atlantic and Gulf of Mexico	4.3, 8
Dwarf sperm whale	<i>Kogia simus</i>	Atlantic and Gulf of Mexico	4.3, 8
False killer whale	<i>Pseudorca crassidens</i>	Atlantic and Gulf of Mexico	11
Fin whale	<i>Balaenoptera physalus</i>	Atlantic	2.1, 4.2, 4.3, 6.3, 8, 9
Fraser's dolphin	<i>Lagenodelphis hosei</i>	Atlantic and Gulf of Mexico	8
Gervais' beaked whale	<i>Mesoplodon europaeus</i>	Atlantic and Gulf of Mexico	4.3
Harbour porpoise	<i>Phocoena phocoena</i>	Atlantic	2.1, 4.2, 4.3, 7.3, 8
Humpback whale	<i>Megaptera novaeangliae</i>	Atlantic	2.1, 3.1, 4.2, 4.3, 8, 9
Killer Whale	<i>Orcinus orca</i>	Atlantic	2.1
Melon headed whale	<i>Peponocephala electra</i>	Atlantic and Gulf of Mexico	4.3, 8
Minke whale	<i>Balaenoptera acutorostrata</i>	Atlantic	2.1, 4.2, 4.3, 6.3, 8

Northern bottlenose whale	<i>Hyperoodon ampullatus</i>	Atlantic	2.1, 8
North Atlantic right whale	<i>Eublaena glacialis</i>	Atlantic	2.1, 3.1, 3.2, 4.1, 6.3, 9
Pilot whales	<i>Globicephala sp.</i>	Atlantic	2.1, 4.1, 4.2, 7.3, 8
Pygmy killer whale	<i>Feresa attenuata</i>	Atlantic and Gulf of Mexico	4.3, 8
Pygmy sperm whale	<i>Kogia breviceps</i>	Atlantic and Gulf of Mexico	4.3, 8
Risso's dolphin	<i>Grampus griseus</i>	Atlantic and Gulf of Mexico	2.1, 4.3, 4.3, 7.3, 8
Rough-toothed dolphin	<i>Steno bredanensis</i>	Atlantic and Gulf of Mexico	2.1, 4.1, 8
Sei whale	<i>Balaenoptera borealis</i>	Atlantic	2.1, 4.3, 8
Short-finned pilot whale	<i>Globicephala macrorhynchus</i>	Atlantic and Gulf of Mexico	2.1, 4.1, 8
Sperm whale	<i>Physeter catadon</i>	Atlantic and Gulf of Mexico	2.1, 4.3, 8
Spinner dolphin	<i>Stenella longirostris</i>	Atlantic and Gulf of Mexico	2.1, 4.1, 8
Striped dolphin	<i>Stenella coeruleoalba</i>	Atlantic and Gulf of Mexico	2.1, 4.3, 8
True's beaked whale	<i>Mesoplodon mirus</i>	Atlantic	4.3
White-beaked dolphin	<i>Lagenorhynchus albirostris</i>	Atlantic	2.1
Unid. beaked whale	<i>Ziphius sp. and Mesoplodon sp.</i>	Atlantic	2.1

2. SIGHTINGS DATA

2.1 Field work

2.1.1 Systematic

NEFSC

NOAA RESEARCH VESSEL R/VALBATROSS IV -NORTHERN RIGHT WHALE FEEDING ECOLOGY CRUISE 8 MAY – 11 JUNE 2007 (AL07-04)

The southern border of the study area included Great South Channel, which is also the southern most portion of the Great South Channel Right Whale Critical Habitat area. The northern border included the waters surrounding the northeast portion of Cape Cod, (Provincetown, MA) and northernmost portion of the Great South Channel (GSC) including the waters north of Cultivator's Shoal. Objectives of the cruise were to conduct marine mammal observations from the near-shore waters of Cape Cod to throughout the Great South Channel Right Whale Critical Habitat area. Specific goals included: (1) photographing and biopsy sampling of large cetaceans (North Atlantic right whales, sei and humpback whales) for individual identification; (2) running transect lines to determine cetacean distribution; (3) attaching time-depth-recorder (TDR) tags on right whales; (4) providing support for the Right Whale Sighting Advisory System (SAS); (5) conducting oceanographic CTD/OPC/VPD stations throughout the GSC Right Whale Critical Habitat area; (6) deploying oceanographic drifters to observe ocean currents and drift in and around the GSC; and (7) deploying and retrieving acoustic pop-up buoys in the GSC and (8) conducting two 24+ hour fixed oceanographic stations with CTD operations every 30 minutes, with complimentary visual operations of marine mammals.

NOAA RESEARCH VESSEL R/V DELAWARE II- GULF OF MAINE SUMMER WHALE CRUISE

19 JULY – 9 AUGUST 2007 (DE07-08)

During 19 July - 09 August, investigators set out conduct various marine mammal surveys within the Gulf of Maine aboard the NOAA r/v Delaware II. The bulk of cruise time was taken up doing oceanographic sampling in known RIWH habitats (northern edge of Georges Bank, southwest part of Georges Bank and Roseway Basin). Secondly, the cruise was set up to do humpback whale photo-ID and pilot whale biopsy and photogrammetric work.

NOAA RESEARCH VESSEL R/V BIGELOW AND NOAA AIRCRAFT TWIN OTTER - MARINE MAMMAL AND TURTLE ABUNDANCE SURVEY

Shipboard survey: 31 July - 10 August 2007 and 12-29 August 2007 (HB07-09)

Aerial survey: 31 July – 28 August 2007

The study area for this joint survey was the region from the coastline to the 2000m depth contour from Cape Hatteras, NC to the northern Bay of Fundy. The primary objective was to determine the spatial distribution and abundance of cetaceans, sea turtles, and seabirds in the study region. On the shipboard survey, additional objectives included use passive acoustics to record vocalizing cetaceans, and conduct oceanographic sampling (e.g., CTD and bongo casts) to help define the habitat throughout the survey region.

On the shipboard visual line transect survey, observations were conducted during daylight hours (approximately 0600-1800 with a 1-hour break at lunchtime) using the two-team Buckland-Turnock line transect procedures. Surveying was conducted during good weather conditions (Beaufort sea state four and below) while traveling at about 11-12 knots. The lower and upper team's average eye heights were at 11.8 m and 15.1 m above the water line, respectively. An acoustic sensor array, containing two high-frequency elements and three medium frequency elements, was towed 200-300m behind the ship.

On the aerial visual line transect surveys, observations were conducted between the hours of 0900 and 1600 using the Hiby circle-back line transect procedures. Surveying was conducted during good weather conditions (Beaufort sea state four and below) while traveling at about 100 knots at a height of 600 feet above the sea surface.

Shipboard sightings

Target species	Date	Area	No. of sightings	Contact person/institute and references
Harbour porpoise	8.07	Gulf of Maine	1155	D. Palka/NEFSC
Atl. white-sided dolphin	8.07	Gulf of Maine	567	D. Palka/NEFSC
White-beaked dolphin	8.07	Gulf of Maine	7	D. Palka/NEFSC
Pilot whale spp.	8.07	Gulf of Maine	28	D. Palka/NEFSC
Minke whale	8.07	Gulf of Maine	46	D. Palka/NEFSC
Humpback whale	8.07	Gulf of Maine	292	D. Palka/NEFSC
Fin whale	8.07	Gulf of Maine	52	D. Palka/NEFSC
Sei whale	8.07	Gulf of Maine	6	D. Palka/NEFSC
Fin or sei whale	8.07	Gulf of Maine	24	D. Palka/NEFSC
Right whale	8.07	Gulf of Maine	47	D. Palka/NEFSC
Sowerby beaked whale	8.07	Gulf of Maine	1	D. Palka/NEFSC
Sperm whale	8.07	Gulf of Maine	3	D. Palka/NEFSC
Unid whale	8.07	Gulf of Maine	166	D. Palka/NEFSC
Unid dolphin	8.07	Gulf of Maine	296	D. Palka/NEFSC

Aerial survey sightings

Target species	Date	Area	No. of sightings	Contact person/institute and references
Harbour porpoise	8.07	Gulf of Maine	363	D. Palka/NEFSC
White-sided dolphin	8.07	Gulf of Maine	335	D. Palka/NEFSC
Striped dolphin	8.07	Gulf of Maine	130	D. Palka/NEFSC
Pilot whale spp.	8.07	Gulf of Maine	183	D. Palka/NEFSC
Minke whale	8.07	Gulf of Maine	14	D. Palka/NEFSC
Humpback whale	8.07	Gulf of Maine	57	D. Palka/NEFSC
Fin whale	8.07	Gulf of Maine	22	D. Palka/NEFSC
Sei whale	8.07	Gulf of Maine	2	D. Palka/NEFSC
Fin or sei whale	8.07	Gulf of Maine	4	D. Palka/NEFSC
North Atlantic right whale	8.07	Gulf of Maine	6	D. Palka/NEFSC
Beaked whale	8.07	Gulf of Maine	6	D. Palka/NEFSC

Sperm whale	8.07	Gulf of Maine	8	D. Palka/NEFSC
Unid whale	8.07	Gulf of Maine	38	D. Palka/NEFSC
Unid dolphin	8.07	Gulf of Maine	525	D. Palka/NEFSC
Common dolphin	8.07	Gulf of Maine	2428	D. Palka/NEFSC
Risso's dolphin	8.07	Gulf of Maine	243	D. Palka/NEFSC
Northern bottlenose dolphin	8.07	Gulf of Maine	2	D. Palka/NEFSC
Bottlenose dolphin	8.07	Gulf of Maine	64	D. Palka/NEFSC

SEFSC

NOAA R/V Gordon Gunter, 29 June – 14 August 2007. Gulf of Mexico Continental Shelf Abundance and Biopsy Survey for Cetaceans.

A vessel survey was conducted aboard the NOAA Ship *Gordon Gunter* to quantify the abundance and spatial distribution and collect biopsy samples of marine mammals along the continental shelf and upper continental slope waters of the U.S. Gulf of Mexico. In addition, intensive surveys of the shelf break region in the northeastern Gulf of Mexico for Bryde's whales were conducted to collect biopsies and individual whale identification photographs. The survey took place during 29 June 2007 – 14 August 2007 and covered a total of 4,062km of trackline. Visual line-transect surveys were conducted, and a total of 394 marine mammal groups were sighted. A small boat was deployed during the survey to collect biopsy samples, and these samples were retained for genetic, stable isotope, and contaminants analyses. In total, 327 biopsy samples were collected. Identification photographs were also collected from Bryde's whale groups. In addition, hydrographic sampling was undertaken during the survey using XBTs and CTDs. Finally, both active and passive acoustic monitoring tools were used to provide continuous measures of zooplankton and nekton biomass during the survey.

Target species	Date	Area	No. of sightings	Contact person/institute and references
Atlantic spotted dolphin	29 June – 14 August 2007	U.S. Gulf of Mexico	64	K. Mullin, SEFSC
Bottlenose dolphin	29 June – 14 August 2007	U.S. Gulf of Mexico	247	K. Mullin, SEFSC
Bryde's whale	29 June – 14 August 2007	U.S. Gulf of Mexico	3	K. Mullin, SEFSC
Risso's dolphin	29 June – 14 August 2007	U.S. Gulf of Mexico	2	K. Mullin, SEFSC
Rough-toothed dolphin	29 June – 14 August 2007	U.S. Gulf of Mexico	2	K. Mullin, SEFSC
Short-finned pilot whale	29 June – 14 August 2007	U.S. Gulf of Mexico	2	K. Mullin, SEFSC
Sperm whale	29 June – 14 August 2007	U.S. Gulf of Mexico	9	K. Mullin, SEFSC
Spinner dolphin	29 June – 14 August 2007	U.S. Gulf of Mexico	1	K. Mullin, SEFSC

NOAA Twin Otter, 16 January – 6 March 2007 and 17 July – 8 August 2007. Eastern Gulf of Mexico Surveys for Cetaceans and Turtles.

These surveys were conducted between 16 January and 6 March 2007 (winter) and between 17 July and 8 August 2007 (summer) and covered the eastern Gulf of Mexico from the Dry Tortugas to the Mississippi River mouth. Survey effort was concentrated in waters from the shoreline to 20m depth, but also included effort over the continental shelf out to a depth of 200m. The surveys were visual line-transect surveys flown aboard a NOAA Twin Otter aircraft at an altitude of 229m. The primary target species include bottlenose dolphins and

endangered sea turtles. The winter survey covered a total of 8,900km of trackline on effort while the summer survey covered 9,000km. During the winter there were a total of 300 marine mammal groups sighted, and in the summer survey sighting rates were generally lower than those during the winter survey with a total of 199 mammal groups sighted. These data are currently being analyzed to estimate the abundance of sighted species and describe spatial distribution as a function of habitat characteristics.

Target species	Date	Area	No. of sightings	Contact person/institute and references
Atlantic spotted dolphin	16 January – 6 March 2007	Eastern Gulf of Mexico	5	L. Garrison, SEFSC
Bottlenose dolphin	16 January – 6 March 2007	Eastern Gulf of Mexico	281	L. Garrison, SEFSC
Bryde's whale	16 January – 6 March 2007	Eastern Gulf of Mexico	1	L. Garrison, SEFSC
Short-finned pilot whale	16 January – 6 March 2007	Eastern Gulf of Mexico	1	L. Garrison, SEFSC
Atlantic spotted dolphin	17 July – 8 August 2007	Eastern Gulf of Mexico	18	L. Garrison, SEFSC
Bottlenose dolphin	17 July – 8 August 2007	Eastern Gulf of Mexico	162	L. Garrison, SEFSC
Bryde's whale	17 July – 8 August 2007	Eastern Gulf of Mexico	2	L. Garrison, SEFSC

2.1.2 Opportunistic, platforms of opportunity

The following U.S. organizations reported using “platforms of opportunity” to collect cetacean data in 2007. This is a conservative list of organizations using such platforms in U.S. waters.

<i>NORTH ATLANTIC</i>						
Institution	US region	Species*	Platform type	Data type**	Collected by	Regional Archive***
Allied Whale, College of the Atlantic, ME	NE	ABCDGHIMP	Whale watch	1,3,4,7	Naturalist, dedicated observer	Yes
Blue Ocean Society, NH	NE	ABCDEFGHIOP	Whale watch	1,3,4,7	Naturalist, dedicated observer	Yes
Coastal Research & Education Society of Long Island, NJ	NE	ABCKOP	Whale watch, fishing vessel	1,3,4	Naturalist, trained volunteers	Yes
Dolphin Fleet, MA	NE	ABCDFGHIP	Whale watch	1,2,3,4,7	Naturalist, dedicated observer	Yes
New England Coastal Wildlife Alliance/ Bridgewater State College, MA	NE	ABCDFGHIP	Whale watch	1,3,4,7	Naturalist	Yes
Provincetown Center for Coastal Studies, MA	NE	ABCDFGHIP	Whale watch	1,2,3,4,5,7	Naturalist, dedicated observer	Yes
Whale Center of New England, MA	NE	ABCDFGHIP	Whale watch, ferry	1,2,3,4,5,6,7	Naturalist, dedicated observer	Yes

Whale and Dolphin Conservation Society, MA	NE	ABCDGHI	Whale watch	1,3,4,5	Naturalist	Yes
<p>*Species codes: A) <i>Megaptera novaeangliae</i>, B) <i>Balaenoptera physalus</i>, C) <i>Balaenoptera acutorostris</i>, D) <i>Eubalaena glacialis</i>, E) <i>Balaenoptera musculus</i>, F) <i>Balaenoptera borealis</i>, G) <i>Lagenorhynchus acutus</i>, H) <i>Phocoena phocoena</i>, I) <i>Globicephala melas</i>, J) <i>Ziphiidae</i> spp. K) <i>Physeter macrocephalus</i>, L) <i>Stenella longirostris</i>, M) <i>Tursiops truncatus</i>, N) <i>Stenella attenuata</i>, O) <i>Delphinus delphis</i>, P) <i>Grampus griseus</i>, R) unspecified odontocete species, S) <i>Orcinus orca</i>, T) <i>Stenella coeruleoalba</i>, U) <i>Globicephala macrorhynchus</i>, V) <i>Feresa attenuata</i></p> <p>**Data types: 1) cetacean sighting data, 2) survey effort data (varied from general location to logged positions), 3) animal behavior, 4), photo-ID (for at least one listed species), 5) management-oriented data (fisheries interactions, ship strike, harassment), 6) scat/prey collection, 7) environmental data</p> <p>--- Data not available</p> <p>***Archives: data for one or more listed species were contributed to a regional or oceanic archive. Responders reported contributing data to the following institutions: Allied Whale (ME), New England Aquarium (MA), Provincetown Center for Coastal Studies (MA), Whale Center New England (MA)</p>						

2.2 Analyses/development of techniques

None reported.

3. MARKING DATA

3.1 Field work 2007

3.1.1 Natural marking data

NEFSC

Species	Feature	Area/stock	No. photo-id'd*	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Humpback whale	Fluke/dorsal	W.N. Atlantic	2	Y	NA	R. Pace/NEFSC
North Atlantic Right whale	Calosities	W.N. Atlantic	869	Y	NA	R. Pace/NEFSC

*number photographed for ID purposes, not identified individuals.

SEFSC

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Bottlenose dolphin	Dorsal Fin	Gulf of Mexico / Mississippi Sound	NA	Y	NA	K. Mullin, SEFSC
Bottlenose dolphin	Dorsal Fin	W.N. Atlantic/Coastal North Carolina	NA	Y	NA	L. Hansen, SEFSC
Bottlenose dolphin	Dorsal Fin	W.N. Atlantic/Coastal Biscayne Bay FL	NA	Y	NA	L. Garrison, SEFSC

3.1.2. Artificial marking data

None reported.

3.1.3 Telemetry data

NEFSC

Species	Tag type	No. successfully deployed	Maximum time transmitting	Contact person/institute; refs
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North Atlantic right whale	Satellite	19	3 hours	Fred Wenzel/NEFSC
Humpback whale	Satellite	11	3 hours 50 minutes	Fred Wenzel/NEFSC

SEFSC

None reported.

3.2 Analyses/development of techniques**NEFSC**

Tags consisting of time-depth recorders and pitch and roll sensors were attached to right whales, and the whales' movements were tracked. At the same time, sampling of oceanographic conditions and prey distribution in proximity to the tagged whales was conducted using a CTD, optical plankton counter, and a video plankton recorder. The results of the study demonstrate the importance of predator behaviour and prey life history in the development of oceanic hotspots.

SEFSC

None reported.

4. TISSUE/BIOLOGICAL SAMPLES COLLECTED**4.1 Biopsy samples (summary only)****NEFSC**

Species	Area/stock	Calendar year/ season - no. collected	Archived (Y/N)	No. analysed	Total holdings	Contact person/institute
Pilot whale	N. Atlantic	2007/Spring - 11	Y	NA	NA	Richard Pace/NEFSC
North Atlantic right whale	N. Atlantic	2007Spring, Summer - 18	Y	NA	NA	Richard Pace/NEFSC

SEFSC

Species	Area/stock	Calendar year/ season - no. collected	Archived (Y/N)	No. analysed	Total holdings	Contact person/institute
Atlantic spotted dolphin	Gulf of Mexico	2007/Summer - 60	Y	0	NA	P. Rosel, SEFSC
Bottlenose dolphin	Gulf of Mexico	2007/Summer - 251	Y	0	NA	P. Rosel, SEFSC
Bryde's whale	Gulf of Mexico	2007/Summer - 7	Y	0	NA	P. Rosel, SEFSC
Rough-toothed dolphin	Gulf of Mexico	2007/Summer - 5	Y	0	NA	P. Rosel, SEFSC
Short-finned pilot whale	Gulf of Mexico	2007/Summer - 2	Y	0	NA	P. Rosel, SEFSC
Spinner dolphin	Gulf of Mexico	2007/Summer - 2	Y	0	NA	P. Rosel, SEFSC
Bottlenose dolphin	Gulf of Mexico/ Choctawhatchee Bay	2007/Summer - 62	Y	0	NA	P. Rosel, SEFSC
Bottlenose dolphin	Gulf of Mexico/ Mississippi Sound	2007/Summer - 6	Y	0	NA	P. Rosel, SEFSC
Bottlenose dolphin	W. North Atlantic/Georgia	2007/Spring - 42	Y	0	NA	P. Rosel, SEFSC

Bottlenose dolphin	W. North Atlantic/Georgia	2007/Summer - 32	Y	0	NA	P. Rosel, SEFSC
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4.2 Samples from directed catches (commercial, aboriginal and scientific permits) or bycatches 2005 NEFSC

Species	Area/stock	Tissue type(s)	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Atlantic white-sided dolphin	N. Atlantic	Skin	61	Y	0	Fred Wenzel/NEFSC
Atlantic white-sided dolphin	N. Atlantic	Blubber	35	Y	0	Fred Wenzel/NEFSC
Atlantic white-sided dolphin	N. Atlantic	Head	7	Y	2	Fred Wenzel/NEFSC
Atlantic white-sided dolphin	N. Atlantic	Heart	0	Y	0	Fred Wenzel/NEFSC
Atlantic white-sided dolphin	N. Atlantic	Muscle	8	Y	0	Fred Wenzel/NEFSC
Atlantic white-sided dolphin	N. Atlantic	Stomach	16	Y	16	Fred Wenzel/NEFSC
Atlantic white-sided dolphin	N. Atlantic	Jaw	6	Y	0	Fred Wenzel/NEFSC
Atlantic white-sided dolphin	N. Atlantic	Kidney	8	Y	0	Fred Wenzel/NEFSC
Atlantic white-sided dolphin	N. Atlantic	Liver	8	Y	0	Fred Wenzel/NEFSC
Atlantic white-sided dolphin	N. Atlantic	Whole	12	Y	12	Fred Wenzel/NEFSC
Atlantic white-sided dolphin	N. Atlantic	Fetus	6	Y	0	Fred Wenzel/NEFSC
Atlantic white-sided dolphin	N. Atlantic	Teeth	3	Y	0	Fred Wenzel/NEFSC
Atlantic white-sided dolphin	N. Atlantic	Lung	7	Y	0	Fred Wenzel/NEFSC
Harbour porpoise	N. Atlantic	Skin	33	Y	0	Fred Wenzel/NEFSC
Harbour porpoise	N. Atlantic	Blubber	12	Y	0	Fred Wenzel/NEFSC
Harbour porpoise	N. Atlantic	Head	5	Y	1	Fred Wenzel/NEFSC
Harbour porpoise	N. Atlantic	Muscle	4	Y	0	Fred Wenzel/NEFSC
Harbour porpoise	N. Atlantic	Stomach	2	Y	0	Fred Wenzel/NEFSC
Harbour porpoise	N. Atlantic	Jaw	2	Y	0	Fred Wenzel/NEFSC
Harbour porpoise	N. Atlantic	Kidney	0	Y	0	Fred Wenzel/NEFSC
Harbour porpoise	N. Atlantic	Liver	1	Y	0	Fred Wenzel/NEFSC
Harbour porpoise	N. Atlantic	Lung	0	Y	0	Fred Wenzel/NEFSC
Harbour porpoise	N. Atlantic	Whole	14	Y	14	Fred Wenzel/NEFSC
Harbour porpoise	N. Atlantic	Reproductive	1	Y	0	Fred Wenzel/NEFSC
Harbour porpoise	N. Atlantic	Fetus	1	Y	0	Fred Wenzel/NEFSC
Common dolphin	N. Atlantic	Skin	20	Y	0	Fred Wenzel/NEFSC
Common dolphin	N. Atlantic	Blubber	6	Y	0	Fred Wenzel/NEFSC
Common dolphin	N. Atlantic	Head	2	Y	0	Fred Wenzel/NEFSC
Common dolphin	N. Atlantic	Intestine	0	Y	0	Fred Wenzel/NEFSC
Common dolphin	N. Atlantic	Muscle	1	Y	0	Fred Wenzel/NEFSC
Common dolphin	N. Atlantic	Skeleton	0	Y	0	Fred Wenzel/NEFSC
Common dolphin	N. Atlantic	Stomach	0	Y	1	Fred Wenzel/NEFSC
Common dolphin	N. Atlantic	Reproductive	0	Y	0	Fred Wenzel/NEFSC
Common dolphin	N. Atlantic	Lung	1	Y	0	Fred Wenzel/NEFSC
Bottlenose dolphin	N. Atlantic	Skin	0	Y	0	Fred Wenzel/NEFSC
Bottlenose dolphin	N. Atlantic	Whole	1	Y	1	Fred Wenzel/NEFSC
Long-fin Pilot whale	N. Atlantic	Skin	13	Y	13	Fred Wenzel/NEFSC
Long-fin Pilot whale	N. Atlantic	Blubber	3	Y	0	Fred Wenzel/NEFSC
Long-fin Pilot whale	N. Atlantic	Lymphatic	0	Y	0	Fred Wenzel/NEFSC

Long-fin Pilot whale	N. Atlantic	Spleen	0	Y	0	Fred Wenzel/NEFSC
Long-fin Pilot whale	N. Atlantic	Muscle	2	Y	0	Fred Wenzel/NEFSC
Long-fin Pilot whale	N. Atlantic	Stomach	0	Y	0	Fred Wenzel/NEFSC
Long-fin Pilot whale	N. Atlantic	Kidney	0	Y	0	Fred Wenzel/NEFSC
Long-fin Pilot whale	N. Atlantic	Liver	0	Y	0	Fred Wenzel/NEFSC
Long-fin Pilot whale	N. Atlantic	Jaw	0	Y	0	Fred Wenzel/NEFSC
Short-fin Pilot whale	N. Atlantic	Skin	17	Y	17	Fred Wenzel/NEFSC
Humpback whale	N. Atlantic	Skin	1	Y	0	Fred Wenzel/NEFSC
Fin whale	N. Atlantic	Skin	1	Y	0	Fred Wenzel/NEFSC
Fin whale	N. Atlantic	Blubber	1	Y	0	Fred Wenzel/NEFSC
North Atlantic right whale	N. Atlantic	Skin	1	Y	1	Fred Wenzel/NEFSC
North Atlantic right whale	N. Atlantic	Blubber	1	Y	0	Fred Wenzel/NEFSC
North Atlantic right whale	N. Atlantic	Muscle	1	Y	0	Fred Wenzel/NEFSC
Minke whale	N. Atlantic	Baleen	1	Y	0	Fred Wenzel/NEFSC
Risso's dolphin	N. Atlantic	Skin	1	Y	0	Fred Wenzel/NEFSC
Risso's dolphin	N. Atlantic	Blubber	1	Y	0	Fred Wenzel/NEFSC
Risso's dolphin	N. Atlantic	Head	1	Y	1	Fred Wenzel/NEFSC
Risso's dolphin	N. Atlantic	Stomach	1	Y	0	Fred Wenzel/NEFSC
Unidentified dolphin	N. Atlantic	Skin	2	Y	2	Fred Wenzel/NEFSC

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None reported.

4.3 Samples from stranded animals 2007^a**NEFSC**

Species	Area/stock	Tissue type(s) ^b	No. collected	Archived (Y/N)	No. analysed ^c	Contact person/institute
Atlantic white-sided dolphin	N. Atlantic		16	Y	NA	Mendy Garron, NER Stranding Network
Bottlenose dolphin	N. Atlantic		57	Y	NA	Mendy Garron, NER Stranding Network
Common dolphin	N. Atlantic		68	Y	NA	Mendy Garron, NER Stranding Network
Fin whale	N. Atlantic		1	Y	NA	Mendy Garron, NER Stranding Network
Gervais beaked whale	N. Atlantic		1	Y	NA	Mendy Garron, NER Stranding Network
Harbor porpoise	N. Atlantic		27	Y	NA	Mendy Garron, NER Stranding Network
Humpback whale	N. Atlantic		5	Y	NA	Mendy Garron, NER Stranding Network
Long-finned pilot whale	N. Atlantic		6	Y	NA	Mendy Garron, NER Stranding Network
Minke whale	N. Atlantic		6	Y	NA	Mendy Garron, NER Stranding Network
Pygmy sperm whale	N. Atlantic		9	Y	NA	Mendy Garron, NER Stranding Network
Risso's dolphin	N. Atlantic		5	Y	NA	Mendy Garron, NER Stranding Network
Sei whale	N. Atlantic		1	Y	NA	Mendy Garron, NER Stranding Network
Sperm whale	N. Atlantic		2	Y	NA	Mendy Garron, NER Stranding Network
Striped dolphin	N. Atlantic		6	Y	NA	Mendy Garron, NER Stranding Network
True's beaked whale	N. Atlantic		2	Y	NA	Mendy Garron, NER Stranding Network
Unidentified delphinid	N. Atlantic		2	Y	NA	Mendy Garron, NER Stranding Network
Unidentified whale	N. Atlantic		1	Y	NA	Mendy Garron, NER Stranding Network

a. Data are entered as represented by the NOAA Fisheries NER Stranding Network and have not been formally reviewed by NOAA Fisheries.

b. Samples include some or all of the following: hard parts (i.e. teeth, jaw, skull, baleen, entire skeleton, etc) and/or soft parts (i.e. skin, gonads, muscle, blubber, blood, organs, etc).

c. Samples are sent to various educational and scientific collections and number analyzed is unknown.

SEFSC

Species	Area/stock	Tissue type(s)	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Atlantic spotted dolphin	W. N. Atlantic and Gulf of Mexico	Various	3	Y	NA	B. Mase, SEFSC
Atlantic white-sided dolphin	W.N. Atlantic	Various	1	Y	NA	B. Mase, SEFSC
Blainville's beaked whale	W. N. Atlantic	Various	2	Y	NA	B. Mase, SEFSC
Bottlenose dolphin	W. N. Atlantic and Gulf of Mexico	Various	267	Y	NA	B. Mase, SEFSC
Cuvier's beaked whale	W. N. Atlantic	Various	3	Y	NA	B. Mase, SEFSC
Dwarf sperm whale	W. N. Atlantic and Gulf of Mexico	Various	12	Y	NA	B. Mase, SEFSC
Gervais' beaked whale	W. N. Atlantic and Gulf of Mexico	Various	1	Y	NA	B. Mase, SEFSC
Harbor porpoise	W. N. Atlantic	Various	11	Y	NA	B. Mase, SEFSC
Humpback whale	W. N. Atlantic	Various	3	Y	NA	B. Mase, SEFSC
Melon-headed whale	W. N. Atlantic	Various	3	Y	NA	B. Mase, SEFSC
North Atlantic right whale	W. N. Atlantic	Various	2	Y	NA	B. Mase, SEFSC
Pygmy killer whale	W. N. Atlantic	Various	3	Y	NA	B. Mase, SEFSC
Pygmy sperm whale	W. N. Atlantic and Gulf of Mexico	Various	12	Y	NA	B. Mase, SEFSC
Risso's dolphin	W. N. Atlantic	Various	2	Y	NA	B. Mase, SEFSC
Sperm whale	W. N. Atlantic	Various	1	Y	NA	B. Mase, SEFSC
Striped dolphin	W. N. Atlantic and Gulf of Mexico	Various	4	Y	NA	B. Mase, SEFSC

4.4 Analyses/development of techniques

None reported.

5. POLLUTION STUDIES 2007

None reported.

6. STATISTICS FOR LARGE CETACEANS

6.1 Corrections to earlier years' statistics for large whales

None reported.

6.2 Direct catches of large whales (commercial, aboriginal and scientific permits) for the calendar year 2007

None reported.

6.3 Anthropogenic mortality of large whales for the calendar year 2005

6.3.1 Observed or reported ship strikes of large whales (including non-fatal events)

NEFSC, SEFSC

Whale species	Sex	No.	Date	Location	Vessel type	Speed	Fate	How observed	Contact person/ institute and refs
North Atlantic right whale	F	1	12/1/05	Cumberland Island, Georgia	U	U	D	DA	Tim Cole/NEFSC/NEFSC Ref. Doc. 08-04
North Atlantic right whale	U	1	10/3.05	Cumberland Island, Georgia	U	U	I	DA	Tim Cole/NEFSC/NEFSC Ref. Doc. 08-04
North Atlantic right whale	F	1	28/8.05	Monomoy Island, Massachusetts	U	U	D	DA	Tim Cole/NEFSC/NEFSC Ref. Doc. 08-04
Minke whale	M	1	23/5.05	Port Elizabeth, New Jersey	U	U	D	DA	Tim Cole/NEFSC/NEFSC Ref. Doc. 08-04
Fin whale	F	1	26/3.05	Off Virginia Beach, Virginia	U	U	D	DA	Tim Cole/NEFSC/NEFSC Ref. Doc. 08-04
Fin whale	F	1	3/4.05	Southampton, New York		U	D	DA	Tim Cole/NEFSC/NEFSC Ref. Doc. 08-04
Fin whale	M	1	23/8.05	Port Elizabeth, New Jersey	U	U	D	DA	Tim Cole/NEFSC/NEFSC Ref. Doc. 08-04
Fin whale	M	1	11/9.05	Bonne Esperance, Quebec	U	U	D	DA	Tim Cole/NEFSC/NEFSC Ref. Doc. 08-04

6.3.2 Fishery bycatch of large whales

NEFSC, SEFSC

Whale species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact
Minke whale	U	1	1-3/05	Gulf of Mexico	D	<i>Cod</i>	TBB	F	NEFSC, 166 Water Street, Woods Hole,

7. STATISTICS FOR SMALL CETACEANS

7.1 Corrections to earlier years' statistics for small cetaceans

None reported.

7.2 Direct catches of small cetaceans for the calendar year 2006

None reported.

7.3 Anthropogenic mortality of small cetaceans for the calendar year 2005*7.3.1 Observed or reported ship strikes of small cetaceans (including non fatal events)***NEFSC**

Species	Sex	No.	Date	Location	Vessel type	Speed	Fate	How observed	Contact person/ institute and refs
Atlantic white-sided dolphin	F	1	7/1.05	Edgartown, Massachusetts	U	U	D	Alive	Mendy.Garron@noaa.gov

SEFSC

Species	Sex	No.	Date	Location	Vessel type	Speed	Fate	How observed	Contact person/ institute and refs
Bottlenose dolphin	F	1	9/2005	Florida West Coast	U	U	D	Post-mortem	Blair Mase, SEFSC
Bottlenose dolphin	U	1	11/2005	Florida West Coast	U	U	D	Post-mortem	Blair Mase, SEFSC

*7.3.2 Fishery bycatch of small cetaceans 2005***NEFSC**

Species	Sex	No	Date	Location*	Fate	Targeted fish species	Gear	How observed?	Contact person/institute and refs
Bottlenose dolphin	M	1	7-9/2005	MAB	D	Spanish mackerel	GNS	F	Gina Shield/NEFSC
Dolphin, unk	U	1	10-12/2005	SNE/NYB	D	Monkfish	GNS	F	Gina Shield/NEFSC
Dolphin, unk	U	1	10-12/2005	GOM	D	Pollock	GNS	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	1-3/2005	GB	D	Groundfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	1-3/2005	GB	D	Atlantic Cod	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	1-3/2005	GB	D	Atlantic Cod	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	1-3/2005	GOM	D	Groundfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	1-3/2005	GOM	D	Groundfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	1-3/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	1-3/2005	GOM	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	1-3/2005	GOM	D	Groundfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	1-3/2005	GOM	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	1-3/2005	GB	D	Flounder	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	1-3/2005	GOM	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	1-3/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	1-3/2005	GOM	D	Atlantic Cod	TBB	F	Gina Shield/NEFSC

Whitesided dolphin	F	1	1-3/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	1-3/2005	GOM	D	Groundfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	1-3/2005	GOM	D	Flounder	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	1-3/2005	GOM	D	Groundfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	1-3/2005	GB	D	Groundfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	1-3/2005	GOM	D	Monkfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	1-3/2005	GOM	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	1-3/2005	GB	D	Monkfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	1-3/2005	GOM	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	1-3/2005	GB	D	Monkfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	1-3/2005	GB	D	Monkfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	1-3/2005	GOM	D	Groundfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	1-3/2005	GB	D	Atlantic Cod	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	1-3/2005	GB	D	Atlantic Cod	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	1-3/2005	GOM	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	1-3/2005	GB	D	Monkfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	1-3/2005	GB	D	Groundfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	4-6/2005	SNE/NYB	D	Monkfish	GNS	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	4-6/2005	GOM	D	Monkfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	4-6/2005	GB	D	Monkfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	4-6/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	4-6/2005	GOM	D	Monkfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	4-6/2005	GB	D	Flounder	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	4-6/2005	GB	D	Atlantic Cod	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	4-6/2005	GB	D	Atlantic Cod	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	4-6/2005	GB	D	Atlantic Cod	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	4-6/2005	GOM	D	Monkfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	4-6/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	4-6/2005	GB	D	Monkfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	4-6/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	4-6/2005	GB	D	Monkfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	4-6/2005	GOM	D	Atlantic Cod	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	4-6/2005	GOM	D	Groundfish	TBB	F	Gina Shield/NEFSC

Whitesided dolphin	U	1	4-6/2005	GOM	D	Groundfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	4-6/2005	GB	D	Monkfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	4-6/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	4-6/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	4-6/2005	GB	D	Monkfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	4-6/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	4-6/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	4-6/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	4-6/2005	GB	U	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	4-6/2005	GOM	D	Groundfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	4-6/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	4-6/2005	GB	D	Groundfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	M	1	4-6/2005	GOM	D	Groundfish	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	7-9/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	7-9/2005	GOM	D	Atlantic Cod	GND	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	7-9/2005	GOM	D	Atlantic Herring	PTM	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	7-9/2005	GOM	D	Atlantic Cod	GNS	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	7-9/2005	GB	D	Flounder	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	7-9/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Whitesided dolphin	F	1	7-9/2005	GOM	D	Atlantic Cod	GNS	F	Gina Shield/NEFSC
Whitesided dolphin	U	1	7-9/2005	GB	D	Haddock	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	1-3/2005	MAB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	1-3/2005	GOM	D	Flounder	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	1-3/2005	GOM	D	Flounder	TBB	F	Gina Shield/NEFSC
Common dolphin	F	1	1-3/2005	GOM	D	Flounder	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	1-3/2005	MAB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	1-3/2005	MAB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	1-3/2005	MAB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	1-3/2005	MAB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	1-3/2005	MAB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	1-3/2005	MAB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	1-3/2005	MAB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	1-3/2005	MAB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	1-3/2005	MAB	D	Squid	TBB	F	Gina Shield/NEFSC

Common dolphin	M	1	1-3/2005	MAB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	7-9/2005	GB	D	Monkfish	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	10-12/2005	SNE/NYB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	M	1	10-12/2005	SNE/NYB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	F	1	10-12/2005	GB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	U	1	10-12/2005	SNE/NYB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	F	1	10-12/2005	SNE/NYB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	F	1	10-12/2005	SNE/NYB	D	Squid	TBB	F	Gina Shield/NEFSC
Common dolphin	U	1	10-12/2005	SNE/NYB	D	Monkfish	GNS	F	Gina Shield/NEFSC
Common dolphin	F	1	10-12/2005	MAB	D	Squid	TBB	F	Gina Shield/NEFSC
Harbour porpoise	U	1	1-3/2005	SNE/NYB	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	U	1	1-3/2005	GOM	D	Atlantic Cod	GNS	F	Gina Shield/NEFSC
Harbour porpoise	M	1	1-3/2005	SNE/NYB	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	F	1	1-3/2005	GOM	D	Atlantic Cod	TBB	F	Gina Shield/NEFSC
Harbour porpoise	F	1	1-3/2005	GOM	D	Haddock	TBB	F	Gina Shield/NEFSC
Harbour porpoise	U	1	1-3/2005	GB	D	Skate	GNS	F	Gina Shield/NEFSC
Harbour porpoise	F	1	1-3/2005	GOM	D	Atlantic Cod	GNS	F	Gina Shield/NEFSC
Harbour porpoise	F	1	1-3/2005	SNE/NYB	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	M	1	1-3/2005	SNE/NYB	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	U	1	1-3/2005	SNE/NYB	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	F	1	1-3/2005	GB	D	Atlantic Cod	TBB	F	Gina Shield/NEFSC
Harbour porpoise	M	1	1-3/2005	SNE/NYB	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	F	1	4-6/2005	SNE/NYB	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	U	1	4-6/2005	SNE/NYB	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	U	1	4-6/2005	SNE/NYB	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	U	1	4-6/2005	GB	D	Groundfish	TBB	F	Gina Shield/NEFSC
Harbour porpoise	U	1	4-6/2005	GOM	D	Monkfish	TBB	F	Gina Shield/NEFSC
Harbour porpoise	F	1	4-6/2005	GOM	D	Groundfish	TBB	F	Gina Shield/NEFSC
Harbour porpoise	F	1	4-6/2005	GB	D	SKATE, NK	TBB	F	Gina Shield/NEFSC
Harbour porpoise	M	1	4-6/2005	GOM	D	Monkfish	TBB	F	Gina Shield/NEFSC
Harbour porpoise	M	1	4-6/2005	GOM	D	Monkfish	TBB	F	Gina Shield/NEFSC
Harbour porpoise	U	1	4-6/2005	GOM	D	Monkfish	TBB	F	Gina Shield/NEFSC
Harbour porpoise	U	1	4-6/2005	SNE/NYB	D	Monkfish	GNS	F	Gina Shield/NEFSC

Harbour porpoise	M	1	7-9/2005	GOM	D	Groundfish	GND	F	Gina Shield/NEFSC
Harbour porpoise	F	1	10-12/2005	GOM	D	Pollock	GND	F	Gina Shield/NEFSC
Harbour porpoise	M	1	10-12/2005	GOM	D	Atlantic Cod	GND	F	Gina Shield/NEFSC
Harbour porpoise	M	1	10-12/2005	GOM	D	Atlantic Cod	GND	F	Gina Shield/NEFSC
Harbour porpoise	U	1	10-12/2005	GOM	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	F	1	10-12/2005	GOM	D	Groundfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	F	1	10-12/2005	GOM	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	M	1	10-12/2005	GOM	D	Atlantic Cod	GNS	F	Gina Shield/NEFSC
Harbour porpoise	U	1	10-12/2005	GOM	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	F	1	10-12/2005	GOM	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	F	1	10-12/2005	GOM	D	Monkfish	GNS	F	Gina Shield/NEFSC
Harbour porpoise	M	1	10-12/2005	GOM	D	Atlantic Cod	GNS	F	Gina Shield/NEFSC
Harbour porpoise	F	1	10-12/2005	GOM	D	Atlantic Cod	GND	F	Gina Shield/NEFSC
Harbour porpoise	M	1	10-12/2005	GOM	D	Atlantic Cod	GNS	F	Gina Shield/NEFSC
Harbour porpoise	U	1	10-12/2005	GOM	D	Monkfish	GND	F	Gina Shield/NEFSC
Harbour porpoise	U	1	10-12/2005	GOM	D	Atlantic Cod	GNS	F	Gina Shield/NEFSC
Harbour porpoise	U	1	10-12/2005	GOM	D	Atlantic Cod	GNS	F	Gina Shield/NEFSC
Pilot whale	F	1	4-6/2005	SNE/NYB	D	Squid	TBB	F	Gina Shield/NEFSC
Pilot whale	F	1	4-6/2005	SNE/NYB	D	Squid	TBB	F	Gina Shield/NEFSC
Pilot whale	U	1	4-6/2005	SNE/NYB	D	Squid	TBB	F	Gina Shield/NEFSC
Pilot whale	U	1	7-9/2005	GB	D	Monkfish	TBB	F	Gina Shield/NEFSC
Pilot whale	M	1	10-12/2005	GB	D	Flounder	TBB	F	Gina Shield/NEFSC

* GOM= Gulf of Maine, GB= George's Bank, SNE= Southern New England, NYB= New York Bight, MAB= mid-Atlantic Bight

SEFSC

Species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact
Atlantic spotted dolphin	U	1	12/2005	Central Atlantic	R	Swordfish/Tuna	LLD	F	L. Garrison, SEFSC
Bottlenose dolphin	U	1	2/2005	Southeast U.S. Atlantic	R	Swordfish/Tuna	LLD	F	L. Garrison, SEFSC
Pilot whale	U	5	6/2005	Southeast U.S. Atlantic	R	Swordfish/Tuna	LLD	F	L. Garrison, SEFSC
Pilot whale	U	11	9/2005	Southeast U.S. Atlantic	R	Swordfish/Tuna	LLD	F	L. Garrison, SEFSC
Risso's dolphin	U	1	2/2005	U.S. Gulf of Mexico	R	Swordfish/Tuna	LLD	F	L. Garrison, SEFSC
Risso's dolphin	U	1	10/2005	Northeast U.S. Atlantic	R	Swordfish/Tuna	LLD	F	L. Garrison, SEFSC

Reference: Fairfield Walsh and Garrison (2006)

8. STRANDINGS 2006

NEFSC

The United States Northeast Regional Stranding network consists of local and regional responders who live and operate from Maine to North Carolina. A NMFS letter of agreement permits these individuals and organizations to approach, handle, and collect stranded, sick, dead, injured and alive marine mammals from both offshore and onshore waters on a year round basis. These permitted individuals and organizations submit a Level A response letter in a timely manner. This Level A report informs NMFS to the level of response, number of animals, number of species involved and collectively assists NMFS in determining any unusual marine mammal mortality events.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Atlantic white-sided dolphin	65	25	Mendy Garron/NER Stranding Network	Mendy.Garron@noaa.gov
Bottlenose dolphin	109	73	See above	See above
Common dolphin	108	21	See above	See above
Fin whale	4	1	See above	See above
Cuvier's beaked whale	1	1	See above	See above
Harbour porpoise	67	27	See above	See above
Humpback whale	21	4	See above	See above
Long-fin pilot whale	6	3	See above	See above
Minke whale	7	4	See above	See above
Pygmy sperm whale	6	4	See above	See above
Risso's dolphin	5	4	See above	See above
Sei whale	2	1	See above	See above
Short-fin pilot whale	1	1	See above	See above
Northern bottlenose whale	2	1	See above	See above
Striped dolphin	6	4	See above	See above
Unidentified dolphin	2	1	See above	See above

SEFSC

The southeast region marine mammal stranding network consists of numerous private and public agencies throughout the southeastern United States from Texas to North Carolina. The Southeast Fisheries Science Center coordinates the activities of these groups, provides training, and manages data from all reported strandings data for the region.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Atlantic spotted dolphin	3	3	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Atlantic white-sided dolphin	1	1	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Blainville's beaked whale	1	1	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Bottlenose dolphin	524	283	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Bryde's whale	1	1	Blair Mase, SEFSC	Blair.Mase@noaa.gov

Cuvier's beaked whale	1	1	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Dwarf sperm whale	10	10	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Pygmy sperm whale	14	11	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Unidentified Kogia	2	1	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Fraser's dolphin	1	1	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Harbor porpoise	6	6	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Humpback whale	6	3	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Melon-headed whale	9	7	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Northern right whale	3	3	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Pygmy killer whale	1	1	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Risso's dolphin	1	1	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Rough-toothed dolphin	4	2	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Common dolphin	2	2	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Short-finned pilot whale	1	1	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Unidentified pilot whale	1	0	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Sperm whale	2	1	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Spinner dolphin	1	1	Blair Mase, SEFSC	Blair.Mase@noaa.gov
Striped dolphin	2	2	Blair Mase, SEFSC	Blair.Mase@noaa.gov

9. OTHER STUDIES AND ANALYSES 2007

NEFSC

Acoustic research:

A 14 month large scale passive acoustic study that took place in the Stellwagen Bank National Marine Sanctuary concluded in early 2007. The project involved collaboration between NMFS, the Sanctuary Office and Cornell University. Ten passive acoustic recording units were deployed and retrieved every three months cataloguing all biological and anthropogenic sounds between 5 and 1000Hz. Analyses of the acoustic distribution and occurrence of right, humpback and fin whales and fish species are underway. Anthropogenic noise and vessel movements are being mapped in relation to biological activity and occurrence. More details on this project can be found at: http://stellwagen.noaa.gov/science/passive_acoustics.html. This project led to the award of a 3 year National Oceanographic Partnership Program grant involving collaboration between Cornell University, NOAA Sanctuary and NEFSC for 'developing an ocean observing system for large scale monitoring and mapping of ocean noise throughout the Stellwagen Sanctuary'. This project started in October of 2007 and will continue into 2010. (Contact: S. Van Parijs, NEFSC)

SEFSC

Gulf of Mexico:

A photo-identification survey of bottlenose dolphins followed by biopsy sampling was conducted in Choctawhatchee Bay, Florida, for six weeks during July and August 2007. The objective of the photo-identification survey was to collect capture-recapture data to estimate dolphin abundance. Biopsy sampling was conducted to collect skin samples for genetic comparisons with other Gulf of Mexico bays, sounds and estuaries and the adjacent Gulf to assess gene flow. (Contact: K. Mullin, SEFSC).

Northwest Atlantic:

The ongoing photo-identification study of bottlenose dolphins in Biscayne Bay, Florida, was continued. Surveys are undertaken on three days each month throughout the year. A small vessel systematically surveys a selected region of Biscayne Bay, photographing all bottlenose dolphins encountered. The photo-identification component of this survey and the associated photographic catalogue has been ongoing for more than ten years. (Contact: L. Garrison, SEFSC).

10. LITERATURE CITED

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Merrick RL, Cole TVN. 2007. Evaluation of Northern Right Whale Ship Strike Reduction Measures in the Great South Channel of Massachusetts. NOAA Tech Memo NMFS NE 202; 12 p.

Niemeyer M, Cole TVN, Christman CL, Duley P, Glass AH. 2008. North Atlantic Right Whale Sighting Survey (NARWSS) and Right Whale Sighting Advisory System (RWSAS) 2007 results summary. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 08-06; 6 p.

Niemeyer M, Cole TVN, Christman CL, Duley P, Nelson M. 2007. North Atlantic Right Whale Sighting Survey (NARWSS) and Right Whale Sighting Advisory System (RWSAS) 2005 results summary. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 07-18d; 5 p.

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11.2 Unpublished literature

None reported.

USA PACIFIC WATERS

1. SPECIES AND STOCKS STUDIED

IWC common name	IWC recommended scientific name	Area/stock(s)	Items referred to
Baird's beaked whale	<i>Berardius bairdii</i>	Aleutian Islands, Bering Sea	2.1
Blainville's beaked whale	<i>Mesoplodon densirostris</i>	Eastern Tropical Pacific	7.3
Blue whale	<i>Balaenoptera musculus</i>	Eastern Tropical Pacific	2.1
Bottlenose dolphin	<i>Tursiops truncatus</i>	captive	5
Bottlenose dolphin	<i>Tursiops truncatus</i>	California	4.1, 9
Bottlenose dolphin	<i>Tursiops truncatus</i>	Eastern Tropical Pacific	2.1, 4.1
Bowhead whale	<i>Balaena mysticetus</i>	Bering-Chukchi-Beaufort	2.1, 6.2, 11.1
Common dolphin	<i>Delphinus sp.</i>	Eastern North Pacific	4.2, 4.3, 5, 7.3, 8
Cuvier's beaked whale	<i>Ziphius cavirostris</i>	Eastern Tropical Pacific	2.1
Cuvier's beaked whale	<i>Ziphius cavirostris</i>	Eastern North Pacific	4.3, 5
Dall's porpoise	<i>Phocoenoides dalli</i>	Eastern North Pacific	5, 8, 9
Dall's porpoise	<i>Phocoenoides dalli</i>	Aleutian Islands, Bering Sea	2.1, 7.3
Dwarf sperm whale	<i>Kogia sima</i>	Eastern Tropical Pacific	2.1
False killer whale	<i>Pseudorca crassidens</i>	Eastern North Pacific	3.1.3
False killer whale	<i>Pseudorca crassidens</i>	Eastern Tropical Pacific	2.1, 4.1, 7.3, 9, 11.1
Fin whale	<i>Balaenoptera physalus</i>	Eastern North Pacific	5, 6.3
Gray whale	<i>Eschrichtius robustus</i>	Eastern North Pacific	2.1, 5, 8, 9
Harbour porpoise	<i>Phocoena phocoena</i>	Eastern North Pacific	4.3, 5, 8, 9, 11.2
Harbour porpoise	<i>Phocoena phocoena</i>	Aleutian Islands, Bering Sea	2.1
Humpback whale	<i>Megaptera novaeangliae</i>	CA/OR/WA	6.3, 8
Humpback whale	<i>Megaptera novaeangliae</i>	Gulf of Maine, Bering Sea, SE Alaska	2.1, 9
Humpback whale	<i>Megaptera novaeangliae</i>	American Samoa and Hawaii	2.2, 3.1, 3.2, 4.1
Irrawaddy dolphin	<i>Orcaella brevirostris</i>	Cambodia	5
Killer whale	<i>Orcinus orca</i>	Bering Sea	2.1
Killer whale	<i>Orcinus orca</i>	Eastern North Pacific (California Current)/E. Tropical Pac.	2.1, 4.1, 4.3, 5, 9, 11.1, 11.2
Killer whale	<i>Orcinus orca</i>	Antarctic/Type C	5, 11.1
Long-beaked common dolphin	<i>Delphinus capensis</i>	Eastern North Pacific	4.2, 4.3, 7.3, 8
Minke whale	<i>Balaenoptera acutorostrata</i>	Eastern North Pacific	5
Mesoplodon spp.	<i>Mesoplodon sp.</i>	Eastern Tropical Pacific	2.1
North Pacific right whale	<i>Eubalaena japonica</i>	Bering Sea	2.1
Northern right whale dolphin	<i>Lissodelphis borealis</i>	North Pacific	8
Pacific white-sided dolphin	<i>Lagenorhynchus obliquidens</i>	Eastern North Pacific	8
Pacific white-sided dolphin	<i>Lagenorhynchus obliquidens</i>	Aleutian Islands, Bering Sea	2.1
Pantropical spotted dolphin	<i>Stenella attenuata</i>	American Samoa	3.1
Pygmy beaked whale	<i>Mesoplodon peruvianus</i>	Eastern Tropical Pacific	2.1
Pygmy killer whale	<i>Feresa attenuata</i>	Eastern Tropical Pacific	2.1
Pygmy sperm whale	<i>Kogia breviceps</i>	Eastern Tropical Pacific	8
Risso's dolphin	<i>Grampus griseus</i>	Eastern Tropical Pacific	2.1, 7.3
Risso's dolphin	<i>Grampus griseus</i>	Eastern North Pacific	4.3
Rough-toothed dolphin	<i>Steno bredanensis</i>	Eastern Tropical Pacific	2.1, 3.1
Sei whale/Bryde's whale	<i>Balaenoptera borealis/edeni</i>	Eastern Tropical Pacific	2.1, 6.3
Short-beaked common dolphin	<i>Delphinus delphis</i>	Eastern Tropical Pacific	2.1
Short-beaked common dolphin	<i>Delphinus delphis</i>	Eastern North Pacific	4.2, 4.3, 7.3, 8

Short-finned pilot whale	<i>Globicephala macrorhynchus</i>	American Samoa, E. Tropical Pac.	3.1, 4.1, 7.3
Sperm whale	<i>Physeter macrocephalus</i>	Eastern North Pacific, Eastern	2.1, 5
Spinner dolphin	<i>Stenella longirostris</i>	American Samoa, E. Tropical	2.1, 3.1
Spotted dolphin	<i>Stenella attenuata (offshore)</i>	Eastern Tropical Pacific	2.1, 4.1
Striped dolphin	<i>Stenella coeruleoalba</i>	Eastern Tropical Pacific	2.1
Stejneger's beaked whale	<i>Mesoplodon stejnegeri</i>	Western Aleutians	5
Unid. Beaked whale	<i>Ziphius sp. and Mesoplodon sp</i>	Tropical Pacific/Hawaii	11.2
Unid. cetacean			2.1, 7.3
Unid. Porpoise	<i>Phocoena sp.</i>	Eastern North Pacific	5, 11.1
White whale	<i>Delphinapterus leucas</i>	Alaska	2.1, 7.2
Ziiphiid whales	<i>Ziphiid whale</i>	Eastern Tropical Pacific	2.1

2. SIGHTINGS DATA

2.1 Field work

2.1.1 Systematic

HHWNMS, NWFSC

None Reported.

AFSC

Gray Whales off Washington Coast - From January 31 to September 26, 2007, vessel surveys for gray whales were conducted along the northern Washington coast and western Strait of Juan de Fuca. The surveys covered 659 nautical miles and represented 47 hours of survey effort. During these surveys 44 gray whales were sighted and 33 were photographed for identification. Twenty-one gray whales were sighted along the northern Washington coast and 23 were sighted in the western Strait of Juan de Fuca.

Gray Whales off Oregon Coast - One survey was conducted along the Oregon coast from the Rogue River jetty to Cape Blanco on July 14, 2007. The survey covered 28 nautical miles and required 1.5 hours of survey effort. During this survey, 7 gray whales were sighted and photographed. (Contact: M. Gosho, AFSC)

Bering Sea Right Whale Cruise - As part of an inter-agency agreement between the National Marine Mammal Laboratory and the Minerals Management Service, a ship-based survey of the North Aleutian Basin and southeastern Bering Sea was conducted from 31 July to 29 August 2007. The survey was conducted from two vessels: the 208-foot NOAA Ship Oscar Dyson and a 155-foot chartered crab boat, the Ocean Olympic. The primary objectives of this survey were to document the occurrence and distribution of North Pacific right whales in the region, and to photo-identify, biopsy-sample and satellite-tag right whales as well as humpback whales. Standard line-transect methods were used together with passive acoustic monitoring using DIFAR sonobuoys. Because of the late nature of the agreement between the two agencies, field work in 2007 was limited to a single shipboard survey with no aerial coverage or oceanographic component.

During the study period, the survey covered a total of 1565 nautical miles (2898 km) on-effort, while transit and fog legs accounted for an additional 241 miles. A total of 336 sightings (983 individuals) of 6 confirmed marine mammal species were recorded; these include humpback, fin and minke whales as well as killer whales, Dall's porpoise and harbor porpoise. No right whales were sighted, and there was only one possible acoustic detection off this species. Satellite tags were deployed on two humpback whales. The tags transmitted for 16 and 27 days, during which the whales remained in the general vicinity of the eastern Aleutian Islands, albeit with periodic excursions away from areas of known prey concentration; these data represent the first satellite-tracked movements of this species on a feeding ground. A total of 106 humpbacks and 23 killer whales were photo-identified, and 18 humpbacks were biopsy sampled.

The absence of right whale sightings during the cruise is likely due to colder water temperatures in the Bering Sea affecting the distribution of *Calanus* and other copepod prey. Such inter-annual variation in distribution and occurrence has commonly been recorded for right whales elsewhere, and very little can be concluded from the results of this limited single-season survey. Additional and considerably expanded effort (shipboard, aerial, acoustic and oceanographic) is planned for 2008. (Contact: P. Clapham, AFSC)

BOWFEST Aerial Surveys 20-24 August and 2-13 Sept 2007 - The National Marine Mammal Lab (NMML) received funds from Minerals Management Service (MMS) in 2007 for a multi-year research program referred to as the bowhead whale feeding ecology study (BOWFEST). This study focuses on late summer oceanography and prey densities relative to whale distribution over continental shelf waters within 100 miles north and east of Point Barrow, Alaska. Through NOAA's cooperative institutes, researchers have been included from Woods Hole Oceanographic Institute, University of Rhode Island, University of Alaska Fairbanks, University of Washington, and Oregon State University. Field work is being coordinated with the North Slope Borough, Alaska Eskimo Whaling Commission, Barrow Whaling Captains' Association, Alaska Department of Fish and Game, and Department of Interior's MMS. Aerial surveys and acoustic monitoring provide information on the spatial and temporal distribution of bowhead whales in the study area. Oceanographic sampling helps identify sources of zooplankton prey available to whales on the continental shelf and the association of this prey with physical (hydrography, currents) characteristics which may affect mechanisms of plankton aggregation. Prey distribution will be better understood by examining temporal and spatial scales of the hydrographic and velocity fields in the study area, particularly relative to frontal features. Results of this research program may help explain increased occurrences of bowheads feeding in the Western Beaufort Sea (US waters), well west of the typical summer feeding aggregations in the Canadian Beaufort Sea. Increased understanding of bowhead behavior and distribution is needed to minimize potential impacts from petroleum development activities. During 31 flight hours 20 Aug to 13 Sept, 16 sightings of approximately 50 bowheads were made, all on 23-24 Aug.

Aerial survey sightings 2007

Target species	Date	Area	No. of sightings	Contact person/institute and references
Bowhead whale	8/23-24	W Beaufort Sea	16	D. Rugh/K. Goetz/AFSC (Goetz et al. 2008)

BWASP Aerial Surveys 3 Sept to 10 Oct 2007 - In 2007, NMML received funds from MMS to begin overseeing BWASP (Bowhead Whale Aerial Survey Project), a survey which has been conducted for approximately 30 years. This study involves north-south transects in survey blocks across the US Beaufort Sea. The objective is to establish migratory timing and location of the fall migration of bowhead whales, particularly in relation to development areas, such as where petroleum industry is conducting seismic work or drilling for oil. The survey is designed to overlap with expected migration of bowheads through the area, generally covering September and early October. Surveys are flown in a Twin Otter at a target altitude of 458 m. In 2007, aerial track lines covered 13,862 km, and 133 bowhead sightings were reported.

Aerial survey sightings 2007

Target species	Date	Area	No. of sightings	Contact person/institute and references
Bowhead whale	9/3-10/10	Beaufort Sea	133	D. Rugh/K. Shelden (AFSC)

Aerial Surveys of Beluga Whales in Cook Inlet, Alaska, June and August 2007 - The National Marine Fisheries Service (NMFS) conducted surveys of the beluga population in Cook Inlet, Alaska, 7-15 June 2007 (47.2 hr) and 1-2 August 2007 (13.1 hr). The aerial surveys were flown at 244 m altitude and 185 km/hr, consistent with NMFS' surveys of Cook Inlet conducted each year since 1993. Although in most years an Aero Commander aircraft was used, in 2007 the survey aircraft was a Twin Otter. The study in June 2007 included one or more surveys of coastal areas (flown 1.4 km offshore) around most of the Inlet and 1,342 km of transects across the Inlet, effectively searching 25% of Cook Inlet and 71% of the coastline. Paired, independent observers searched on the coastal (left) side of the plane where virtually all beluga sightings occur, while a single observer and computer operator/data recorder were on the right side of the plane. After finding belugas, multiple aerial passes were made with paired observers doing four or more independent counts of each group. Daily median counts made on seven different days ranged from 183 to 224 in the upper Inlet. Belugas were not observed in lower Cook Inlet, which is typical of annual surveys in most of the recent years. In June 2007, the highest daily median estimate, used here as an index for relative abundance (not corrected for effort nor for estimates of missed whales), was 224 belugas. This is below index counts for survey years prior to 1998 (305, 281, 324, 307, 264 belugas from 1993-97, respectively), but higher than index counts made during the past nine years (193, 217, 184, 211, 192, 174, 187, 192, 153, respectively).

The survey in August covered coastal areas (survey track 1.4 km offshore) and some offshore waters north of Moose Point and the Native Village of Tyonek. The intent of the survey was to obtain high-resolution video of each beluga group to determine age structure (white relative to gray individuals and dark gray calves) and number of calves. In addition, video cameras used during past surveys (1999-2001 and 2002-2005) were paired with the high-definition video camera used in 2006-2007 in order to account for differences in video quality across years. Despite extensive surveys of the northern Inlet, belugas were found only in the Susitna

delta (total median count 181 whales on 1 Aug and 141 whales on 2 Aug). Unlike most years, whales were absent in Chickaloon Bay and Knik Arm. The daily median estimates (a quick index of relative abundance not corrected for missed whales) were on par with August 2006 counts (126 belugas on 16 August, 143 on 17 August) but were below counts made in August 2005 (236 belugas on 11 August, 277 on 12 August).

Aerial survey sightings 2007

Target species	Date	Area	No. of whales	Contact person/institute and references
Beluga whale	6/7-15	Cook Inlet	224	D. Rugh/AFSC (Rugh et al., 2007)
Beluga whale	8/1-2	Cook Inlet	181	K. Shelden/AFSC (Shelden et al., 2007)

2007 Killer Whale Survey, Aleutian Islands and Bering Sea - This survey constituted the seventh consecutive year of a study conducted by the National Marine Mammal Laboratory (NMML) to assess cetacean, and particularly killer whale, population biology around the Aleutian Islands and Bering Sea. This survey focused on near-shore waters of the eastern Aleutian Islands, around the Pribilof Islands in the Bering Sea and along the Bering Sea shelf edge between the Pribilofs and the eastern Aleutians Islands. A total of 1368 miles of visual survey effort were conducted aboard the charter F/V Ocean Olympic between May 30 and June 16, 2007, resulting in 312 marine mammal sightings including killer whales (17), pacific white-sided dolphins (2), harbor porpoise (66), Dall's porpoise (34), Baird's beaked whales (1), gray whales (14), minke whales (15), humpback whales (76), northern fur seals (28), walrus (2), sea otters (39), harbor seals (3), and Steller sea lions (3). "Encounters" involving photo-id, tagging and biopsy, involved two species: killer whales and Pacific white-sided dolphins porpoise (Contact, J. Durban, AFSC).

Primary species	Date	Area	No. of sightings	Contact person/institute
Killer whale	30/5/07-16/6/07	Aleutian Islands and Bering Sea, Alaska	17	J. Durban (AFSC)

Gray Whale Census January 2008 - The National Marine Mammal Lab (NMML) has been responsible for providing abundance estimates of gray whales most years since the mid-1960s. Counts applied in these estimates have come from shore-based counts conducted at Granite Canyon in central California. However, starting in 2008, the gray whale census is being conducted by SWFSC. NMML's participation now is to assist in the transfer of information, document procedures, and provide parallel counts to compare the old counting protocol relative to new methods. Throughout most of January 2008, one to three NMML observers rotated through three-hour watches, sitting in a small, wooden shed on the edge of a 22 m sea cliff. Meanwhile, SWFSC observers conducted an independent effort in a nearby trailer from 2 January to 9 February, also on three-hour watches but rotating every 1.5 hr. As in most recent years, a fix-mounted, high-powered (25x) binocular provided an index of the offshore distribution of whales within the observers' viewing range. SWFSC will provide an abundance estimate, and both NMML and SWFSC will conduct an analysis of how well matched the two sighting efforts were. (Contact: J. Rugh, AFSC)

Shore-based sightings 2008

Target species	Date	Area	No. of sightings	Contact person/institute and references
Gray whale	1/2-31	Central California	706	D. Rugh/AFSC (Rugh, 2008)

NOAA Ship John N. Cobb – line transect cruises of inland waters of Southeast Alaska - NOAA Ship John N. Cobb - Three (spring, summer, fall) line transect cruises in the inland waters of Southeast Alaska to obtain abundance and trends of harbor porpoise. All cetacean sightings were recorded and in the case of killer whales, a skiff was launched to obtain photographs of individual killer whales as part of our 18-year studies on life history & ecology of SE Alaska killer whales. (Contact: M. Dahlheim, AFSC).

10-20 April 2007. 64 sightings of humpback whales (no photographs or biopsies collected); 3 sightings of killer whales (58 individuals photographed; no biopsies).

7-17 July 2007. 215 sightings of humpback whales (no photographs or biopsies collected); 5 sightings of killer whales (62 individuals photographed; no biopsies).

10-20 September 2007. 97 sightings of humpback whales (no photographs or biopsies collected); 8 sightings of killer whales (113 individuals photographed; no biopsies).

Satellite tagging of humpback whales in the South Pacific - A total of 20 satellite tags were attached to humpback whales in the Cook Islands ($n=8$) and New Caledonia ($n=12$) in August/September 2007. Tags transmitted for a maximum of 54 days. Whales from the Cook Islands all proceeded west or northwest. Those from New Caledonia travelled to a variety of destinations, including to the north and northwest (Chesterfield Reefs), south/southeast (Antigonia Reef, Norfolk Island, and New Zealand).

PIFSC

Target species	Date	Area	No. of sightings	Contact person/institute and references
Sei whale	27- 30/MAR/2007 01- 11/APR/2007	Hawaii	2	D.W.Johnston/ PIFSC/OES0702
Humpback whale	27- 30/MAR/2007 01- 11/APR/2007	Hawaii	20	D.W.Johnston/ PIFSC/OES0702
Sperm whale	27- 30/MAR/2007 01- 11/APR/2007	Hawaii	6	D.W.Johnston/ PIFSC/OES0702
Short-finned pilot whale	27- 30/MAR/2007 01- 11/APR/2007	Hawaii	4	D.W.Johnston/ PIFSC/OES0702
Bottlenose dolphin	27- 30/MAR/2007 01- 11/APR/2007	Hawaii	3	D.W.Johnston/ PIFSC/OES0702
Rough-toothed dolphin	27- 30/MAR/2007 01- 11/APR/2007	Hawaii	1	D.W.Johnston/ PIFSC/OES0702
Spinner dolphin	27- 30/MAR/2007 01- 11/APR/2007	Hawaii	4	D.W.Johnston/ PIFSC/OES0702

SWFSC

Stenella Abundance Research – Line Transect and Ecosystem Survey – In 2007, SWFSC conducted a Stenella Abundance Research – Line Transect and Ecosystem (STAR-LITE) cruise to survey marine mammals and their habitat in the ETP. The primary objective of the STAR –LITE cruise was to investigate line-transect methodologies used on surveys in the eastern tropical Pacific Ocean and explore fine-scale spatial and temporal variability in the ecosystem. The project took a multidisciplinary approach. Data on cetacean distribution, school size and school composition were collected to examine cetacean density. Oceanographic data were collected to characterize habitat and its variation over time. Data on distribution and abundance of seabirds, flyingfish, and marine turtles will be used to further characterize the ecosystem. Skin biopsies of cetaceans provide a resource for investigations of stock structure and phylogenetic relationships. Photographs provide a tool to document geographic variation in dolphins and distribution of individual large whales.

Target species	Date	Area	# sightings	Contact person
Pygmy beaked whale	8/07-11/07	Eastern Tropical Pacific	24	Lisa Balance
Spotted dolphin (offshore)	8/07-11/07	Eastern Tropical Pacific	17483	
Spinner dolphin (orientalis)	8/07-11/07	Eastern Tropical Pacific	5659	
Spinner dolphin (unid. subsp.)	8/07-11/07	Eastern Tropical	89	

		Pacific	
Striped dolphin	8/07-11/07	Eastern Tropical Pacific	1020
Rough-toothed dolphin	8/07-11/07	Eastern Tropical Pacific	160
Short-beaked common dolphin	8/07-11/07	Eastern Tropical Pacific	463
Bottlenose dolphin	8/07-11/07	Eastern Tropical Pacific	54
Risso's dolphin	8/07-11/07	Eastern Tropical Pacific	442
Pygmy killer whale	8/07-11/07	Eastern Tropical Pacific	115
False killer whale	8/07-11/07	Eastern Tropical Pacific	66
Killer whale	8/07-11/07	Eastern Tropical Pacific	15
Sperm whale	8/07-11/07	Eastern Tropical Pacific	1
Dwarf sperm whale	8/07-11/07	Eastern Tropical Pacific	30
ziphiid whale	8/07-11/07	Eastern Tropical Pacific	14
Mesoplodon sp.	8/07-11/07	Eastern Tropical Pacific	38
Cuvier's beaked whale	8/07-11/07	Eastern Tropical Pacific	24
Blue whale	8/07-11/07	Eastern Tropical Pacific	8
unid. dolphin	8/07-11/07	Eastern Tropical Pacific	125
unid. small whale	8/07-11/07	Eastern Tropical Pacific	32
unid. large whale	8/07-11/07	Eastern Tropical Pacific	1
unid. cetacean	8/07-11/07	Eastern Tropical Pacific	19
Sei/Bryde's whale	8/07-11/07	Eastern Tropical Pacific	1
unid. small delphinid	8/07-11/07	Eastern Tropical Pacific	3367

2.1.2 Opportunistic, platforms of opportunity

NORTH PACIFIC						
Institution	US region	Species*	Platform type	Data type**	Collected by	Regional Archive***
Channel Island National Marine Sanctuary Naturalist Corps, CA****	SW	AE	Whale watch	1,4	Naturalist, dedicated observer	Yes
Monterey Bay Whale Watch, CA****	SW	AE	Whale watch	1,4	Naturalist, dedicated observer	Yes
Oceanic Society, CA****	SW	AE	Whale watch	1,4	Naturalist, dedicated observer	Yes
Univ. of Alaska SE, AK	NW	ABCKSW	Fishing vessels, Boaters	1,4,5	Captain, crew	Yes
Wild Whale Research Foundation, HI	HI	JMUVXY	Whale watch	1,4	Vessel captain/researcher	Yes
<p>*Species codes: A) <i>Megaptera novaeangliae</i>, B) <i>Balaenoptera physalus</i>, C) <i>Balaenoptera acutorostris</i>, D) <i>Eubalaena glacialis</i>, E) <i>Balaenoptera musculus</i>, F) <i>Balaenoptera borealis</i>, G) <i>Lagenorhynchus acutus</i>, H) <i>Phocoena phocoena</i>, I) <i>Globicephala melas</i>, J) <i>Ziphiidae</i> spp. K) <i>Physeter macrocephalus</i>, L) <i>Stenella longirostris</i>, M) <i>Tursiops truncatus</i>, N) <i>Stenella attenuata</i>, O) <i>Delphinus delphis</i>, P) <i>Grampus griseus</i>, R) unspecified odontocete species, S) <i>Orcinus orca</i>, T) <i>Stenella coeruleoalba</i>, U) <i>Globicephala macrorhynchus</i>, V) <i>Feresa attenuata</i>, W) <i>Eschrichtius robustus</i>, X) <i>Steno bredanensis</i> Y) <i>Pseudorca crassidens</i></p> <p>**Data types: 1) cetacean sighting data, 2) survey effort data (varied from general location to logged positions), 3) animal behavior, 4), photo-ID (for at least one listed species), 5) management-oriented data (fisheries interactions, ship strike, harassment), 6) scat/prey collection, 7) environmental data</p> <p>--- Data not available</p> <p>***ARCHIVES: DATA FOR ONE OR MORE LISTED SPECIES WERE CONTRIBUTED TO A REGIONAL OR OCEANIC ARCHIVE. RESPONDERS REPORTED CONTRIBUTING DATA TO THE FOLLOWING OTHER INSTITUTIONS: CASCADIA RESEARCH (WA), NATIONAL BIOLOGICAL INFORMATION INFRASTRUCTURE, NATIONAL MARINE MAMMAL LABORATORY (WA), SCRIPPS INSTITUTE OF OCEANOGRAPHY (CA)</p> <p>****Reported by Cascadia Research</p>						

2.2 Analyses/development of techniques

NWFS, SWFS

None reported.

AFSC

We developed a new approach for analyzing telemetry data, based on a continuous-time version of the correlated random walk model. The continuous-time formulation allows data that have been nonuniformly collected over time to be modeled without subsampling, interpolation, or aggregation to obtain a set of locations uniformly spaced in time. The model is derived from a continuous-time Ornstein-Uhlenbeck velocity process that is integrated to form a location process. The continuous-time model was placed into a state-space framework to allow parameter estimation and location predictions from observed animal locations. (Contact: J. Durban, AFSC)

HIHWMNS

Target species	Date	Area	Methods/effort	Parameters/ factors measured	Contact person/institute; refs
Humpback whale	Various days	Hawaii	Underwater full body imaging	Anthropogenic scarring and skin condition	D. Mattila/HIHWNMS/ David.Mattila@noaa.gov

PIFSC

Target species	Date	Area	Methods/effort	Parameters/ factors measured	Contact person/institute; refs
Fin whale	5-20/8/06	Ligurian Seas	Line transect survey	Distribution; sighting frequency	C. Fortuna, ICRAM; SC/59/07

3. MARKING DATA**3.1 Field work 2007***3.1.1 Natural marking data***NWFSC, SWFSC**

None reported.

AFSC

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Killer whale	Dorsal fin, saddle patch	Aleutian Islands and Bering Sea, Alaska	156	Y	>1000	J. Durban (AFSC)
Humpback whale	Tail fluke, dorsal fin	Aleutian Islands, Bering Sea	106	Y	>500	P. Clapham (AFSC)

HIHWNMS

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Humpback whale	Fluke	American S	43	Y	145	J. Robbins/PCCS/ Jrobbins@coastalstudies.org
Humpback whale	Dorsal fin	American S	60	Y	250	J. Robbins/PCCS/ Jrobbins@coastalstudies.org

PIFSC

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Humpback whale	Fluke	Hawaii	2	N	n/a	DWJ
Humpback whale	Dorsal fin	Hawaii	4	N	n/a	DWJ
Spinner dolphin	Dorsal fin	Hawaii	68	Y	92	DWJ

*3.1.2. Artificial marking data***AFSC, HIHWNMS, NWFSC, PIFSC, SWFSC**

None reported.

*3.1.3 Telemetry data***SWFSC**

None reported.

AFSC

Species	Tag type	No. successfully deployed	Maximum time transmitting	Contact person/institute; refs
Killer whale	Satellite	2	48 days	J.Durban (AFSC)
Humpback whale	Satellite	22	54 days	P Clapham (AFSC)

HIHWNMS

Species	Tag type	No. successfully deployed	Maximum time transmitting	Contact person/institute; refs
Humpback whale	Dtag	12	16.5 hours	A. Stimpert/Univ. of Hawaii/ stimpert@hawaii.edu

NWFSC

Species	Tag type	No. successfully deployed	Maximum time transmitting	Contact person/institute; refs
False killer whale	Satellite	3	32 days	Brad Hanson, NWFSC

3.2 Analyses/development of techniques**NWFSC, PIFSC, SWFSC**

None reported.

AFSC*North Pacific Humpback Whales*

Target species	Date	Area	Methods/effort	Parameters/factors measured	Contact person/institute
Humpback whale	2008	North Pacific	Computer assisted matching	Software development, total flukes photos (26,964) photos digitized (10,501)	S. Mizroch (AFSC)

Progress was made on updating entries in NMML's humpback whale FlukeFinder computer-assisted matching system. There are now nearly 27,000 photographs in the database, some dating back to the late 1960s. Over 10,500 of those historical photos have been digitized using a newly developed rapid digitizing technique. The photo-ID matching software has been transitioned to the Microsoft Access database program.

A number of long-term (early-mid 1970s to 2008) matches were recently discovered. Currently, the longest sightings time series is a whale first seen in 1972 and seen again in 2008. At least 9 whales that had been photographed by Chuck Jurasz in 1973 and 1974 in Glacier Bay, Alaska were seen in Glacier Bay in 2007. Seven of these whales have been seen over a 34-year time span and 2 whales have been seen over a 35-year time span. One of the whales was first photographed as a calf, which sets a record as the oldest known-age free ranging whale. These records extend the longevity record for humpback whales which had been 31 years based on a match we found from the Jurasz set a few years ago (1968-1998).

In addition, 7 whales which were radio-tagged in Alaska from 1976-1978 have been resighted over an extended period and many were still alive in 2007 and 2008. Five of the seven have been seen over 30 years later, and 2 have been seen 17-21 years later. A note on describing these findings has been drafted and sent to co-authors.

During 2007 some significant new matches were found:

- a first match between the Bering Sea and Japan
- a new match between Prince William Sound and offshore Mexico

(Contact: S. Mizroch, AFSC)

HIHWNMS

Suitable photo-identification images from humpback whales obtained off American Samoa were submitted to the South Pacific Whale Research Consortium and the IWC sponsored Antarctic Catalog. Tissues collected will be sent to collaborating genetic (and other) labs. No song recordings were acquired in 2007, but previous years' were sent to the University of Queensland, Australia for ongoing analyses.

Dtags were deployed off West Maui during the breeding season. They recorded ambient sound levels received and vocalizations emitted by the tagged animal, as well as body orientation.

4. TISSUE/BIOLOGICAL SAMPLES COLLECTED**4.1 Biopsy samples (summary only)****AFSC**

Species	Area/stock	Calendar year/ season - no. collected	Archived (Y/N)	No. analysed	Total holdings	Contact person/institute
Killer whale	Aleutian Islands and Bering Sea, Alaska	2007/14	Y	14	233	J. Durban (AFSC)
Humpback whale	Aleutian Islands, Bering Sea	2007/18	Y	0	400	P Clapham (AFSC)
Pacific white-sided dolphin	Aleutian Islands and Bering Sea, Alaska	2007/3	Y	3	5	J. Durban (AFSC)

HIHWNMS

Species	Area/stock	Calendar year/ season - no. collected	Archived (Y/N)	No. analysed	Total holdings	Contact person/institute
Humpback whale	American S	2007/Austral Spring. - 6	Y	0	66	J. Robbins/PCCS/ Jrobbins@coastalstudies.org
Short-finned pilot whale	American S	2007/Austral Spring. - 2	Y	0	2	J. Robbins/PCCS/ Jrobbins@coastalstudies.org

NWFSC

Species	Area/stock	Calendar year/ season - no. collected	Archived (Y/N)	No. analysed	Total holdings	Contact person/institute
Killer whale	NE Pacific/ Southern resident	2007/summer – 2008/winter -18	N	18	0	Peggy Krahn/NWFSC
Killer whale	NE Pacific (California current) transient	2007/summer-3	Y	0	3	Peggy Krahn/NWFSC

PIFSC

Species	Area/stock	Calendar year/ season - no. collected	Archived (Y/N)	No. analysed	Total holdings	Contact person/institute
Humpback whale	Hawaii	2	Y	0	3	DWJ
Spinner dolphin	Hawaii	8	Y	8	65	DWJ

SWFSC

Species	Area/stock	2007 - no. collected	Archived (Y/N)	No. analysed	Total holdings	Contact person/institute
Bottlenose dolphins	ETP	4	Y	0	1256	SWFSC
Spotted dolphin	ETP	5	Y		1473	SWFSC
False killer whale	ETP	4	Y		132	SWFSC

4.2 Samples from directed catches (commercial, aboriginal and scientific permits) or bycatches 2005**ASFC, HIHWNMS, NWFSC, PIFSC**

None reported.

SWFSC

Species	Area/stock	Tissue type(s)	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Long-beaked common dolphin	CA	Skin, blubber, gonads, stomach, adrenals, skull, teeth	3	Y	3	Kerri Danil/SWFSC
Short-beaked common dolphin	CA	Skin, blubber, gonads, stomach, adrenals, skull, teeth	12	Y	12	Kerri Danil/SWFSC

4.3 Samples from stranded animals 2007**AFSC, HIHWNMS, PIFSC**

None reported.

NWFSC

Species	Area/stock	Tissue type(s)*	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Harbor porpoise	Eastern North Pacific/ Georgia Basin	Blubber, muscle, stomach, skin	14	Y	0	Brad Hanson, NWFSC
Harbor porpoise	Eastern North Pacific/ Georgia Basin	Muscle (<i>longissimus dorsi</i> – neonate, calf, and adult)	4	Y	4	Dawn Noren, NWFSC
Killer whale	Eastern North Pacific, Georgia Basin – West Coast Transient	Blubber, skin	2	Y	0	Brad Hanson, NWFSC

SWFSC

Species	Area/stock	Tissue type(s)*	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Long-beaked common dolphin	CA	Skin, blubber, gonads, stomach, skull, teeth	22	Y	22	Kerri Danil/SWFSC
Short-beaked common dolphin	CA	Skin, blubber, gonads, stomach, skull, teeth	3	Y	3	Kerri Danil/SWFSC
Bottlenose dolphins	CA	Skin, blubber, gonads, skull, teeth	2	Y	0	Kerri Danil/SWFSC
Cuvier's beaked whale	CA	Skin, blubber, gonads, skull, teeth	1	Y	0	Kerri Danil/SWFSC
Risso's dolphin	Eastern North Pacific	Skin, blubber, gonads, liver, kidney etc	1	Y	0	Kerri Danil/SWFSC

4.4 Analyses/development of techniques**AFSC, HIHWNMS, NWFSC, PIFSC, SWFSC**

None reported.

5. POLLUTION STUDIES**AFSC, HIHWNMS, PIFSC, SWFSC**

None reported.

NWFSC

Using chemical tracers (persistent organic pollutants, fatty acids, stable isotopes) to assess feeding ecology of killer whales

Measuring chemical tracers in tissues of marine predators provides insight into the prey consumed and the predator's contaminant exposure. In this study, samples from Type C killer whales (*Orcinus orca*) biopsied in Antarctica were analyzed for chemical tracers [i.e., stable isotopes of carbon and nitrogen, fatty acids and

persistent organic pollutants (POPs)]. Profiles of these individual tracers were very different from those of killer whale populations that have been studied in the eastern North and eastern Tropical Pacific. For example, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ stable isotope values and most POP concentrations were significantly lower in the Antarctic population. In addition, multivariate statistical analyses of both fatty acid and POP profiles found distinctly different patterns for Antarctic Type C whales compared to those from whales in the other populations. Similar assays were conducted on four species of Antarctic marine fish considered potential prey for Type C killer whales. Results were consistent with a diet of fish for Type C whales, but other species (e.g., low trophic level marine mammals or penguins) could not be eliminated as supplemental prey. Reference: Krahn, M.M., Pitman, R., Burrows, D.G., Herman, D.P., and Pearce, R.W. In press. Use of chemical tracers to assess diet and persistent pollutants in Antarctic type C killer whales. *Mar. Mammal Sci.*

“Southern Resident” killer whales include three “pods” (J, K and L) that reside primarily in Puget Sound/Georgia Basin during the spring, summer and fall. This population was listed as “endangered” in the US and Canada following a 20% decline between 1996 and 2001. The current study, using blubber/epidermis biopsy samples, contributes contemporary information about potential factors (i.e., levels of pollutants or changes in diet) that could adversely affect Southern Residents. Carbon and nitrogen stable isotopes indicated J- and L-pod consumed prey from similar trophic levels in 2004/2006 and also showed no evidence for a large shift in the trophic level of prey consumed by L-pod between 1996 and 2004/2006. ΣPCBs decreased for Southern Residents biopsied in 2004/2006 compared to 1993–1995. Surprisingly, however, a three-year-old male whale (J39) had the highest concentrations of ΣPBDEs , ΣHCHs and HCB. POP ratio differences between J- and L-pod suggested that they occupy different ranges in winter. Reference: Krahn, M.M., Hanson, M.B., Baird, R.W., Boyer, R.H., Burrows, D.G., Emmons, C.K., Ford, J.K.B., Jones, L.L., Noren, D.P., Ross, P.S., Schorr, G.S. and Collier, T.K. 2007. Persistent organic pollutants and stable isotopes in biopsy samples (2004/2006) from Southern Resident killer whales. *Mar. Pollut. Bull.* 54:1903-1911.

Maternal transfer of persistent organic pollutants

The purpose of this study is to assess the dynamics of the transfer of persistent organic pollutants (POPs) from female delphinids to their young during gestation and lactation. These compounds, which include DDTs, PCBs, and PBDEs, have been linked to reduced immune system efficiency and reproductive failure in pinnipeds. Although the dynamics of POP transfer have been studied in some pinniped species, there have been no such studies in cetaceans. Due to the differences in life history strategies and behavior in pinnipeds compared to delphinids, a study on maternal contaminant transfer in a delphinid species is warranted. Using captive bottlenose dolphins, *Tursiops truncatus*, as a model, placenta, blood, and milk will be sampled from mother/calf pairs to assess 1) contaminant levels that are mobilized from the female to the calf during gestation, 2) contaminant levels that are mobilized from the female’s blubber into her blood and then into the milk during lactation, and 3) the deposition of contaminants from the female’s milk to her calf during the lactation period. The relationship between female body condition and the concentrations of POPs in the blood and milk samples will also be assessed. This analysis may shed light on how nutritional status of mothers may influence levels of contaminants that are transferred to their offspring. Sampling (blood and milk) was initiated on 4 mother/calf pairs in June 2007 within one month following birth. A second set of samples was collected when the calves were approximately 6 months of age, and a third set of samples will be collected near the time of weaning when the calves are approximately 1 year of age. (Contact: Dawn Noren, NWFSC)

Persistent organic pollutants and lipids in various cetaceans stranded in Puget Sound

We have completed analyses of samples from 50 animals collected by Cascadia Research Collective that stranded in Washington waters between 1987 and 2005. Species included gray, fin, minke, humpback, and sperm whale, Cuvier’s beaked whale, common dolphin, and harbor porpoise. All of these samples were analyzed for PBDEs as part of the suite of analytes, which will provide important time trend information regarding these contaminants in this geographic area. (Contact: John Calambokidis, Cascadia Research Collective)

Persistent organic pollutants and lipids in various cetaceans stranded on the California coast

We have completed analyses of samples from 15 animals from 6 species collected by Michelle Berman at the Santa Barbara Museum of Natural History that stranded in California waters between 2005 and 2007. Species included minke whale, killer whale (transient and offshore ecotypes), long- and short-beaked common dolphin, Dall’s and harbor porpoise. All of these samples were analyzed for PBDEs as well. More analyses from this project are anticipated. (Contact: Michelle Berman, Santa Barbara Museum of Natural History)

Levels of persistent organic pollutants and profiles of lipid classes in tissues of stranded cetaceans

As part of the NWFSC’s collaboration with the US Marine Mammal Health and Stranding Response Program, blubber samples of stranded cetaceans from various species collected by various U.S. West coast and Alaska

stranding networks were analyzed for a suite of persistent organic pollutants, and lipid profiles, and, if the quality of the sample permitted, fatty acid signatures and/or stable isotopes of carbon and nitrogen (in skin). If sufficient sample is available, several depths were analyzed to better understand differences in blubber strata. We have completed analyses of samples from stranded West coast transient killer whales from California and Alaska and Stejneger's beaked whales collected in Alaska between 2005 and 2007. (Contact: Gina Ylitalo, NWFSC)

Persistent organic pollutants and lipids in Irrawaddy dolphins from Cambodia

We have completed analyses of blubber samples from 5 Irrawaddy dolphins collected in Cambodia between 2004 and 2006. These necropsy samples were obtained by the Wildlife Conservation Society (Contact: Martin Gilbert) and sent to NWFSC by Stephen Raverty of the B.C. Animal Health Service, Canada. Samples were analyzed for persistent organic pollutants (including PBDEs), and for total lipid and lipid classes in blubber, and for stable isotopes of carbon and nitrogen in skin. (Contact: Gina Ylitalo, NWFSC)

6. STATISTICS FOR LARGE CETACEANS

6.1 Corrections to earlier years' statistics for large whales

None reported.

6.2 Direct catches of large whales (commercial, aboriginal and scientific permits) for the calendar year 2007

Species	Type of catch	Area/stock	Males	Females	Total landed	Struck and lost
Bowhead	Aboriginal	Alaska	17	24	41	22

6.3 Anthropogenic mortality of large whales for the calendar year

6.3.1 Observed or reported ship strikes of large whales (including non-fatal events)

AFSC, HIHWNMS, NWFSC

None reported.

PIFSC

Whale species	Sex	No.	Date	Location	Vessel type	Speed	Fate	How observed	Contact person/institute and refs
Humpback whale	U	1	02/06/05	Maui	PC	17 knots	X	Expedition Ferry captain called in collision	NMFS-MN-05-11-VC
Humpback whale	U	1	02/21/05	O'ahu	FV	U	I	Fishing vessel collision, NOAA Enforcement took report	NMFS-MN-05-16-VC
Humpback whale	U	1	02/25/05	O'ahu	Unknown	U	I	Anonymous owners called in collision	NMFS-MN-05-18-VC
Humpback whale	U	1	02/28/05	Maui	O	U	I	Struck by moderate size motor vessel,	NMFS-MN-05-21-VC

SWFSC

Whale species	Sex	No.	Date	Location	Vessel type	Speed	Fate	How observed	Contact person/ institute and refs
Fin whale	U	1	8 July 2005	California	U	U	I	At sea sighting, large gash in animal, photos available	Joe Cordaro, NMFS, Southwest Regional Office
Humpback whale	U	1	25 Feb 2005	Offshore of San Francisco, California	U	U	I	At sea sighting	Joe Cordaro, NMFS, Southwest Regional Office

6.3.2 Fishery bycatch of large whales

AFSC, HIIWNMS, NWFSC, SWFSC

None reported.

PIFSC

Whale species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact
Bryde's whale	U	1	3/08/05	N/A	D	<i>Tuna</i>	LLS	F	NMFS Observer Prog

7. STATISTICS FOR SMALL CETACEANS

7.1 Corrections to earlier years' statistics for small cetaceans

None reported.

7.2 Direct catches of small cetaceans for the calendar year 2006 and 2007

AFSC, HIIWNMS, NWFSC, PIFSC, SWFSC

None reported.

AFSC - DRAFT data provided by Kathy Frost, ABWC (Alaska Beluga Whale Committee)

2006

Species	Type of catch	Area/stock	Males	Females	Total landed	Struck and lost
White whale	aboriginal	Beaufort sea			5	NA
White whale	aboriginal	Chukchi sea			31	NA
White whale	aboriginal	E. Bering Sea			166	NA
White whale	aboriginal	Kuskokwim			9	NA
White whale	aboriginal	Bristol Bay			20	NA
White whale	aboriginal	Cook Inlet			0	0

2007

Species	Type of catch	Area/stock	Males	Females	Total landed	Struck and lost
White whale	aboriginal	Beaufort sea			40	NA
White whale	aboriginal	Chukchi sea			270	NA
White whale	aboriginal	E. Bering Sea			202	NA
White whale	aboriginal	Kuskokwim			10	NA
White whale	aboriginal	Bristol Bay			15	NA
White whale	aboriginal	Cook Inlet			0	0

7.3 Anthropogenic mortality of small cetaceans for the calendar year 2005**7.3.1 Observed or reported ship strikes of small cetaceans (including non fatal events)****AFSC, HIIWNMS, NWFSC, PIFSC, SWFSC**

None reported.

7.3.2 Fishery bycatch of small cetaceans**HIIWNMS, NWFSC**

None reported.

AFSC

Species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact
Dall's porpoise	U	2	10 Feb 13 Aug.	Bering Sea/Aleutian Is.	D	BSAI pollock trawl fishery	TBB	F	AFSC/NMML

PIFSC

Species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact
Risso's dolphin	U	1	02/28/05	N/A	I	Tuna	LL-Shallow	F	NMFS Observer Program
Short-finned pilot whale	U	1	03/21/05	N/A	I	Tuna	LL-Deep	F	NMFS Observer Program
Risso's dolphin	U	1	08/26/05	N/A	I	Tuna	LL-Deep	F	NMFS Observer Program
False killer whale	U	1	10/04/05	N/A	D	Tuna	LL-Deep	F	NMFS Observer Program
False killer whale	U	1	09/29/05	N/A	I	Tuna	LL-Deep	F	NMFS Observer Program
Unidentified cetacean	U	1	10/23/05	N/A	I	Tuna	LL-Deep	F	NMFS Observer Program
Blainville's beaked whale	U	1	11/06/05	N/A	I	Tuna	LL-Deep	F	NMFS Observer Program

SWFSC

Species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed?	Source or contact
Common dolphin, long-beaked	F	1	6 Dec. 2005	California	D	<i>Xiphias</i>	GND	F (fishery observer program)	Jim Carretta, NOAA NMFS Southwest Fisheries Science Center

Common dolphin, long-beaked	M	1	19 Dec. 2005	California	D	<i>Xiphias</i>	GND	F (fishery observer program)	Jim Carretta, NOAA NMFS Southwest Fisheries Science Center
Common dolphin, long-beaked	M	1	11 Nov. 2005	California	D	<i>Xiphias</i>	GND	F (fishery observer program)	Jim Carretta, NOAA NMFS Southwest Fisheries Science Center
Common dolphin, short-beaked	M	1	28 Sep. 2005	California	D	<i>Xiphias</i>	GND	F (fishery observer program)	Jim Carretta, NOAA NMFS Southwest Fisheries Science Center
Common dolphin, short-beaked	M	1	5 Nov. 2005	California	D	<i>Xiphias</i>	GND	F (fishery observer program)	Jim Carretta, NOAA NMFS Southwest Fisheries Science Center
Common dolphin, short-beaked	M	1	28 Nov. 2005	California	D	<i>Xiphias</i>	GND	F (fishery observer program)	Jim Carretta, NOAA NMFS Southwest Fisheries Science Center
Common dolphin, short-beaked	F	1	16 Jan. 2005	California	D	<i>Xiphias</i>	GND	F (fishery observer program)	Jim Carretta, NOAA NMFS Southwest Fisheries Science Center
Common dolphin, short-beaked	M	1	12 Dec. 2005	California	D	<i>Xiphias</i>	GND	F (fishery observer program)	Jim Carretta, NOAA NMFS Southwest Fisheries Science Center
Common dolphin, short-beaked	M	1	31 Dec. 2005	California	D	<i>Xiphias</i>	GND	F (fishery observer program)	Jim Carretta, NOAA NMFS Southwest Fisheries Science Center
Common dolphin, short-beaked	M	1	12 Dec. 2005	California	D	<i>Xiphias</i>	GND	F (fishery observer program)	Jim Carretta, NOAA NMFS Southwest Fisheries Science Center
Common dolphin, short-beaked	M	1	13 Dec. 2005	California	D	<i>Xiphias</i>	GND	F (fishery observer program)	Jim Carretta, NOAA NMFS Southwest Fisheries Science Center
Common dolphin, short-beaked	M	1	28 Dec. 2005	California	D	<i>Xiphias</i>	GND	F (fishery observer program)	Jim Carretta, NOAA NMFS Southwest Fisheries Science Center
Common dolphin, short-beaked	M	1	18 Dec. 2005	California	D	<i>Xiphias</i>	GND	F (fishery observer program)	Jim Carretta, NOAA NMFS Southwest Fisheries Science Center

8. STRANDINGS 2006**AFSC, HIHWNMS**

None reported.

NWFSC

The stranding network for the NWR is comprised of several regional stranding networks in Washington and Oregon. Coverage is not complete for all areas. The individual stranding networks respond to calls from the public, etc., and there is no directed monitoring.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Harbor porpoise	36	33	Kristen Wilkenson/ NOAA/NWR	Kristen.wilkenson@noaa.gov
Dall's porpoise	1	1	Kristen Wilkenson/ NOAA/NWR	Kristen.wilkenson@noaa.gov
Pacific White-sided dolphin	1	1	Kristen Wilkenson/ NOAA/NWR	Kristen.wilkenson@noaa.gov

PIFSC

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Humpback whale	7	2	David Schofield/NOAA PIRO	david.schofield@noaa.gov
Pygmy sperm whale	2	1	David Schofield/NOAA PIRO	david.schofield@noaa.gov
Spinner dolphin	1	2	David Schofield/NOAA PIRO	david.schofield@noaa.gov
Striped dolphin	1	0	David Schofield/NOAA PIRO	david.schofield@noaa.gov
Beaked whale	0	1	David Schofield/NOAA PIRO	david.schofield@noaa.gov
Pygmy killer whale	0	1	David Schofield/NOAA PIRO	david.schofield@noaa.gov
Bottlenose dolphin	1	0	David Schofield/NOAA PIRO	david.schofield@noaa.gov

SWFSC

Southwest Fisheries Science Center (SWFSC) responds to dead cetacean strandings along the San Diego coastline year round, whereas Sea World responds to live pinniped and cetacean strandings. SWFSC receives samples from cetaceans that expire during rehabilitation and those are included in this summary.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Long-beaked Common Dolphin	6	5	Kerri Danil, SWFSC	Kerri.Danil@noaa.gov
Short-beaked common dolphin	3	2	Kerri Danil, SWFSC	Kerri.Danil@noaa.gov
Right Whale Dolphin	1	1	Kerri Danil, SWFSC	Kerri.Danil@noaa.gov
Harbor porpoise	1	0	Kerri Danil, SWFSC	Kerri.Danil@noaa.gov
Gray whale	1	0	Kerri Danil, SWFSC	Kerri.Danil@noaa.gov
Humpback whale	1	0	Kerri Danil, SWFSC	Kerri.Danil@noaa.gov

9. OTHER STUDIES AND ANALYSES 2007

HIHWNMS, PIFSC

None reported.

AFSC

Arctic Issues

The AFSC contributed marine mammal-focused objectives towards the development of long-term collaborative international research efforts in the Arctic, as planned under the umbrella of the International Study of Arctic Change (ISAC), Study of Environmental Arctic Change (SEARCH), and the International Conference on Arctic Research Planning (ICARP) II Working Group 5 (Arctic margins and gateways) science plans. Further to long-term research goals, the AFSC contributed to the publication of a special peer-reviewed publication entitled *Arctic Marine Mammals and Climate Change*, published as *Ecological Applications*, Vol. 18, Issue 2 Supplement in April 2008.

A presentation entitled “Are gray whales and walrus responding to ‘tipping points’ in seasonal sea ice extent” given at the international 2008 Ocean Sciences Meeting (OSM) in March 2008 provided a baseline example of how marine mammals can act as sentinels of ecosystem alteration coincident with climate change in the arctic. This activity was followed on by participation in the BEST/BSIERP patch-dynamics cruise focused on investigation of changes in the northern Bering Sea coincident with loss of sea ice. Finally, with the funding from NOAA’s Science and Technology (S&T) division, an IPY study was initiated with science colleagues in Canada, Germany and Norway. The study calls for deployment of three autonomous recorders on existing oceanographic moorings in the northern Chukchi Sea (Chukchi borderland), central and eastern Fram Strait during summer 2008 (Contact: S. Moore, AFSC).

NWFSC

Humpback whale studies

Estimating ages of humpback whales using fatty acid profiles

The ability to age individual humpback whales (HW) and to estimate population age distributions is critical to accurate assessments of status and long-term viability. Existing methods of ageing large whales rely either on limited longitudinal sighting studies of individual whales from the birth year, or on relatively intrusive (or post-mortem) procedures to extract tissues suitable for age determination. Here, we describe a potential method for ageing live, free-ranging HW using relatively passive sampling techniques. Specifically, shallow blubber biopsy samples were obtained from known-age HWs from two distinct populations (North Atlantic, Gulf of Maine, n=39) and (North Pacific, Southeast Alaska, n=17) and analyzed for their fatty acid (FA) compositions. Of these, approximately one-half from each of the two populations had “exact” known ages, and one-half “minimum” ages. Multilinear FA-age models were then derived for these known-age whales and serve as the basis from which the age of unknown-age whales can be estimated. Four FA-age models were developed, including one for each HW population analyzed separately, and an additional two by combining both populations into a single dataset and deriving models based on exact known-age and exact plus minimum known-age whales independently. Each of these empirical models was based on a linear combination of FA ratios (two specific FA ratios per model) rather than their individual FA compositions and appeared to be largely independent of sex, diet and nutritional status. Although the precisions of these specific models were somewhat variable, these preliminary results suggest that it may be possible to estimate the age of an individual HW with better than decadal resolution using this approach. Moreover, with further analyses and testing, it is conceivable that when the data reported herein are supplemented by FA data for additional known-age HWs inhabiting widely distant populations, a single updated FA-age model can be derived allowing HW age to be estimated over broader expanses of the globe.

These data will be presented to the IWC Scientific Committee at the 2008 meeting in Santiago, Chile, in June. (Contact: David Herman, NWFSC)

Evaluating body condition of humpback whales using lipid content and classes

In collaboration with Jooke Robbins of the Provincetown Center for Coastal Studies, NWFSC will study body condition in humpback whales from the Gulf of Maine using lipid content and profiles, which will be used to assess population impacts. A large number of biopsy samples are collected from this population every year, and there is a great deal of demographic data on the population. Approximately 60 analyses have been completed so far. Differences in lipid profiles of biopsy samples will be evaluated by season, sex, age class, and sampling location. (Contact: Gina Ylitalo, NWFSC)

Persistent organic pollutants, fatty acids, and lipid classes in biopsy samples of humpback whales

On Wednesday, May 9, 2007, two humpback whales were seen off of Benicia, near San Pablo Bay, California. It was confirmed these were a cow and calf pair, and that both had laceration injuries. The pair spent several weeks in the Sacramento River, and efforts were made during this time to evaluate their injuries, administer antibiotics, and lure them back out to sea using recorded calls. Biopsy samples were collected on each animal (the cow on May 21 and the calf on May 29), and the pair apparently returned to the sea sometime on May 30. Biopsy samples were analyzed for persistent organic pollutants, total lipid, and lipid classes. (Contact: Gina Ylitalo, NWFSC)

A graduate student project (Christiane Elfes, University of Washington, MS Thesis) to measure levels of persistent organic pollutants, fatty acids and lipid classes in blubber biopsies of male humpbacks from various populations (~ 100 samples, representing 10 animals from each of 10 feeding areas) has been mostly completed, using samples obtained from the SPLASH Program. (Contact: Christiane Elfes, University of Washington)

Southern Resident killer whales studies

Energetics studies

A study was conducted in 2005 to measure the energetic cost of surface active behaviors (breaches, tail slaps, etc.) that can be performed in response to vessel disturbance. To accomplish this, oxygen consumption of two trained bottlenose dolphins was measured using flow-through respirometry following bouts of surface active behaviors (tail slaps and breaches) that have been performed by cetaceans in response to disturbance by vessels. In order to assess how the number of successive behaviors performed in a bout affects metabolism, oxygen consumption following both low intensity bouts of breaches (n=5 breaches in a row) and high intensity bouts of breaches (n=10 breaches in a row) were measured. Data are currently being analyzed. Analysis of respiration rates data in 2007 and visual inspection of the respirometry data show that bouts of breaches are energetically more expensive than bouts of tail slaps. Although tail slaps increase metabolism over resting values, these increases are not as significant as the increase in metabolism caused by breaches. These data in combination with field behavioral studies of cetacean vessel interactions (e.g., Southern Resident killer whales, see below) will allow us to assess whether cetaceans incur increased energetic costs in the presence of vessels. By knowing the metabolic cost of these behaviors, we will better understand the potential for vessel disturbance to increase energetic requirements (e.g., prey consumption) and the potential impact to individuals. (Contact: Dawn Noren, NWFSC)

A study was conducted to determine the energetic cost of transport in killer whales. Data on average swimming speed and respiration rates collected from adult Northern Resident killer whales (data from Rob Williams) were used in combination with published values of oxygen consumption in captive killer whales (Kriete 1995) to determine cost of transport (COT) curves over a range of speeds (up to approximately 3.0 ms^{-1}) for adult male and female killer whales. The results show that killer whales can swim efficiently over a range of speeds, but that the optimum travel speed, corresponding to the speed with the minimum cost of transport, ranges between $2.6\text{-}3.0 \text{ ms}^{-1}$. This is similar to the average travel speed (2.9 ms^{-1}) of Northern Resident killer whales reported by Ford (1989). Finally, females with calves aged 0-2 years old have higher respiration rates than females without calves. As a result, the calculated COT for females with calves is greater than females without calves. This result could be due to a potential higher energetic cost to females with calves travelling in echelon or it could be an artifact of females surfacing more frequently to maintain contact with their calves, which have reduced breath-hold capabilities. A draft of this paper (Williams, R. and Noren, D.P.) is currently in revision in Marine Mammal Science. (Contact: Dawn Noren, NWFSC)

A study was conducted to determine the daily prey energetic needs for the Southern Resident killer whale population. Body mass, daily energy expenditure, and daily prey energetic needs were estimated for all age and sex-classes in the Southern Resident killer whale population. Results for the predicted daily energy expenditure in adult male and female killer whales agreed with the daily energy expenditure calculated from the energetic cost of transport at specific swimming speeds (from above study) and a daily activity budget that included average swimming speeds for various behaviours and the percentage of time engaged in the behaviours (e.g., foraging, travelling, resting, socializing, and beach-rubbing; from Ford 1989). A draft of this paper has been completed and submitted to the NOAA Northwest Regional office to inform biological opinions on salmon fisheries. (Contact: Dawn Noren, NWFSC)

Vessel interactions and noise effects on Southern Resident killer whales

Several research projects focusing on vessel interactions with Southern Resident killer whale have been conducted from 2004-2006. Here we only report on updates on studies that were conducted in 2004-2006. The first study investigates the energetic costs to killer whales in the response to vessels. Preliminary results (data analyzed from 2003-04) suggest that in adult male killer whales surface durations following dives decrease when

the number of vessels increases, but this relationship plateaus when a greater number of vessels (approximately 15) are present. Data analysis on diving parameters, surface active behaviors, and swimming speed are still underway. Concurrent with this study, killer whale group behavior data were collected on 2006 to examine geographic locations where different behavior states (rest, travel, forage, and socialize) occur and how the diving parameters, swim speeds, spatial arrangement (flank, linear, nonlinear), and proximity (contact, tight, loose, spread) of individual whales in a group relate to these behaviors and geographic location. GIS analyses of these data were completed in 2007, and draft papers are being prepared for submission to a scientific journal. In another study, data from 2005 were combined with data from a project conducted in 2006 to investigate the occurrence of surface active behaviors relative to vessel distances and mode of operation. The highest frequency of surface active behaviors (SABs) occurred when the nearest vessel was within 75-99 meters and 125-149 meters of the focal whale in 2005 and 2006, respectively. In both years, approximately 70% of all SABs occurred when the closest vessel was within 224 meters of the whale. Furthermore, the majority of SABs were performed immediately prior to or soon after the closest approach by a vessel and while the vessel was motoring. These results suggest that close approaches by vessels elicit behavioral responses in SRKWs and that the minimum approach distance of 100 m in whale-watching guidelines may be insufficient in preventing behavioral responses from whales. A draft paper describing the relationship between close approaches and SABs is complete and will be submitted to *Journal of Zoology*, London by April or May 2007. (Contact: Dawn Noren, NWFSC)

Investigating noise effects on the acoustic signals of Southern Resident killer whales

In 2007, vocal compensation was investigated in SRKW calls and biosonar signals to determine the degree to which whales can adjust to increased background noise levels. In addition, whale and vessel behavior data are also collected to determine what contribution vessel traffic has on noise levels and how noise levels influence whale behavior. A preliminary study was conducted using previously collected data from a shore-based hydrophone array. Results demonstrated a significant positive relationship between call source level and background noise levels. Due to sample size limitations, the analysis could not be broken down by call type. In the summer 2007, over 1600 calls were recorded from SRKWs. Most of these calls were from encounters with one pod (J pod). Approximately 275 calls were localized to determine call (apparent) source levels. Preliminary results corroborated the previous results, showing that SRKWs adjusted the level of their calls as background levels fluctuate. Call data were broken down by call type (S1, the predominate call of J pod, N = 103) and results illustrated that for every 1 dB increase in background levels, the whales increased their call source level by 1 dB. (Contact: Marla Holt, NWFSC)

Annual southern resident killer whale survey

The annual photo-identification survey was conducted to document all individual Southern Resident killer whales present in the population in late spring and early summer each year. This is the continuation of the long-term monitoring effort (since mid-1970s) that reports the presence or absence of individuals for demographic and population dynamics studies. (Contact: Ken Balcolmb, Center for Whale Research)

Distribution and habitat of southern resident killer whales

Studies on winter and summer distribution of Southern Resident killer whales were continued in 2007. Additional sightings of killer whales off the U.S. west coast during the winter were obtained through continuation of the coast-wide sighting network. Opportunistic sightings are obtained from fisherman, the general public, fishery observers and other scientists. Southern resident killer whales were again sighted in California waters in 2007.

Results of passive acoustic recorders deployed in winter 2007 off the Washington coast have yet to be analyzed. This study continues in 2008. (Contact: Brad Hanson, NWFSC)

Southern Resident killer whale foraging and prey

Prey remains were collected on 40 days in 2007 in conjunction with behavioral cues of predation events for Southern Resident killer whales. Of fish remains collected, Chinook were predominant in summer. This species was also predominant in fecal material collected during this season. Genetic analyses of Chinook identified from scales and tissue were primarily from the Fraser River. (Contact: Brad Hanson, NWFSC)

NWFSC

False killer whale and harbour porpoise stock structure studies using genetic markers. Publications listed under 11.

Bottlenose dolphin geographical variation in skull morphology on U.S. west coast, identifying coastal and offshore specimens with DNA extracted from teeth of museum specimens.

10. LITERATURE CITED

HIHWNMS, NWFSC, PIFSC, SWFSC

None reported.

AFSC

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11. PUBLICATIONS

11.1 Published or 'In Press' papers only

HIHWNMS, PIFSC

None reported.

AFSC

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None reported.

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