

USA Progress Report on Cetacean Research, October 1997 to April 1998

The following information summarizes cetacean research conducted or supported from October 1997 to April 1998 by the U.S. National Marine Fisheries Service at Silver Spring, Maryland (NMFS HQ), and by the five NMFS Science Centers; Alaska Fisheries Science Center (AFSC), Northwest Fisheries Science Center (NWFSC), Seattle, Washington; Southwest Fisheries Science Center (SWFSC), La Jolla, California, Northeast Fisheries Science Center (NEFSC), Woods Hole, Massachusetts; and the Southeast Fisheries Science Center (SEFSC), Miami, Florida. Information was also contributed by the Alaska Department of Fish and Game (ADFG), Anchorage, Alaska, the Alaska Beluga Whale Committee (ABWC), and the North Slope Borough (NSB), Barrow, Alaska, and the National Museum of Natural History (NMNH), Smithsonian Institution, Washington, DC. The information was compiled, in consultation with the above agencies, by Janeen Quintal, Northeast Fisheries Science Center, Woods Hole, MA, 02543 USA.

U.S.A. Atlantic and Gulf of Mexico Waters

SPECIES AND STOCKS STUDIED

Common Name	Scientific Name	Area/Stock(s)
Atlantic white-sided dolphin	<i>Lagenorhynchus acutus</i>	western N. Atlantic
Beaked whale	<i>Mesoplodon sp.</i>	western N. Atlantic, Gulf of Mexico
Bottlenose dolphin	<i>Tursiops truncatus</i>	western N. Atlantic, Gulf of Mexico
Common dolphin	<i>Delphinus delphis</i>	western N. Atlantic
Dwarf sperm whale	<i>Kogia simus</i>	Gulf of Mexico
Fin whale	<i>B. physalus</i>	western N. Atlantic
Goose-beaked whale	<i>Ziphius cavirostris</i>	western N. Atlantic
Harbor porpoise	<i>Phocoena phocoena</i>	western N. Atlantic
Humpback whale	<i>Megaptera novaeangliae</i>	western N. Atlantic
Minke whale	<i>B. acutorostrata</i>	western N. Atlantic
Pilot whale	<i>Globicephala sp.</i>	western N. Atlantic, Gulf of Mexico
Right whale	<i>Balaena glacialis</i>	western N. Atlantic
Risso's dolphin	<i>Grampus griseus</i>	western N. Atlantic, Gulf of Mexico
Sperm whale	<i>Physeter macrocephalus</i>	western N. Atlantic, Gulf of Mexico
Striped dolphin	<i>S. coeruleoalba</i>	western N. Atlantic, Gulf of Mexico

SIGHTINGS DATA

NEFSC conducted a marine mammal sighting survey on the R/V Delaware from 06 - 27 March 1998. The cruise covered waters between Cape Lookout, NC and the southern edge of Georges Bank during about 1400 nmi of track lines. The following marine mammal species were sighted: harbor porpoises, common, spotted, white-sided, and risso's dolphins, and humpback, fin, pilot, minke beaked, sperm and sei whales (Contact: D. Palka).

STATISTICS FOR LARGE CETACEANS

Non-natural (e.g., ship strike, entanglement) mortalities for calendar year 1995 as reported in Waring et al. 1997. N/A = information not available.					
Species	Area/Stock	Males	Females	Total	Cause/Methodology
<i>Eubalaena glacialis</i>	Rhode Island	1		1	beached, mortality, line through mouth, embedded deeply right flipper - prob. entangle.
<i>Eubalaena glacialis</i>	Long. Island NS	1		1	beached, mortality, wound in back, spine damaged. - prob. ship strike
<i>Megaptera novaeangliae</i>	No. Carolina	N/A	N/A	1	stranded dead with gear wrapped around tail, prob. entangle.
<i>Megaptera novaeangliae</i>	Virginia Beach		1	1	dead, floating off inlet, lacerations along peduncle, prob. ship strike
<i>Balaenoptera acutorostrata</i>	Canadian/east coast	N/A	N/A	4	incidental mortality in pelagic drift gillnet fishery
<i>Balaenoptera physalus</i>	So. Carolina	N/A	N/A	1	Shipstrike
<i>Megaptera novaengliae</i>	No. Carolina	N/A	N/A	2	Pelagic Driftnet; Gillnet entanglement.
<i>Mesoplodon europaeus</i>	N/A	N/A	N/A	1	Plastic ingestion
<i>Ziphius cavirostris</i>	So. Carolina	N/A	N/A	1	Plastic ingestion

STATISTICS FOR SMALL CETACEANS (Not Strandings)

Incidental catches for the calendar year 1995 as reported in Waring et al. 1997. N/A = information not available.				
Species	Area/Stock	Incidental Mortality		
		Reported	Est. Total ¹	Fishery type
<i>Kogia simus</i>	W. No. Atl.	1	1	Pelagic drift gillnet
<i>Globicephala melas</i>	W. No. Atl.	9	9	Pelagic drift gillnet
		12	22	pelagic pair trawl
<i>Lagenorhynchus acutus</i>	W. No. Atl	2	80	NE multispecies sink gillnet
<i>Tursiops truncatus</i>	W. No. Atl offshore	5	5	Pelagic drift gillnet
		9	17	Pelagic pair trawl
<i>Stenella coeruleoalba</i>	W. No. Atl	2	2	Pelagic drift gillnet
<i>Delphinus delphis</i>	W. No. Atl	82	83	Pelagic drift gillnet
		3	6	Pelagic pair trawl
		1	N/A	Mid-Atl. coastal gill.
		3	142	No. Atl. bottom trawl
<i>Grampus griseus</i>	W. No. Atl.	N/A	N/A	N/A
<i>Phocoena phocoena</i>	Gulf of Maine/Bay of Fundy	43	1400	NE multispecies sink gillnet
		6	N/A	Mid-Atl. coastal gill.
<i>Ziphius and Mesoplodon spp.</i>	W. No. Atl	9	9	Pelagic drift gillnet
<i>Globicephala sp.</i>	Atlantic	N/A	N/A	Longline
<i>Tursiops truncatus</i>	Atlantic, Gulf of Mexico	N/A	N/A	N/A

¹ rounded to the nearest whole number

U.S.A. Pacific Waters

SPECIES AND STOCKS STUDIED

Common Name	Scientific Name	Area/Stock(s)
Beluga whale	<i>Delphinapterus leucas</i>	Alaska, N. Pacific
Bowhead whale	<i>B. mysticetus</i>	Alaska, western U.S. Arctic
Dall's porpoise	<i>Phocoenoides dalli</i>	California, Washington, N. Pacific
Gray whale	<i>Eschrichtius robustus</i>	California, Washington, northwest Pacific
Harbor porpoise	<i>Phocoena phocoena</i>	Alaska, eastern N. Pacific
Killer whale	<i>Orcinus orca</i>	Alaska, British Columbia, California, eastern tropical Pacific
Long-beaked common dolphin	<i>Delphinus delphis</i>	California/Oregon/Washington
Pacific white-sided dolphin	<i>L. obliquidens</i>	California, eastern tropical Pacific, N. Pacific
Right whale	<i>Balaena glacialis</i>	N. Pacific
Short-beaked common dolphin	<i>Delphinus capensis</i>	California/Oregon/Washington

SIGHTINGS DATA

FIELD WORK

Gray Whales

From 13 Dec 1997 to 24 Feb 1998, AFSC conducted counts of gray whales migrating past Granite Canyon, California. Severe storms and road damage stopped the primary effort on 2 Feb, but an alternate site was used 11 -24 Feb to continue documentation of the seasonal trends in sighting rates. (Contact: D. Rugh)

AFSC conducted ninety-three vessel surveys of gray whales from 31 May to 21 November 1997 along the north-western coast of Washington, the Strait of Juan de Fuca, and off the southwest coast of Vancouver Island, Canada. The surveys covered 1858 nautical miles during which 162 gray whales were sighted and 123 gray whales were photographed for identification. Approximately 69 per cent of the whales were seen in the Strait of Juan de Fuca and 28 per cent were seen on the northwest coast of Washington. (Contact: M. Gosho)

Harbor Porpoise

AFSC conducted an aerial survey of harbor porpoise in coastal waters, to the 200 m isobath, of Oregon, Washington, and Southern British Columbia to 49° N between 15 Aug and 9 Sep 1997. During 5,396 km of survey effort 703 harbor porpoise were observed in 360 groups. (Contact: J. Laake)

ANALYSES/DEVELOPMENT OF TECHNIQUES

From 7-23 January 1998, AFSC continued a study of pod size estimates made during counts of gray whales migrating past Granite Canyon, California (Rugh et al. 1997). Pairs of observers selected whale pods and documented their sighting locations as the whales moved through the viewing area. There were 219 track records collected (86 in 1998), and of these, 74% were considered excellent to fair records. There has been a total of 133 groups of whales recorded both by trackers and by observers on the standard watch. This resulted in 237 pair-wise comparisons of pod size estimates (Contact: D. Rugh).

MARKING DATA

NATURAL MARKING DATA

Photo-identification surveys of gray whales were conducted by AFSC from late May to November, 1997 for gray whales which use spring and summer feeding grounds in the Strait of Juan de Fuca, along the northwest coast of Washington, and off the southwest coast of Vancouver Island, British Columbia. Of the 162 gray whales which were sighted during these surveys, 123 were photographed for later identification. Blubber biopsy samples were collected from 9 whales for contaminant analysis and sex determination (Contact: M. Gosho)

TELEMETRY DATA

Species	Area/Stock	Tag Type	No. Deployed	Contact Person/Institute
<i>Phocoenoides dalli</i>	Washington State	VHF	3	B. Hanson

In May 1997, five Dall's porpoise were captured by AFSC personnel with break-away hoopnets while porpoises were bow-riding on a small vessel in Haro Strait, Washington State. Two of the porpoises were released unharmed without tags and three had low-drag design VHF tags pinned to their dorsal fin for long-term monitoring as well as having a suction-cup attached time-depth recorder/VHF radio tag placed for short-term collection of dive and velocity data. Signals were obtained for only about 5 days for each tagged porpoise. Twenty-three hours of suction-cup attached TDR data, totaling 4,208 dives were collected. All three Dall's porpoises dove in excess of 190 m. Despite occasional deep dives, each individual typically spent 40-90% of their time (depending on time of day) in the upper 10 m of the water column. (Contact: B. Hanson)

STATISTICS FOR LARGE CETACEANS

Direct catches (commercial, aboriginal and scientific permits) for calendar year 1997. Catch data for bowhead whales are reported by NSB and catch data for beluga whales are reported by ADFG and ABWC (Contact: K. Frost, ADFG and B. Mahoney, NMFS AK)					
Species	Type of	Area/stock	Total landed	Struck &	Total
<i>Balaena mysticetus</i>	Aboriginal	Bering-Beaufort-Chukchki Seas	48	18	66
<i>Delphinapterus leucas</i>	Aboriginal	Beaufort Sea	43	26-30	69-73
		Chukchi Sea	8	2	10
		E. Bering Sea	124-136	19-32	143-168
		Kuskakwim Delta	0	0	0
		Bristol Bay	11	0	11
		Cook Inlet stock	35	35	70
		Total	221-233	82-99	303-332

EARLIER YEARS' STATISTICS

The following updates previously reported aboriginal catch statistics for beluga whales.

Beluga whale subsistence harvest estimates by calendar year - 1994 -1996.
 + indicates lower bound; N/A = data not available.

1994				
Species	Stock	Landed	Struck & Lost	Total
<i>Delphinapterus leucas</i>	Beaufort Sea	62	1+	63+
	Chukchi Sea	63	3+	66+
	E. Bering Sea	110-116	9	119-125
	Kuskokwim Delta	6	1+	7+
	Bristol Bay	16	2	18
	Cook Inlet	19	2	21
	Total	276-282	18+	294-300+
1995				
Location	Landed	Struck & Lost	Total	
Beaufort Sea	44	N/A	44	
Chukchi Sea	37	6	43	
E. Bering Sea	48-50	6	54-56	
Kuskokwim Delta	2	N/A	2	
Bristol Bay	6	4	10	
Cook Inlet	50	22	72	
Total	187-189	38	225-227	
1996				
Location	Landed	Struck & Lost	Total	
Beaufort Sea	22	18	40	
Chukchi Sea	118	7	125	
E. Bering Sea	96-103	16	112-119	
Kuskokwim Delta	2	0	2	
Bristol Bay	17-18	1	18-19	
Cook Inlet	49	49-98	98-147	
Total	304-312	91-140	395-452	

STATISTICS FOR SMALL CETACEANS (Not Strandings)

Incidental Catches for the calendar year 1995 as reported in Hill et al. 1997 and Barlow et al. 1997.				
Species	Area/Stock	Incidental Mortality		
		Reported	Est. Total	Fishery type
<i>Phocoena phocoena</i>	Bering Sea	1	1	Groundfish Trawl
<i>Phocoenoides dalli</i>	Bering Sea	2	3	Groundfish Trawl
<i>Phocoenoides dalli</i>	Bering Sea	1	4	Groundfish Longline
<i>Phocoenoides dalli</i>	Bering Sea	0	0	Groundfish Jig
<i>Lagenorhynchus obliquidens</i>	Bering Sea	1	4	Groundfish Longline

<i>Orcinus orca</i>	Bering Sea	1	N/A	Groundfish Longline
<i>Phocoena phocoena</i>	Central California	-	141	set gillnet
<i>Phocoena phocoena</i>	Oregon/Washington Coast	20	20	set gillnet
<i>Phocoenoides dalli</i>	California/Oregon/Washington	1	6	drift gillnet
<i>Lagenorhynchus obliquidens</i>	California/Oregon/Washington	1	6	drift gillnet
<i>Grampus griseus</i>	California/Oregon/Washington	6	39	drift gillnet
<i>Delphinus delphis</i>	California/Oregon/Washington	36	231	drift gillnet
<i>Delphinus capensis</i>	California/Oregon/Washington	6	39	drift gillnet
<i>Lissodelphis borealis</i>	California/Oregon/Washington	9	58	drift gillnet

¹ The California set gillnets were not observed after 1994; mortality was extrapolated from effort estimates and previous entanglement rates.

OTHER STUDIES AND ANALYSES

Field tests were continued by AFSC on the effectiveness of acoustic alarms (pingers) in reducing the incidental catch of harbor porpoise in a salmon gillnet fishery in northern Washington in July and August of 1997. All nets were alarmed and remained in place for a 6-week period to examine the potential for habituation. Nets were typically checked daily. (Contact: P. Gearin)

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