

## STRANDINGS AND FISHING GEAR ENTANGLEMENTS OF CETACEANS OFF THE WEST COAST OF CANADA IN 1995

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### ABSTRACT

Forty-two records of cetaceans which stranded or collided with fishing gear in 1995 in British Columbia (BC), Canada, are presented. The number of records likely represents a small proportion of the total number of cetacean strandings and incidental catches which occurred during the year. Eight species are represented out of the 35 records for which positive identification was obtained, the most commonly recorded species being harbour porpoise (Phocoena phocoena) and Dall's porpoise (Phocoenoides dalli). A record of a dead stranded striped dolphin (Stenella coeruleoalba) is the 13th recorded occurrence of the species in BC waters. Other species recorded stranding during 1995 include gray whale (Eschrichtius robustus), killer whale (Orcinus orca), humpback whale (Megaptera novaeangliae), and Pacific white-sided dolphin (Lagenorhynchus obliquidens). The only record identified as an incidental catch was of a Dall's porpoise entangled in fishing gear near Prince Rupert.

### INTRODUCTION

Analysis of stranded or incidentally caught animals can provide information on a variety of parameters not easily or impossible to obtain from their living counterparts. The Stranded Whale and Dolphin Program of BC (SWDP), established in 1987, monitors and responds to whale, dolphin and porpoise strandings and fishing gear entanglements throughout the province. The number of records, the species involved, and the geographic and seasonal distribution of records is monitored by the volunteer program. The program attempts to maximize the research use of each animal through detailed necropsies and tissue collection, from which a variety of information may be obtained, including: causes of mortality, feeding habits, reproductive parameters, parasite loads, contaminant levels, and variability in the above by sex, season, and location.

This ninth annual report summarizes records collected through the SWDP of cetacean strandings and incidental catches on the Canadian west coast during 1995. The objectives of this report are to: (i) summarize records obtained during 1995; (ii) encourage further research use of this information; (iii) encourage reporting of future records; and (iv) briefly discuss records of particular interest and information on incidental mortality of cetaceans in BC derived through the SWDP.

## METHODS

The SWDP relies on reports from researchers and the general public of cetaceans which are found dead, live-stranded, or caught incidentally during fishing operations. Non-fishery related events are hereafter referred to as stranding records. To encourage the public to report both current and historical events, a province-wide toll-free number (1-800-665-5939) was set up for this purpose, as well as to collect information on cetacean sightings.

Information initially recorded from stranded and incidentally caught animals include the date and location of the event, the type of event, and description and condition of the animal(s), as well as sex, standard length (American Society of Mammalogists, 1961), and weight where possible. If the carcass is not recovered, efforts are made to have it marked for future identification, reducing the possibility of duplicate records. Photographs are also requested, supplementing verbal descriptions of the animal(s) as well as allowing for future matching of records.

Whenever feasible, complete necropsies are performed with a veterinarian in attendance. External morphometrics and blubber thicknesses are recorded, and all animals are examined for signs of potential entanglement in fishing gear, as described by Hare and Mead (1987). Teeth are collected to estimate age, ovaries and the uterus are examined for signs of past or current pregnancies, mammary glands are examined for the presence of milk, and testes are examined histologically for the presence of sperm. Stomach contents and parasites are also collected and identified. Tissue samples from most animals are collected for histological and toxicological analysis by the BC Provincial Ministry of Agriculture, Fisheries and Food and Zenon Environmental Laboratories. Samples are also collected for a tissue archive and for various other studies. In addition, skulls, teeth, and axial skeletons are collected for various educational or research collections.

## RESULTS AND DISCUSSION

Forty-two incidents of stranded or incidentally entangled cetaceans were recorded in 1995 (Table 1). Locations of events are provided in Figure 1. From the program's inception in 1987 to 1993, the number of records reported each year increased; however, in both 1994 and 1995, the numbers were lower than reported in the previous year. This drop likely reflects a decrease in sightings and/or reportings to the SWDP, rather than an actual decrease in the number of strandings and incidental catches. It is likely that many records are not reported, as most records are reported by only one source and many are received days to months after the event. Awareness of the program's activity presumably has yet to reach full potential among those liable to encounter stranded or incidentally caught animals. In addition, much of B.C.'s coastline is rocky, far from populated areas, and relatively inaccessible. This decreases the likelihood that dead animals will be cast and remain ashore, and be subsequently encountered within the short period of time that most such animals remain recognizable, being exposed to scavengers and the elements. These limitations likely result in only a small proportion of stranded animals being reported to the program.

Eight different species were positively identified out of the 42 records. These include 15 harbour porpoises (*Phocoena phocoena*), 6 Dall's porpoises (*Phocoenoides dalli*), 4 gray whales (*Eschrichtius robustus*), 3 killer whales (*Orcinus orca*), 3 humpback whales (*Megaptera novaeangliae*), 3 Pacific white-sided dolphins (*Lagenorhynchus obliquidens*), and

1 striped dolphin (*Stenella coeruleoalba*). The remaining 7 records were not positively identified to species; 4 of which being large whales, 2 being unidentified porpoises, and 1 being an unidentified small cetacean.

All species recorded in 1995 have been recorded previously in B.C. waters; however, striped dolphins are uncommon visitors, having been recorded only 12 times previously (Baird et al. 1993). In December, a dead female striped dolphin was found dead on Wickaninnish Beach, Vancouver Island. Prior to this event, the most recent striped dolphin record consisted of a stranded male from Graham Island in 1990 (Baird et al. 1993).

The only record identified as an incidental catch in 1995 consisted of a female Dall's porpoise entangled off Prince Leboos Island, near Prince Rupert. Since the program's inception, at least a few incidental catches have been reported each year, even in years in which fewer records were obtained than in 1995 (c.f. Baird et al. 1994, Guenther et al. 1995.). As evidence of entanglement is usually apparent only in fresh animals, it is unlikely that all incidentally caught animals are identified as such.

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Table 1. Cetacean "strandings" and incidental catches from 1995. (VI = Vancouver Island).

NUMBER <sup>1</sup>	DATE <sup>2</sup>	SPECIES <sup>3</sup>	LOCATION	COMMENTS <sup>4</sup>
SWDP95-01	14 February 1995	harbour porpoise	Esquimalt Lagoon, VI	C,1,4,5,7-10,13-17,m,117.9cm,RBCM
SWDP95-02	20 February 1995	unidentified large whale	b/n Cape Naden and Shag Rock	C,D,u
SWDP95-03	7 April 1995	Dall's porpoise	Race Rocks	C,1,4,5,7-10,13-17,m,188.4cm,UVIC
SWDP95-04	9 April 1995	Dall's porpoise	Island View Beach, VI	C,1,2,4,5,7-10,13-17,f,141.4cm
SWDP95-05	8 April 1995	gray whale	Winter Harbour, VI	C,10,17,u
SWDP95-06	21 April 1995	harbour porpoise	Clover Point, VI	C,1,2,4,5,7-10,13-17,m,117.8cm,RBCM
SWDP95-07	14 April 1995	gray whale	Jordan River, VI	C,D,u
SWDP95-08	21 April 1995	harbour porpoise	Howe Sound	C,1,4,5,7-10,13-17,u
SWDP95-09	15 May 1995	Dall's porpoise	Ten Mile Point, VI	C,1,2,4,5,7-10,13-17,m,136.0cm,RBCM
SWDP95-10	18 May 1995	harbour porpoise	Clover Point, VI	C,1,2,4,5,7-10,13-17,f,125.3cm,RBCM
SWDP95-11	29 April 1995	Dall's porpoise	Constance Bank	C,D,u
SWDP95-12	April/May 1995	killer whale	Langara Island	C,2
SWDP95-13	30 May 1995	harbour porpoise	Fleming Beach, VI	C,1,2,4,5,7-10,13-17,f,129.2cm,RBCM
SWDP95-14	26 June 1995	Dall's porpoise	Trial Island	C,D,4,u
SWDP95-15	04 July 1995	humpback whale	off Quatsino Sound, VI	C,D,2,u
SWDP95-16	10 July 1995	gray whale?	off Winter Harbour, VI	C,D,u
SWDP95-17	12 July 1995	Dall's porpoise	Prince Leboos Island	A,1,2,4,5,7-10,13-17,f,162.8cm
SWDP95-18	13 July 1995	harbour porpoise	Stories Beach, VI	C,1,2,4,5,7-10,13-17,f,158.6cm
SWDP95-19	21 July 1995	harbour porpoise	Trial Island	C,1,2,4,5,7-10,13-17,f,152.1cm,MC
SWDP95-20	24 July 1995	harbour porpoise	N of Parksville, VI	C,1,2,4,5,7-10,13-17,f,149.0cm,MC
SWDP95-21	30 July 1995	Pacific white-sided dolphin	Boat Bay, W Cracroft I	C,1,2,4,5,8-10,13-17,f,179.4cm,UVIC
SWDP95-22	31 July 1995	harbour porpoise	Crescent Beach, White Rock	C,D,u <100cm
SWDP95-23	31 July 1995	gray whale	Boundary Bay	C,D,u
SWDP95-24	25 July 1995	unidentified porpoise	Tsecowis Creek, VI	C,D,u
SWDP95-25	June 1995	gray whale	Kitasu Bay	C,D,u
SWDP95-26	08 July 1995	killer whale	Hippa Island	C
SWDP95-27	17 August 1995	harbour porpoise	Ogden Point, VI	C,1,2,4,7,8,14,15,f,90.1cm,RBCM
SWDP95-28	summer 1995	harbour porpoise	Blunden Channel	C,1,2,4,7-10,13-17,f,91.0cm
SWDP95-29	25 September 1995	harbour porpoise	Friendly Cove, Nootka Island	C,1,2,4,7-10,13-17,f,=100.4cm
SWDP95-30	06 October 1995	harbour porpoise	Green Point, VI	C,1,2,4,7-10,13-17,f,103.2cm
SWDP95-31	20 October 1995	harbour porpoise	Shelter Point, VI	C,1,2,4,7-10,13-17,u,191.2cm,MC
SWDP95-32	02 May 1995	unidentified large whale	100 mi W Port Renfrew, VI	C,D,u
SWDP95-33	mid July 1995	unidentified large whale	Brooks Peninsula, VI	C,D,u
SWDP95-34	mid July 1995	harbour porpoise	Brooks Peninsula, VI	C,D,u
SWDP95-35	end October 1995	Pacific white-sided dolphin	N end Johnstone Strait	C,D,u
SWDP95-36	12 December 1995	killer whale	Texada Island	C,1,2,4,f
SWDP95-37	17 December 1995	striped dolphin	Wickaninnish Beach, VI	C,1,2,4,7-10,13-17,f,205.4cm,MMRG
SWDP95-38	19 July 1995	unidentified small cetacean	Rose Island	C,D,u
SWDP95-39	6 August 1995	humpback whale	2 mi W Engelfield Bay, Moresby Island	C,D,u
SWDP95-40	12 August 1995	humpback whale	NE end Langara Island	C,D,u
SWDP95-41	10 May 1995	Pacific white-sided dolphin	Lanz Island, Scott Islands	C,4,u
SWDP95-42	19 May 1995	harbour porpoise	Cox Island, Scott Islands	C,2,4,u

Notes to Table 1.

<sup>1</sup>Consecutive record numbers are given as each record is received, therefore records are not in chronological order.

<sup>2</sup>Date shown is earliest date reported. Many records were also reported from later dates.

<sup>3</sup>If species identification is not positive, indicated with "?".

<sup>4</sup>Comments: A, incidental catch, died; B, live stranded, returned to water alive. 1. measurements; 2. photographs; 3. radiographs; 4. skeleton and/or or trailing gear; F, live stranded, returned to water alive.

baleen, whole/partially collected; 5. aging of teeth; 6. blood tests/cultures; 7. histology samples; 8. gross post mortem examination; 9. heavy metal analysis; 10. organochlorine analysis; 11. dioxin analysis; 12. duplicate tissue samples in Ottawa; 13. duplicate tissue samples in Victoria; 14. parasitology examination; 15. stomach content analysis; 16. reproduction studies; 17. genetic analysis; 18. plaster cast replica of whole/part animal; 19. educational use (anatomy labs, class displays etc); 20. carcass removed from beach to prevent duplicate reporting. Sex: f = female, m = male, u = unknown. Length shown if known. Institution where skeletal materials or baleen deposited listed at end (MC = Malaspina College; MMRG = Marine Mammal Research Group; RBCM = Royal British Columbia Museum; UVIC = University of Victoria).

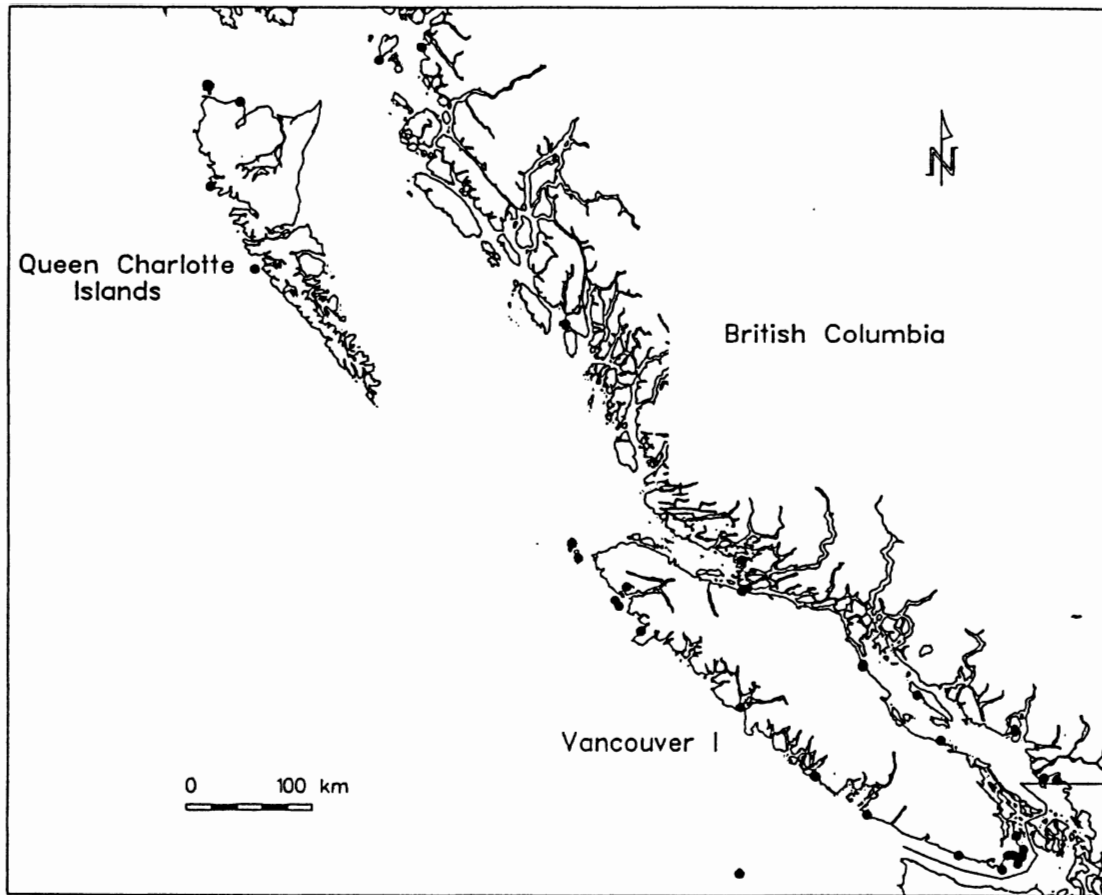


Figure 1. Geographic distribution of stranding and entanglement records during 1995.