

Sightings, Strandings and Incidental Catches of Short-finned Pilot Whales, *Globicephala macrorhynchus*, off the British Columbia Coast

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ABSTRACT

Records of the short-finned pilot whale, *Globicephala macrorhynchus*, from within the Canadian 320km (200mi) extended economic zone off the coast of British Columbia, are presented, with a total of 19 occurrences to 1989. Six animals were incidentally caught in Canadian waters in an experimental driftnet fishery for flying squid (*Ommastrephes bartrami*) in 1986–7, and an additional five animals were taken by this fishery outside of Canadian waters in 1983–7. This fishery has now been discontinued. Sighting records are infrequent. Water depth at sighting and incidental catch localities ranged from 10 to 1,200 fathoms. Mean group size was about 15, with a range from 1 to 150 individuals (n=15). Single individuals were sighted most frequently. Records have been obtained from April through October but since search effort in winter months is greatly reduced, it is difficult to determine if this distribution reflects seasonal changes in their presence in BC waters. Although there are large gaps in the sighting record (1962–76, 1978–84), it can probably be assumed that the increased number of records in recent years is due to an increase in search and recording effort. Based on this information the short-finned pilot whale should be considered rare in the waters off British Columbia. They may be present in these waters in most years, but usually only with a few records each year. Sighting programs are limited, and no information is available on sightings per unit effort.

KEYWORDS: NORTH PACIFIC; PILOT WHALE–SHORT-FINNED; SIGHTING-OPPORTUNISTIC; STRANDINGS; DISTRIBUTION; INCIDENTAL CAPTURE.

INTRODUCTION

In the eastern North Pacific the range of the short-finned pilot whale (*Globicephala macrorhynchus*) extends northward as far as Alaska (Leatherwood *et al.*, 1988). From the waters off the British Columbia (BC) coast, however, only Pike and MacAskie (1969) appear to have presented accepted published records of this species. Osgood (1901) and Wailes and Newcombe (1929) reported that this species is common in some areas of BC, but Pike and MacAskie (1969) subsequently discounted these reports. Home (1980) also noted recent records from the coast of southeastern Alaska, and suggested that the earlier records discounted by Pike and MacAskie may be valid. He overlooked a sighting of six animals mentioned by Spong *et al.* (1972). We believe that Pike and MacAskie's (1969) suggestion that these early records are most likely mis-identifications or misnamed killer whales (*Orcinus orca*) is probably correct, and that short-finned pilot whales are not 'common' as Osgood (1901) and Wailes and Newcombe (1929) noted. However, assessment of status based on published records leads one to conclude that short-finned pilot whales might be accidental or vagrant in these waters. Based on recent records presented here, and those of Home (1980), and considering the lack of search effort in the waters off the BC coast, such a conservative assessment might be unwarranted.

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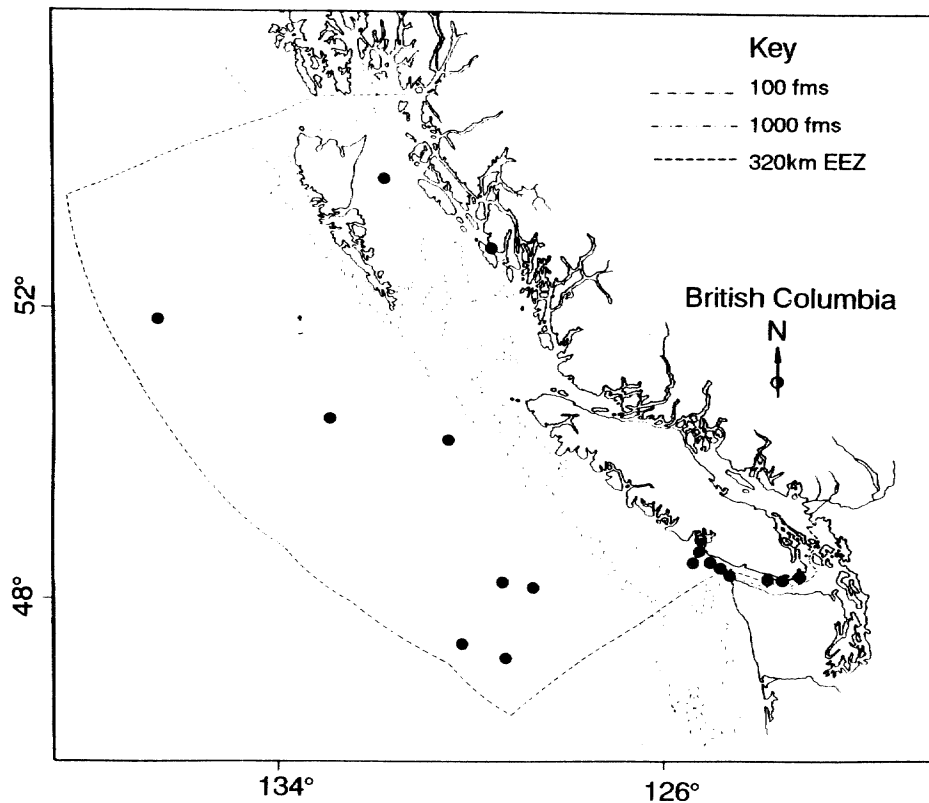


Fig. 1. Map showing localities of records from within the BC 320km (200mi) extended economic zone.

RESULTS AND DISCUSSION

Thirteen previously unpublished records, and the seven records noted by Pike and MacAskie (1969) from within the Canadian 320km (200mi) extended economic zone are presented in Table 1, with locations shown in Fig. 1. Previously unpublished records were obtained from the Canadian Wildlife Service, Royal British Columbia Museum, the National Marine Fisheries Service's National Marine Mammal Laboratory, the Canadian Department of Fisheries and Oceans' Pacific Biological Station, and the BC Cetacean Sighting Program. There are several repositories for cetacean records in BC, but none are currently accepted by all researchers, thus other records may exist, but are unavailable. No regular sighting surveys are currently undertaken in BC waters, and public knowledge of unusual species is generally poor, so it is likely that this species occurs more often than records indicate. Inexperienced observers may not discriminate between pilot whales and similar species found in BC, such as the false killer whale, *Pseudorca crassidens* (Baird *et al.*, 1989). In fact, the common name 'blackfish' is still sometimes used for pilot whales, false killer whales and killer whales, further confusing species identification. Additional unsubstantiated records of animals that may be pilot whales do exist, but the lack of details or documentation preclude positive identification.

During an experimental Canadian driftnet fishery for flying squid (*Ommastrephes bartrami*) in 1986-7, six animals were incidentally caught in Canadian waters (Jamieson

and Heritage, 1987; 1988; Table 1). This fishery has now been discontinued. An additional five animals were caught in this fishery outside Canadian waters in 1983–7. Recording of incidental catches during this fishery by qualified observers allowed for a detailed record of species taken. Incidental catches probably occur in other fisheries in Canadian waters, but are not recorded due to a lack of observers.

A total of 16 sighting records have been obtained, 15 of which include group size. Group size ranged from 1–150 animals (mean = about 15). Leatherwood *et al.* (1988) note that pilot whales are gregarious and rarely found alone. For the BC records however, the

Table 1

Records of *Globicephala macrorhynchus* off the British Columbia coast.

Date	Location ^A	Number	Type ^B	Source ^C
August 1954	Barkley Sound	?	1	1
30 May 1958	Swiftsure Bank	6	1	1
6 June 1958	Swiftsure Bank	1	1	1
2 July 1958	Clarke Pt.	1	1	1
29 July 1958	Laredo Channel	3	1	1
22 April 1959	48°28'N, 125°30'W	1	1	2
10 June 1959	5mi W of Pachena Pt.	1	1	1
14 August 1961	48°43'N, 125°13'W	4	1	1
August 1971	Johnstone Strait	about 6	1	3
23 November 1977	Metchosin, V.I.	1	2 ^D	4,5
23 August 1985	50°6'N, 129°58'W	2	1	2
18 July 1986	47°27'N, 129°18'W	12-15	1	6
14 August 1986	50°25'N, 132°20'W	2	3 ^E	6
14 August 1986	50°25'N, 132°20'W	2	4 ^E	6
23 August 1986	51°40'N, 136°0'W	1	3 ^E	6
23 August 1986	51°40'N, 136°0'W	150	1 ^E	6
15 September 1986	48°10'N, 129°15'W	4	1	4
13 July 1987	47°27'N, 130°5'W	1	3	6
10 May 1988	53°30'N, 131°10'W	1	1	7
30 August 1988	48°5'N, 128°10'W	9	1	8
14 April 1989	48°21'N, 123°50'W	30	1	7
10 July 1989	48°18'N, 123°39'W	1	1	7

Notes:

^A Location of previously published records given as presented in the original source.

^B Type: 1. Sighting; 2. Stranding; 3. Incidental catch, dead; 4. Incidental catch, released alive.

^C Source: 1. Pike and MacAskie, 1969; 2. D. Cheng, Platforms of Opportunity Program, National Marine Mammal Laboratory; 3. P. Spong (pers. comm.), Spong *et al.* (1971); 4. M.A. Bigg, Pacific Biological Station; 5. Royal British Columbia Museum, Victoria, BC. 6. D. Heritage, Pacific Biological Station; 7. BC Cetacean Sighting Program, c/o authors; 8. K. Morgan, Canadian Wildlife Service.

^D This appears to be the only specimen record from British Columbia, a 4.52m female (BCPM 9775). Although reported in November, the animal had been dead for greater than a month (M. Bigg, pers. comm.). Thus in interpreting seasonal presence this record was listed from October.

^E When a single group of animals was both seen and one or more animals were incidentally caught, they are dealt with as if they are independent records of different types in this Table, but for the purposes of the total number of occurrences in BC waters they are considered only once.

modal group size was one ($n=6$). It is possible that this high proportion of single animals may be an artifact of the small number of records, or that single animals may be more prevalent in the fringes of the range of this species. Alternatively it is possible that records of single animals are a result of incomplete observations or documentation of a larger group, especially considering that the sightings were not made as part of a marine mammal sighting survey.

Water depth of sighting and incidental catch localities ranged from 10 to 1,300 fathoms. Sea surface temperatures were only recorded for six sightings, three reported in Pike and MacAskie (1969) as 12°C, 12°C and 14°C, and three unpublished records, from 23 August 1985, 30 August 1988 and 14 April 1989 as 14°C, 16°C and 8°C respectively. Records have been from April to October, but since search effort in winter months is greatly reduced, it is difficult to determine if this seasonal distribution reflects seasonal changes in their presence in BC waters. Although pilot whales frequently strand in other parts of their range, only one stranding, that of a single animal, has been recorded from BC (Table 1, Fig. 2). Pilot whales are frequently found associated with other species of cetaceans. In the records presented here, one interspecific association was noted, on 30 August 1988, with a group of 5 northern right whale dolphins, *Lissodelphis borealis*, and 25 Pacific white-sided dolphins, *Lagenorhynchus obliquidens* (Baird and Stacey, 1991; Stacey and Baird, 1991).

There are large gaps in the record from 1962–76 and from 1978–84. However, search effort has not been consistent. There has been an increase in search, reporting and recording effort in recent years, and based on these sightings the short-finned pilot whale should be considered rare in BC waters, occurring in most years, but with only a few records per year. Further research on short-finned pilot whales would be necessary to clarify their status in Canadian waters. By itself such research may not be warranted, but could be undertaken in combination with offshore sighting surveys for other cetaceans.



Fig. 2. A 4.52m stranded female short-finned pilot whale from Metchosin, 1977; the only specimen record from British Columbia (BCPM 9775). Photo by M.A. Bigg.

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