

# First Records of Long-beaked Common Dolphins, *Delphinus capensis*, in Canadian Waters

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The genus *Delphinus* has recently been determined to be comprised of two species, the Short-beaked Common Dolphin, *D. delphis*, and the Long-beaked Common Dolphin, *D. capensis*. *D. delphis* is regularly observed in eastern Canadian waters, but is known only from a single stranding in British Columbia. Two specimen records and a series of sightings of *D. capensis* in British Columbian waters during 1993-2003, detailed here, are the first for this species in Canada. *D. capensis* normally ranges only as far north as central California, and its abundance in those waters increases in association with warm-water oceanographic events. Although the species appears to be rare in British Columbia, future sightings during warm-water periods might be anticipated.

Key Words: Long-beaked Common Dolphin, *Delphinus capensis*, Short-beaked Common Dolphin, *Delphinus delphis*, stranding, entanglement, feeding.

Dolphins of the genus *Delphinus* have a wide but disjunct distribution in warm temperate to tropical waters worldwide from about 40-60°N to roughly 50°S (Jefferson et al. 1993). Considerable uncertainty about the taxonomic status of *Delphinus* species has long existed, especially in the eastern North Pacific (Banks and Brownell 1969; van Bree and Purves 1972; Heyning and Perrin 1994). Dall (1873) proposed a new species *Delphinus bairdii* Dall from coastal waters of California, which he considered distinct in rostral length and colouration from *Delphinus delphis* Linnaeus, previously known from the Atlantic Ocean. The validity of *D. bairdii* was challenged by some authors (e.g., True 1889; van Bree and Purves 1972) and supported by others (e.g., Miller 1936; Banks and Brownell 1969). Until this uncertainty was resolved recently, the names *D. bairdii*, *D. delphis bairdii*, and *D. delphis* were applied inconsistently to eastern North Pacific *Delphinus* (Guiguet 1954; Norris and Prescott 1961; Heyning and Perrin (1994) recently reviewed the taxonomic status of *Delphinus* and provided clear evidence for two distinct species in the northeastern Pacific, the Short-beaked Common Dolphin, *D. delphis* Linnaeus, and the Long-beaked Common Dolphin, *D. capensis* Gray. *D. capensis* is equivalent to the original long-beaked form described as *D. bairdii* Dall, but the latter name is now considered a junior synonym and is not used (Rice 1998). Short-beaked and Long-beaked Common Dolphins can be distinguished reliably by colouration pattern and the proportional length of the rostrum in adults (ratio of rostral length to zygomatic width in *D. delphis* is 1.21-1.47 and in *D. capensis* is 1.52-1.77; Heyning and Perrin 1994). The validity of these two species has been corroborated by genetic analyses (Rosel et al. 1994) and

they are now widely accepted (Rice 1998; Carretta et al. 2002; Reeves et al. 2002).

Short-beaked and Long-beaked Common Dolphins have generally allopatric ranges in warm-temperate and tropical regions of the Pacific and Atlantic Oceans, though they are narrowly sympatric in some coastal waters (Heyning and Perrin 1994; Perrin 2002). *D. capensis* appears to prefer shallower and warmer water than *D. delphis*, and is most often found within 50 nm of shore. In the northeastern Pacific, *D. delphis* ranges along the coast and pelagically from South America to southern British Columbia, while *D. capensis* is found primarily in the Gulf of California and along the west coast of Baja California north to central California (approximately 36°N; Carretta et al. 2002, Perrin 2002).

The status of *Delphinus* in Canadian waters was reviewed by Gaskin (1992) before *D. capensis* was recognized as distinct from *D. delphis*. Common Dolphins are frequently seen during summer and fall on the banks offshore of Nova Scotia, and occasionally range as far north as coastal waters off Newfoundland (approximately 50°N; Gaskin 1992). The species in this region is *D. delphis*, as *D. capensis* has not been recorded north of 20°N in the western Atlantic (Perrin 2002). In western Canadian waters, the genus has until recently been represented only by a single individual found stranded on southern Vancouver Island in April 1953. This specimen, an adult male, was described by Guiguet (1954) as *D. bairdii*, but the animal was judged to be *D. delphis* by Heyning and Perrin (1994) based on colouration evident in a photograph in the 1954 article (W. Perrin, National Marine Fisheries Service, La Jolla, California, personal communication). To confirm this identification, the skull of

the specimen was measured and found to have a rostral length to zygomatic width ratio of 1.37, clearly within the range diagnostic of *D. delphis* (Heyning and Perrin 1994). (Royal British Columbia Museum, Victoria, British Columbia.; catalogue number 5792, examined 12 January 2004). The following thus describes the first records of Long-beaked Common Dolphins, *D. capensis*, in Canadian waters.

The earliest record of *D. capensis* in British Columbia is from 2 February 1993, when a male Common Dolphin stranded alive at Mayne Island and died shortly thereafter (Table 1). Post mortem examination at the provincial Animal Health Centre revealed the animal to be in poor condition, with extensive osteomyelitis of the caudal vertebrae and a heavy parasitic infection. The animal was recorded as *D. delphis*, but no skeletal material or measurements were collected (R. Lewis, Animal Health Centre, Abbotsford, British Columbia, personal communication) Archived photographs of the specimen were subsequently located and examined, which showed the colouration pattern distinctive of *D. capensis*.

The species is next recorded in a series of sightings in the late summer and fall of 2002. On 21 August 2002, a single individual was observed and photographed in Port McNeill, northeastern Vancouver Island, British Columbia. The animal appeared lethargic and in poor health. During the period of 18 September to 2 October 2002, a pair of *D. capensis* was sighted on several occasions in Vancouver harbour. One of these individuals, shown in Figure 1, was determined from dorsal fin markings to be the same animal as in the earlier Port McNeill sighting. Next, a group of four Common Dolphins was observed and video recorded on 1 November 2002 at Goose Bay, on the central coast of British Columbia north of Vancouver Island. Examination of the video recording showed the animals to be *D. capensis*.

The last set of records involves a pair of *D. capensis* photographed in Victoria harbour, southern Vancouver Island, on 19 September 2003. In one of these animals, the distal 5-8 cm portion of the rostrum was bent at an approximately 45° angle to the left. This distinctive individual had been sighted previously, together with another Long-beaked Common Dolphin (probably the same companion as in Victoria), on several occasions approximately 150 km to the south, in Puget Sound, Washington, during July-August 2003 (S. Norman, National Marine Fisheries Service, Seattle, Washington, personal communication). On 7 October 2003, a pair of dolphins, including the animal with the deformed rostrum, became entangled in a gillnet during a salmon test fishery in Alberni Inlet, on the west coast of Vancouver Island. The animal with the deformed rostrum was released alive from the net, but the other animal died and was collected and frozen for later examination. On 28 October 2003, the released dolphin was again sighted near the location of the 7 October entanglement.

TABLE 1. Records of *Delphinus capensis* in British Columbian waters. All species identifications were made from photographs or video recordings of the animals' distinctive colouration, except for the entangled animal collected on 7 October 2003, the identity of which was confirmed by cranial measurements.

Date	Location	Position	Type	Number	Comments
2 February 1993	Mayne Island	48°51'N, 123°18'W	Stranding	1	Stranded alive, died en route to rehab facility.
21 August 2002	Port McNeill	50°35'N, 127°05'W	Sighting	1	Animal appeared lethargic
18 September – 2 October 2002	Vancouver harbour	49°16'N, 123°8'W	Sighting	2	Series of sightings of apparently same pair; one individual same as 21 August 2002 sighting from dorsal fin markings
1 November 2002	Goose Bay	51°22'N, 127°39'W	Sighting	4	Tight group of 4 individuals swimming actively in bay; observed for approx. 2 hours.
19 September 2003	Victoria harbour	48°25'N, 123°23'W	Sighting	2	Same pair as 7 October 2003
7 October 2003	Alberni Inlet	49°16'N, 123°8'W	Entanglement	2	One died, one released
28 October 2003	Alberni Inlet	49°16'N, 123°8'W	Sighting	1	Same animal released on 7 October 2003



FIGURE 1. One of a pair of *Delphinus capensis* observed in Vancouver harbour, 19 September 2003, showing the distinctive colouration of the species (see Heyning and Perrin (1994) or Reeves et al. (2002) for comparative illustrations of *D. capensis* and *D. delphis*). Photo by Anne Carson.

Post mortem examination of the entangled animal showed that it had been in good health and had been feeding. It was a male, 187 cm long and 80 kg in weight. Tooth rake scars on its body were positively matched to scars in photographs taken on 19 September 2003 of the animal accompanying the dolphin with the deformed rostrum. Its stomach contained remains of four Pacific hake (*Merluccius productus*) and six Pacific herring (*Clupea pallasii*). The skeleton of the dolphin was prepared and is now part of the collection of the Natural History Museum, Malaspina University-College, Nanaimo, British Columbia (catalogue number M-0283). The ratio of rostral length to zygomatic width is 1.69, well within the range measured for *D. capensis* (1.52-1.77; Heyning and Perrin 1994).

These recent records confirm that *D. capensis* occurs in British Columbian waters, but it is unlikely more than a rare visitor. The records presented here are the northern-most for the species in the eastern North Pacific. Previously, there had been no sighting or stranding records for *D. capensis* north of central

California, though the species has only recently been differentiated from *D. delphis* in sighting surveys (Heyning and Perrin 1994; Carretta et al. 2002). *D. delphis* is common in both inshore and offshore waters off California, but no confirmed sightings have been made in waters off Oregon and Washington (Carretta et al. 2002). Of four stranding records of Common Dolphins on the coasts of Oregon and Washington, only one, a *D. delphis*, was identified to species (Carretta et al. 2002). There are no confirmed records of *D. delphis* in British Columbia since the 1953 stranding. In Californian waters, the abundance of the two species varies both seasonally and inter-annually, with highest densities associated with warm-water events (Heyning and Perrin 1994, Forney and Barlow 1998). Heyning and Perrin (1994) noted that the proportion of *D. capensis* versus *D. delphis* strandings on the coast of California increased for several years following the warm-water El Niño of 1982-83. The appearance of *D. capensis* in British Columbian waters may be associated with increased water temperatures, and future sightings might be anticipated during warm-water periods.

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