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Narwhal, *Monodon monoceros*, Near Western Baffin Island, Nunavut, Canada

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In August 2000, a Narwhal, *Monodon monoceros*, was found dead on the west coast of Baffin Island at a location where this species had not been previously documented. The Narwhal was very dark for an adult, and it had an injury on its back that may be consistent with being speared by either a harpoon or by another Narwhal.

Key Words: Baffin Island, Narwhal, *Monodon monoceros*, range, injury.

Knowledge of the abundance and distribution of various wildlife species in arctic Canada is incomplete, in large part due to the isolation of some regions and the expense incurred in surveying these sites. Hence, opportunistic wildlife observations from varied field projects can be of considerable assistance in filling in the gaps in species range maps.

On 8 August 2000 the Canadian Wildlife Service was conducting helicopter surveys of coastal wetland habitats to verify vegetation characteristics identified in LANDSAT 5 satellite images in and near the Dewey Soper Migratory Bird Sanctuary on the west coast of Baffin Island. Four biologists and a pilot used a Bell Long Ranger helicopter equipped with floats, and navigated using GPS. Just north of the mouth of the Koukdjuak River, at 66° 59' N, 72° 49' W (Figure 1), we observed a dead Narwhal (*Monodon monoceros*) near the shoreline, and we landed beside it to investigate. We knew the Nar-

whal had washed ashore the previous night, because we had flown over this portion of shoreline at low altitude the previous day on the way to a fuel cache, and on the pale, flat, clay shoreline the Narwhal was an obvious feature.

The carcass was in excellent condition, suggesting a recent death. Blood was flowing from recent pecking at the eyes and blowhole by larid (gull) or corvid (crow) scavengers. Closer inspection revealed two curious characteristics of this male Narwhal. Although we had no measuring equipment with us, we extrapolated measurements from digital photos and determined that the Narwhal had a tusk that was approximately 1.4 m long, and a total body length of approximately 3.9 m, indicating it was an adult (Hay and Mansfield 1989). However, adults of this size and tusk length are typically light coloured on their ventral surface and dark, mottled gray on their dorsal surface (Banfield 1974; Hay and Mansfield 1989). This male had only two small, whitish patches under the

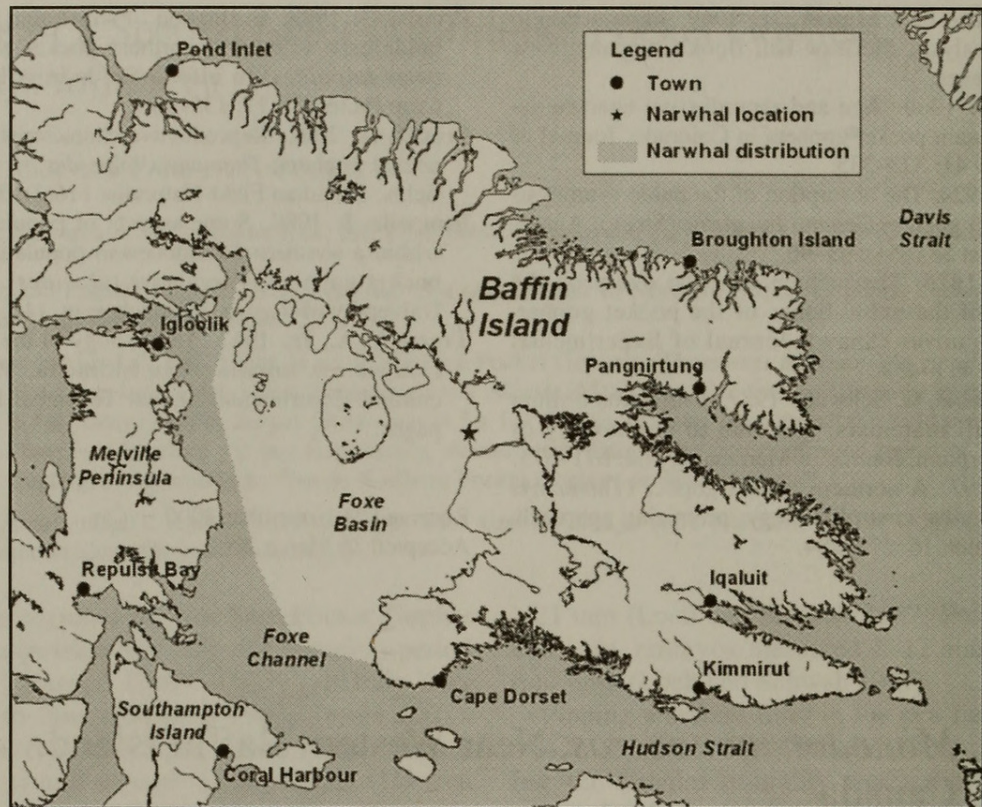


FIGURE 1. Known range of Narwhal (*Monodon monoceros*) near Foxe Basin, and location of our observation.

chin (each approximately 10×15 cm), and it was otherwise a uniform mottled gray over the rest of the body, which is an odd colouration for an adult (K. Hay, Nunavut Wildlife Management Board, personal communication).

Also, there was a puncture wound on the dorsal surface of the Narwhal centered approximately 2 cm to the right of the spine. The puncture was almost a perfect, smooth circle with a diameter of approximately 5 cm, and it was clearly made as something penetrated from the dorsal surface directly into the central organs of the Narwhal. We could see 10 cm into the wound, at which point the mass of internal tissues had collapsed and sealed the hole. It did not appear to result from a bite from another animal, and thus we considered three possible explanations: gunshot wound, harpoon wound, or puncture from the tusk of another Narwhal. First, all observers agreed that, given the location, shape and direction of the puncture, the pattern was inconsistent with that expected from a gunshot wound. Second, the wound configuration was consistent with a harpoon puncture. However, if this was an animal that had suffered internal wounds during an Inuit hunt, it would have travelled at least 200 km from the known range of Narwhal and Inuit hunting regions in this condition. Finally, we postulate that the wound could have resulted from a puncture by the tusk of another Narwhal. The function of the Narwhal tusk has been

the topic of considerable speculation, but it is likely used as a weapon, as a sexually selected trait that indicates male dominance (Gerson and Hickie 1985), and perhaps for digging for food. One study has reported injury of a female Narwhal from another Narwhal's tusk (Ford and Ford 1986). Unfortunately, in our case the lack of dissection and preservation equipment and the approach of a nearby Polar Bear (*Ursus maritimus*) precluded a detailed examination of the wound, and thus we could not discriminate further between our two possible explanations.

Aside from the curious physical characteristics of this carcass, the location of the finding was also noteworthy. Range maps and traditional ecological knowledge of Inuit in nearby communities suggest Narwhal inhabit western Foxe Basin (Figure 1; Strong 1988; Hay and Mansfield 1989; Stewart et al. 1995). This is the first report of a Narwhal along the eastern coast of Foxe Basin (P. Richard, Department of Fisheries and Oceans, personal communication). It is unclear whether this sighting represents a chance observation of a carcass within the species' normal geographic range, or if instead this was an injured individual Narwhal that strayed from its usual range. Shallow waters and extensive tidal flats are considered atypical habitat for Narwhal (Hay and Mansfield 1989), although they do enter these areas to escape Killer Whales, *Orcinus orca* (Campbell et al. 1988). Nonetheless, with no communities along

this coastline and minimal Inuit hunting in this area, it is possible that Narwhal visit this area of Foxe Basin without detection.

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