

Short communications

POLAR BEAR ATTACK ON A JUVENILE NARWHAL

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A juvenile female narwhal *Monodon monoceros* landed at Pond Inlet had several sets of scratches on the posterior part of the body. They were probably made by a polar bear *Ursus maritimus* in the course of an unsuccessful attack. A successful attack on a young calf has been reported. Polar bears catch beluga (*Delphinapterus leucas*), and the narwhal is of similar size and habits, but polar bear predation on narwhal is less well documented.

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On 20 July 1987 the hunters of Pond Inlet landed a female narwhal *Monodon monoceros* at the fast ice edge near Guy's Bight (approximate location 72° 40' N, 75° 52' W). It was dark in colour on the back and flanks (i.e. young) but the lighter shade of maturity (Hay 1984) was developed over the entire ventral surface. It was 296 cm long, with umbilical girth 203 cm; a mature female would typically be 391 cm long and 257 cm round (M. Kingsley, unpublished data). From the growth curve of Kingsley (1989) estimated age was 2 yrs. Body condition from girth, length ratio and blubber thicknesses (5–7 cm) were normal. The stomach was not full of food, but the whale had been feeding a short while before.

I found eight sets of scratches on the posterior half of the body. There were three short sets on the back to the left of the dorsal crest, and five, mostly longer, on the right back and flank, extending onto the tail-stock. The longest set was 75 cm long. Each set consisted of four evenly-spaced furrows and all were about 15 cm wide. The scratches were all healed, and had not been deep enough to change the pigmentation of the skin. (Scars from deep wounds on narwhal show up white on dark skin, but these were the same colour as their surroundings.)

These scratches differed in several ways from those described, and photographed, on a subadult beluga *Delphinapterus leucas* (Heyland & Hay 1976). Those were scattered, some single, and mostly curved, and they gave the appearance of having been made with (a) blunt point(s) (see Heyland & Hay 1976: fig. 2). These on the narwhal were so concentrated on the dorsal and dorso-lateral aspects of the posterior end of the body that they overlapped; all, not just some, were in

parallel sets, and all sets were of four scratches; they were all roughly straight and in line with the long axis of the body; and they looked as though they had been made by finer, sharper points.

The only reasonable supposition is that a polar bear *Ursus maritimus* had made these scratches in the course of an unsuccessful attack. Although the polar bear lives mostly on seals, it takes other prey if it can. Circumstantial evidence, such as tracks and remains on ice (Lowry et al. 1987), apparent stalking behaviour (Smith 1985), and scars on the body (Heyland & Hay 1976; but see Smith 1985), and eyewitness accounts of successful attacks (Lowry et al. 1987; B. Sjö pers. comm.), have shown that polar bears hunt and kill beluga; often, but not always, subadults and when the whales are trapped in the ice (Freeman 1973) or moving through narrow leads. But although bear predation on beluga is well documented, scratches from unsuccessful attacks are rare (estimated 3–4% on hunter-killed animals (R.E.A. Stewart pers. comm.); 9 of 53 scarred beluga at Cunningham Inlet (Smith 1985)).

The narwhal is were similar to the beluga in size, weight, swimming ability, and ice adaptations, and is expected to be similarly preyed on, but few records have yet shown that this occurs. Smith (1985) points out that scars due to polar bear attack have not previously been reported on narwhal although scars have been particularly studied in this species (Silverman 1979; Finley and Miller 1982; Gerson and Hickie 1985).

The multiple sets of scratches on the narwhal taken by the hunters at Pond Inlet are evidence that polar bears make serious efforts to catch at least some juvenile narwhal which are not fatally trapped in the ice. When this narwhal was taken, I asked the hunters if they had seen such marks on narwhal before, and they said «Yes, but very seldom». Born and Olesen (1986) know of no well-documented cases of polar bears killing narwhal. J. T. Strong (pers. comm.) remembers only one narwhal carrying polar bear scratches — an adult whale with a single old, well-healed set of four — out of several hundred hunter-killed narwhal seen at Pond Inlet. Twenty dead narwhal seen on top of the ice of Dundee Bight in the central Canadian high Arctic in 1979 (Sergeant & Williams 1983) were probably caught and pulled out by bears; but they were trapped in the ice northwest of the normal summer range of the species, and may have been already dead or dying.

Larry Dueck (pers. comm.) on 14 July 1985, saw a polar bear feeding on a narwhal calf of the year beside a lead in the fast ice of Admiralty Inlet, north Baffin Island (73° N, 85° W). This may have been a scavenged natural death, but predation is perhaps a more likely cause. It was reported to me on 10 Aug. 1989 that an Inuk hunter at Low Point in Navy Board Inlet (73° N, 80° 30' W) had seen a polar bear rush into the water from a steeply-sloping shore, and catch and kill a narwhal calf of the

year that was accompanying a female close in. These additional observations support the hypothesis that polar bears do prey on young narwhal when they can catch them in favourable circumstances.

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