

LETTER TO THE EDITOR:
FARTHEST NORTH POLAR BEAR
(*Ursus maritimus*)

Dear Editor:

On 5 August 2001, while on a cruise with tourists from Longyearbyen, Svalbard, to the Geographic North Pole, we sighted a lone polar bear (*Ursus maritimus*) from the Russian icebreaker *Yamal* at a site we believe to be the northernmost record of this species. The adult bear was seen walking slowly on the ice toward the ship about 500 meters away. The location of the ship, as determined by the ship's Global Positioning System (GPS), was 89°46.5' N, 26°21.1' E, about 13 nautical miles from the Pole. No seals were seen in the area on that day, although on an earlier date (8 August 1993), one of us (JFS) sighted a ringed seal (*Phoca hispida*) in the water adjacent to the *Yamal* upon reaching the Pole. Many other sightings of polar bears were made on the August 2001 cruise, both prior to this date and also later, as the ship reached Franz Josef Land [Zemlya Frantsa-Iosifa], Russia, the next objective after the Pole. The voyage began at Longyearbyen on 1 August and ended there on 12 August 2001.

Todd and others (1992) list bird and seal species sighted at the North Pole by themselves and others, but no polar bear sightings are known at or near 90°N. Their list includes animals at the Pole and very near it—snow bunting (*Plectrophenax nivalis*) (May 1987), northern fulmar (*Fulmarus glacialis*) (August 1991, July 1992), black-legged kittiwake (*Rissa tridactyla*) (July 1992), ringed seal (July 1992), and small fish (5–8 cm), the latter swept up onto the surface as the ship crashed through the ice. We also saw the latter and speculate, as do Todd and others (1992), that birds follow the ship to take advantage of the exposed fish as a food resource. We also saw a northern fulmar at the Pole during our visit on 5 August 2001.

Stirling (1990:65–66) reports that “Polar bears or their tracks have been reported, albeit infrequently, by various explorers almost as far north as the pole,....[but] This is uncommon.” Other reports pertained to a series of aerial surveys, which recorded 181 sightings of bears, and only three of them were above 82° N (Stirling 1990, no latitudes given). The 1969 Transpolar Expedition also saw no bears between the Pole and 82° N (Stirling, 1990). At lower latitudes, as many as 35 sightings of polar bears were made during a circumnavigation of the Arctic in 1999 (Headland and Spletstoeser, 1999), with concentrations, as expected, in Svalbard, the Northwest Passage, and the Northeast Passage.

Ice conditions in the area of the sighting on 5 August 2001 ranged from unbroken 10/10 multiyear sea ice to 8/10–9/10 broken multiyear ice. Toomey (2001) explains the vagaries of sea-ice coverage in the vicinity of the North Pole by comparing ice conditions in two consecutive years, 1999 and 2000. The heavier ice year in 1999 was caused by a steady northeasterly wind that had packed the

ice floes tightly together, exerting moderate pressure from about 84° N all the way to the Pole. Easier ice conditions in 2000 were related to the fact that there was very little wind at all in the very high latitudes while two voyages to the Pole were in progress, thus explaining much open water near or at the Pole (Toomey, 2001). Winds and currents can thus be responsible for relatively rapid ice-cover changes in foraging habitats for polar bears, perhaps making it more opportunistic for them to move northward or in other directions in pursuit of prey. Whether those factors might have been instrumental in producing the conditions of our polar bear sighting only 13.5 nautical miles (15.5 statute miles/25 km) from the North Pole cannot be ascertained.

Considering the water depth at the Geographic North Pole (4179 m, or 13 710'), with little likelihood of upwelling and generation of nutrients for seals and lower elements of the food chain, it is unlikely that seals and polar bears would normally venture this far north. However, Todd et al. (1992) noticed, as we did, light-brown algae frozen within some of the ice en route to the Pole, and they also mention sighting tracks of arctic fox (*Alopex lagopus*) in hard-packed snow at 89°11.15' N in July 1992.

Yamal was chartered by Quark Expeditions, Darien, Connecticut, U.S.A. Captain Aleksandr Lembrik (Master of *Yamal*) and Expedition Leader Susan Adie led this successful voyage. Lynn Lay, Librarian, Byrd Polar Research Center, The Ohio State University, assisted with literature sources.

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