

Recent Records of Hooded Seals, *Cystophora cristata* Erxleben, from the Western Beaufort Sea

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ABSTRACT. Three records of hooded seals, *Cystophora cristata* Erxleben, from the western Beaufort Sea were obtained between 1970 and 1975. Two of these sightings were verified. The third seal was identified based on descriptions from Eskimo informants. During a period of 106 days in captivity, seal Number 2 increased in weight by 51% at a rate of 0.45 kg per day. Its length increased by 12.3 cm.

RÉSUMÉ. Entre 1970 et 1975, trois mentions de phoques à capuchons, *Cystophora cristata*, étaient obtenues de la partie occidentale de la mer de Beaufort. Deux de ces observations étaient vérifiées. Le troisième phoque était indentifié à partir de descriptions faites par des informateurs Esquimeaux. Pendant une période de captivité de 106 jours, le poids du phoque No. 2 s'accroissait de 51% au rythme d'une livre par jour. Il gradissait de 12.3 centimètres. Traduit par Alain de Vendegies, Aquitaine Company of Canada Ltd.

INTRODUCTION

Four general areas of hooded seal concentrations during the reproductive season are known. These are: 1) in the White Sea, 2) around Jan Mayen in the Norwegian Sea, 3) near Newfoundland in the western Atlantic and Gulf of St. Lawrence, and 4) in Davis Strait (Sergeant, 1974; 1976). We are aware of three recent records of these seals in the western Beaufort Sea, the details of which are reported here.

CASE HISTORIES

Information about these three hooded seals, designated as Numbers 1, 2, and 3, is presented in Table 1.

Seal Number 1 was discovered at approximately 0830 on 10 September 1972 by Angus Gavin. It was seen in the water about 20 m distant from the west side of a short causeway which extends into Prudhoe Bay. It was in water approximately 0.75 m deep. The seal did not move until it was touched but then it vigorously charged. It did not attempt to move into deeper water or to escape. Each time the seal was approached it lunged aggressively and, in this manner, was enticed into very shallow water where it was almost completely visible. Numerous photographs were taken and its length and

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Table 1. Information about two verified and one reported record of hooded seals from the western Beaufort Sea.

Record No.	1	2	3*
Date	10 September 1972	12 December 1975	Summer 1970
Location	Prudhoe Bay	Prudhoe Ba	
Beechey Point			
Position	70°19'N, 148°19'W	70°26'N, 148°37'W	70°29'N, 149°09'W
Sex	male	male	male
Standard length (m)	1.6 (est.)	1.63	—
Weight (kg)	120 (est.)	93.2	—
Relative age	subadult	subadult	subadult

*Reported sighting of a stranded, dead seal. The sex and relative age of this seal were inferred from descriptive comments of Eskimo informants.

weight were estimated. It was recognized as a male hooded seal approximately 2 to 3 years old. At 1230 the seal was still in the vicinity of where it was originally seen, having moved away from the beach line. At 1430 it had left the area and was not resighted.

The seal appeared to be healthy and vigorous, except for a slight opaqueness of the eye.

At the time this seal was found the weather was quite mild. There was no ice in the bay, winds were light from the east, there were occasional snow flurries, and the temperature was -2°C.

Seal Number 2 was first seen on the night of 11 December 1975. It was reported by workers in the Prudhoe Bay oilfield who had seen an unidentified but strange animal on the snow-covered tundra, in the beam of their headlights. On 12 December this seal, thought to be a spotted seal (*Phoca vitulina largha*), was caught by workmen from British Petroleum Alaska, Inc. and shipped to John Burns in Fairbanks, Alaska. Upon arrival in Fairbanks, it was immediately recognized as a hooded seal. This animal was maintained in the animal research facility at the University of Alaska, Fairbanks from 13 December 1975 to 7 April 1976.

The circumstances of this sighting and capture were reconstructed based on conversations and correspondence with persons involved. Apparently the seal was first seen on 11 December when it surfaced in a hole cut through the ice of the Kuparuk River at a location approximately 10 km from its mouth (70°20'N, 148°59'W). The hole in the completely ice-covered river was made by men for purposes of obtaining fresh water for an oilfield camp. The seal apparently did not emerge from the river at the time it was first seen.

Tracks on the snow-covered tundra, leading to the capture site, indicated that the seal had moved overland a distance of 14.4 km from the direction of the Kuparuk River. At the time of capture the seal appeared healthy, vigorous, and was very aggressive. It was captured with a lariat.

Weather records for the Prudhoe Bay area on the morning of 12 December are not available. However, the general conditions were: wind moderate from the northeast and temperature about -35°C with light snow and blowing snow. All of the lakes and rivers in the vicinity of Prudhoe Bay were completely covered by ice. There was an air space between the water and ice of the Kuparuk River due to reduced winter flow and significant pumping. Sea ice extended seaward from shore for approximately 30 km.

Seal Number 2 was first weighed and measured on 22 December 1975. It was vigorous but appeared lean. Between that date and 7 April 1976, while it was maintained at the University of Alaska, it gained 47.7 kg to 140.9 kg, a 51% increase at an average rate of 0.45 kg per day for 106 days. Its length increased by approximately 12.3 cm, to 1.74 m.

Hooded seal Number 3 was a reported sighting of a beached, dead animal which was not examined by either of us. The carcass of a partially decomposed seal on the beach at Beechey Point was seen several times during aerial surveys of birds by Angus Gavin in August 1970. The remains suggested that it was a hooded seal. It was not possible to land near the seal to examine it. In 1972, after photographs of seal Number 1 (a male) were shown to several Eskimo men working at Prudhoe Bay, they indicated that the carcass of a similar seal was found by them during the summer of 1970, at Beechey Point. The location coincided with the unverified sighting made by Angus Gavin. Descriptions provided by the Eskimo men indicate that this hooded seal was also a subadult male. The exact date and conditions under which this seal became stranded are unknown.

The circumstantial evidence available to us and the subsequent sightings of two additional hooded seals are convincing enough to warrant inclusion of this report as a record for the western Beaufort Sea.

DISCUSSION

Hooded seals are described as inhabiting the heavy pack ice of the central and western North Atlantic (Dunbar, 1949; Sergeant, 1974; 1976). A whelping population in Davis Strait, discovered in the middle nineteenth century, was recently rediscovered (Sergeant, 1974). This population, reported to occur between $63^{\circ}30'\text{N}$ and $64^{\circ}20'\text{N}$, is the group closest to the Beaufort Sea.

Hooded seals, especially juveniles, are known to wander extensively. Previously reported extralimital records include one from Ellesmere Island and two from the eastern Beaufort Sea: one at Tuktoyaktuk in 1942-43, and the other at Herschel Island in 1931 (Porsild, 1945; Anderson, 1947; Dunbar, 1949). Sergeant (1974) has summarized the reported extralimital records of 19 hooded seals from eastern North America including one from the Atlantic coast of central Florida, originally reported by Miller (1917). Of these, 14 were single subadults and three were adults (2 of which were females) accompanied by young. Richardson (1975) reported a subsequent record of a female with pup from Maine. Mohr (1963) reported extralimital records of hooded seals in Europe.

The three sightings from the western Beaufort Sea (all considered as strandings) reported in this paper were from an area with a coastline of about 37 km. The seals which were alive when found appeared to have been disoriented in the sense that seal Number 1 made no immediate attempt to escape seaward when disturbed, and seal Number 2 was apparently trapped by freezeup in the Beaufort Sea.

Other occurrences of hooded seals in waters adjacent to Alaska have undoubtedly occurred. Eskimo hunters of Little Diomed Island, in Bering Strait, recall stories of a hooded seal having been killed there in the early 1900's. Additionally, there is a vague knowledge about the rare occurrence of this seal expressed in the Eskimo lore of several other villages in northern Alaska. However, we are not aware of any specific records of sightings or kills.

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REFERENCES

- ANDERSON, R. M. 1947. Catalogue of Canadian recent mammals. National Museums of Canada, Bulletin No. 102. 238 p.
- DUNBAR, M. J. 1949. The Pinnipedia of the Arctic and Subarctic. Fisheries Research Board of Canada, Bulletin No. 85: 1-22.
- MILLER, G. S., Jr. 1917. A hooded seal in Florida. Proceedings of the Biological Society, Washington 30: 121.
- MOHR, E. 1963. A contribution to the natural history of the hooded seal, *Cystophora Cristata* Erxl., 1777. Z. Säugetierkunde 28: 65-84.
- PORSILD, A. E. 1945. Mammals of the MacKenzie Delta. Canadian Field-Naturalist 59: 4-22.
- RICHARDSON, D. T. 1975. Hooded seal whelps at South Brooksville, Maine. Journal of Mammalogy 56(3): 698-699.
- SERGEANT, D. E. 1974. A rediscovered whelping population of hooded seals *Cystophora cristata* Erxleben and their possible relation to other populations. Polarforschung 44: 1-7.
- . 1976. History and present status of populations of harp and hooded seals. Biological Conservation 10: 95-118.