

Canadian Wildlife Service  
Arctic Ecology Map Series  
Critical Wildlife areas

Descriptive report

Eureka Sound

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EUREKA SOUND  
(Sheet #2007)

This map sheet encompasses approximately 103,000 square miles of Queen Elizabeth Islands and Arctic Ocean. The northern parts of Ellesmere, Axel Heiberg, and Meighen Islands are included in this area.

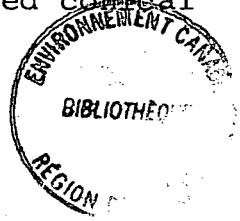
The region of Ellesmere Island to the east of Tanquary Fiord and Antoinette Bay extending through the Lake Hazen area is known as the northern plateau and consists of a dissected upland with a fairly flat top. To the north and west lie the northern mountains. Most of this region is covered by the northern ice cap. The coastal part of northern Ellesmere is not covered by the ice cap and is characterized by unique vegetated transverse valleys running at right angles to the axes of the fiords.

To the south and east of the Greely Fiord system lie the central mountains most of which are ice-capped. The Fosheim Peninsula and area adjacent to the east coast of Canon Fiord is relatively low and very well vegetated.

The portion of Axel Heiberg Island included on this map sheet represents four topographic regions. The western coastal region is generally low but with some hills. The eastern slope is low and rolling with a similar topography to that of the adjacent Fosheim Peninsula. The mountains in the central area are covered by an ice cap. The northern tip of the island is characterized by a low plain broken by smooth-sided conical hills rising to a striking ridge on the north coast.

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Meighen Island is dome-shaped with a generally rolling topography. A small ice cap occurs in the central portion of the island included on this map sheet.

The chief wildlife species present in areas included on this map sheet are Muskoxen, Peary Caribou, Greater Snow Geese, Gyrfalcons, and Arctic Hare.

Small numbers of Muskoxen and Peary Caribou inhabit the vegetated transverse valleys of the northern coast of Ellesmere Island. The same species as well as Greater Snow Geese and Gyrfalcons are more plentiful on Ellesmere's northern plateau and are especially abundant in the vicinity of Lake Hazen.

The Fosheim Peninsula and adjacent eastern slope of Axel Heiberg are extremely rich in all species of wildlife common to the area. The ridge at the northern tip of Axel Heiberg Island provides a nesting area for Gyrfalcons. The western coastal region provides range for Muskoxen and Peary Caribou.

No Eskimo settlements occur in the area encompassed by this map sheet.

Following is the descriptive text for units mapped on this sheet.

UNIT NUMBER

DESCRIPTION

- 1 Within this area, valleys and "saddle passes" running from one fiord to the next may be vital to local wildlife and to scientific knowledge. These "saddle passes" lie approximately at right angles to the axes of the fiords. These areas are vegetated, unique botanically, and provide a measure of habitat for Peary Caribou and Muskoxen (Muir).

Peary Caribou have been observed in the slopes around Phillips Inlet which has been reserved as an International Biological Program area (Inglis).

- 2 Greater Snow Geese numbering in the hundreds use the area around Lake Hazen for breeding purposes. Approximately 230 Geese were seen here one summer (Heyland).

Populations of Muskoxen and Peary Caribou occur in this area (Muir, Harington). The terraced platforms supporting growth of Pucinellia sp. and sedges on the northwest side of Lake Hazen constitute better range than that which occurs on the opposite side (Harington). The Muskoxen population is estimated at 50 - 100 animals (Muir) and Peary Caribou number in the dozens (Curtis).

White phase Gyrfalcons have often been seen around Lake Hazen and are suspected to nest in the highlands area on the northwest side of Lake Hazen (Harington).

- 3 Both anadromous and freshwater populations of Arctic Char inhabit Lake Hazen (Hunter, Nassichuk, Curtis). The fish exhibit an extremely slow growth rate and the harvest quota has been set at 1,000 pounds per year. (Hunter)

Arctic Char use the Ruggles River and Conybeare Fiord as a route for travel between the sea and Lake Hazen (Hunter). Since the river does not completely freeze during winter (Curtis), Char may overwinter in the river as well as in Lake Hazen.

UNIT NUMBER

DESCRIPTION

- 4 Muskoxen are common in this area and have been observed by Muir, Inglis, Curtis, and Nassichuk. The Muskoxen population is thought to be discontinuous from that of Lake Hazen (Muir). Arctic Fox and Rock Ptarmigan are also common in this area (Nassichuk).
- Ekblaw Lake in the northern part of this area has considerable aesthetic value and supports several vegetation communities (Inglis). The lake is also frequented by a number of shorebirds and Greater Snow Geese (Nassichuk).
- 5 This area contains important Muskoxen range (Muir, Curtis) and is also used by breeding Greater Snow Geese (Heyland, Muir).
- 6 This area contains important range for Muskoxen and ponds in the area are used by breeding pairs of Greater Snow Geese (Muir, Inglis, Heyland).
- A band of Peary Caribou was observed in the extreme southwestern part of this area (Nassichuk).
- 7 This area is used extensively by Greater Snow Geese and Muskoxen (Muir).
- This area is considered to be of approximately the same quality as the Schei and Fosheim Peninsulas with regard to their use by breeding Greater Snow Geese. Hundreds of the Geese use the area (Heyland). Approximately 50 Greater Snow Geese were observed nesting in the lowlands at the head of Borup Fiord (Inglis).
- The valleys in this area support more vegetation than the plateaus in the Lake Hazen area due to a more suitable microclimate (Inglis). The Muskoxen population in the area numbers approximately 100 (Heyland).

UNIT NUMBER

DESCRIPTION

- 8           The Fosheim Peninsula contains excellent range for Muskoxen (Muir, Inglis, Jonkel, Kelsall, Harington). Since the entire Fosheim Peninsula supports a population of approximately 1,000 Muskoxen and these are generally distributed in many small bands over the whole area, the area included on this map sheet would have hundreds of the animals (Jonkel).
- Large concentrations of breeding Greater Snow Geese occur in this area (Heyland, Jonkel, Muir, Harington, Inglis, Curtis) with the total population numbering in the hundreds (Heyland).
- Arctic Hare abound on the Peninsula (Muir, Jonkel, Inglis, Curtis, Kelsall, Harington) and have been seen in herds of up to several hundred animals per herd (Curtis, Jonkel). The population of Arctic Hares on the Fosheim Peninsula is estimated at several thousand (Inglis).
- 9           The Schei Peninsula is very similar to the Fosheim with respect to its importance to wildlife. The area contains excellent range for Muskoxen (Muir, Inglis, Jonkel).
- Large numbers of Greater Snow Geese breed here (Heyland, Inglis). In a recent summer, 480 Geese were counted in the area (Heyland).
- 10          This unit delineates important Peary Caribou, Muskoxen, and Greater Snow Geese breeding range.
- Peary Caribou have been observed in this area in the hundreds (Jonkel, Muir). Muskoxen have been observed in smaller numbers (Muir). Tener (1963) who stated that Muskoxen were numerous on the east coast of Axel Heiberg Island from Stor Island north to a point west of Schei Peninsula estimated the total population on the Island to be 1,000 animals.
- Scattered Greater Snow Goose nesting is reported by Kerbes.

UNIT NUMBER	DESCRIPTION
11	Valleys along braided river channels in this unit are used by Peary Caribou (Muir).
12	The lowlands in this area are important Peary Caribou range (Muir).
13	The coastal lowlands in this area constitute important Peary Caribou range (Muir).
14	Approximately 10 Muskoxen and 10 Peary Caribou have been seen on this island using the same range. The use of the same range by these two ungulate species is an unusual and unexplained biophenomenon (Muir).
15	This area provides year-round range for Muskoxen (Muir) and a band of approximately 12 was seen in the northern part of the area by Inglis.
16	This area is a "saddle pass" similar to those described in Unit #1 and is important for the same reasons (Muir).  The area is a proposed International Biological Program site and contains the northern record for three species of plants (Inglis).  Muskoxen move through this pass (Curtis) and a herd of 18 Muskoxen have been observed by Nassichuk.
17	Peary Caribou move through this area. The area also supports a population of Arctic Hare (Inglis).
18	Muskoxen have been observed in this relatively barren area (Harrington).
19	Peary Caribou have been observed in this area (Muir, Inglis) with a population estimated at 200 animals (Muir).

UNIT NUMBER	DESCRIPTION
20	A Glaucous Gull colony numbering 20 - 30 pairs of birds breed here (MacDonald).
21	Gyrfalcons have been observed here and are suspected to nest in the area. (Jonkel)
22	This unit delineates the northern limit of distribution for Walrus. The animals utilizing this range are part of a herd of thousands which occupy Smith Sound and Kane Basin between Ellesmere Island and Greenland (Mansfield).  The unit also delineates the most northern area to which some of the Harp Seals from the Gulf of St. Lawrence migrate (Mansfield, 1967).



REFERENCES

Personal Communications

- J.P. Kelsall  
R.H. Kerbes  
D. Muir  
C.J. Jonkel  
(Canadian Wildlife Service)
- C.R. Harington  
S.D. MacDonald  
(National Museum of Canada)
- D. Heyland  
(Quebec Department of Fish and Game)
- J.G. Hunter  
(Fisheries Research Board of Canada)
- W. Nassichuk  
(Institute of Sedimentary and Petroleum Geology)
- J. Inglis  
(Carleton University, Ottawa)
- M. Curtis  
(McGill University, Montreal)

Reports and Publications

- Mansfield, A.W. 1967. Seals of Arctic and Eastern Canada. Bulletin No. 137. Fisheries Research Board of Canada.
- Tener, J.S. 1963. Queen Elizabeth Islands Game Survey, 1961. Canadian Wildlife Service, Occasional Papers, No. 4.