Key Migratory Bird Terrestrial Habitat Sites in the Northwest Territories

Environment Canada
Canadian Wildlife Service

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KEY MIGRATORY BIRD TERRESTRIAL HABITAT SITES

IN THE NORTHWEST TERRITORIES

Habitat Management Section

Technical Report No. 84-6

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INTRODUCTION

Under the Migratory Birds Convention Act (MBCA) of 1917, the Canadian Wildlife Service (CWS) is responsible for managing populations of migratory birds which occur within Canada. Pursuant to this Act, the CWS administers the Migratory Bird Regulations addressing the harvest and possession of migratory birds and the Migratory Bird Sanctuary Regulations providing for the establishment and management of bird sanctuaries. In addition, the CWS also administers the Canada Wildlife Act (1973). Under this legislation, the CWS may take measures necessary for the protection of any species of non-domesticated animal in danger of extinction or acquire lands for the purposes of wildlife research, conservation, or interpretation. The administration and management of such lands is governed by the Wildlife Area Regulations.

Adequate habitat (both quantity and quality) is fundamental to the conservation of all wildlife species. Therefore, consistent with the above legislation and the Federal Policy on Land Use (1981) the CWS identifies, protects, and manages lands of particular ecological value to wildlife as part of the Canadian national heritage. This document is a first step in identifying those sites within the Northwest Territories (NWT) which are essential to the welfare of various migratory bird species in Canada. It will serve as a statement of CWS interest in these sites and is offered as a guide to the conservation efforts of other agencies and organizations with interests in the NWT.

METHODOLOGY AND RATIONALE

The CWS is committed to the conservation of all species and subspecies of wildlife within the NWT. This document, however, addresses only migratory birds as defined in the MBC Act.

Like the establishment of hunting seasons and harvest limits, the protection of key habitat sites is a population management tool. Such sites are so important that their degradation or destruction could have a significant impact upon a particular population. Since the severity of an impact is manifested in terms of a numerical decline in a population, the importance of a particular site is a function of the portion of a population which it supports for any segment of the species' annual cycle.

The effectiveness of habitat site protection as a management tool, however, is dependent upon a species' biology. The following general statements can be made:

1) populations which are geographically widespread or dispersed widely throughout a variety of habitats are less vulnerable to site-specific threats since only a small portion would be affected. For these species, it would be impractical to control and manage enough habitat to support a significant portion of the population.

2) populations which are concentrated, for any part of the year, are more vulnerable to site-specific threats since a significant portion of the population could be affected. Such habitat sites include staging areas, moulting areas, nesting colonies, and the foraging areas of some species.

3) populations that occupy habitats of restricted geographic area are vulnerable if their habitat is threatened. Certain rare or endangered species are prime examples.

Species, occurring in the NWT, which will be considered within the context of the above statements are listed in Table 1. Population data are presented for all relevant subspecies, wherever possible. Canada geese, however, are considered in terms of population management units. Reliable data are readily available for these units whereas extensive mixing precludes the accurate determination of subspecific population levels.

Although no attempt was made to compare or rank habitat sites, a minimum requirement was established, as a guideline, for their recognition. Sites which support at least 1% of a national population are considered to be key habitat sites. This criterion is not without precedence (Atkinson-Willes 1976, Prater 1976, Fuller 1980). It represents a compromise between recognizing a biologically significant portion of a population and the need to avoid identifying the entire geographical range of a population as key habitat. Despite this low population figure, a maximum of nine sites are recognized for any individual species.

We have relied upon the best available estimates of national and regional populations and the numbers present at each site. This approach is not without limitations. In some cases the only available information is out-dated or limited to a single observation. Although such data are hardly ideal, they do provide an initial identification of sites and an indication of where further information is needed.

The recognition of key habitat sites must be a dynamic, iterative process. The importance of individual sites will fluctuate in response to their utilization by various populations. As a result, the present limits of biologically important areas do not always coincide with existing management boundaries. The following list represents our present understanding of the habitat needs of these populations. As further information becomes available, site importance will be re-evaluated.

Table 1. Population estimates of various migratory bird species and subspecies which occur within the NWT. (Numbers represent breeding pairs unless otherwise indicated).

Species	Subspecies	Population Estimate Canada	NWT	Authority
Northern Fulmar *Fulmarus glacialis*	*minor*	363,000	363,000	Nettleship 1980.
Tundra Swan *Cygnus columbianus*	-	69,000[1,2] 79,000[1,3]	69,000[1,2] 79,000[1,3]	Anon. 1981a.
Trumpeter Swan *Cygnus buccinator*	-	120[4]	2[4]	Brechtel 1982.
Canada Goose *Branta canadensis*				
Pacific[8]	*moffitti*	50,000[1]	-	A. Dzubin, pers. comm.
Short-grass Prairie[7]	*parvipes* *hutchinsii*	157,000[1]	-	Anon. 1979 - 1983.
Rocky Mountain[8]	*moffitti* *maxima*	73,000[1]	-	Anon. 1979 - 1983.

Table 1. Continued.

Hi Line Plains[8]	maxima moffitti	93,000[1]	–	Anon. 1979 - 1983.
Western Prairie[8]	maxima interior	178,000[1]	–	Anon. 1979 - 1983.
Eastern Prairie[8]	interior	177,000[1]	–	Anon. 1979 - 1983
Manitoba Interlake[8]	maxima	45,000[1]	–	D. Caswell, pers. comm.
Tennessee Valley[7]	interior	128,000[1]	–	Anon. 1979 - 1983.
Tall-grass Prairie[7]	parvipes hutchinsii	212,000[1]	–	Anon. 1979 - 1983.
Brant *Branta bernicla*	hrota	87,000[1,2]	87,000[1,2]	Anon. 1979 - 1983
	nigricans	42,000[1,2]	42,000[1,2]	Anon. 1979 - 1983, Anon. 1982b.

Table 1. Continued.

Greater White-fronted Goose *Anser albifrons*	*frontalis*	90,000[1,2]	90,000[1,2]	Anon. 1983.
		128,000[1,3]	128,000[1,3]	
Snow Goose *Anser caerulescens*	*atlantica*	200,000[1]	200,000[1]	Anon. 1981b.
	caerulescens	681,000	622,000	Kerbes 1975, Kerbes 1982, 1983, Kerbes *et al.* 1983, R. Kerbes, pers. comm., Reed *et al.*, pers. comm.
Ross' Goose *Anser rossii*	-	50,000	50,000	Kerbes *et al.* 1983, R. Kerbes, pers. comm.
Whooping Crane *Grus americana* (E)	-	23	23	E. Kuyt, pers. comm.
		70[1,6]	70[1,6]	
Eskimo Curlew *Numenius borealis* (E)	-	20[1,4]	20[1,4]	Gollop and Shier 1978.
Ivory Gull *Pagophila eburnea* (R)	-	1,200	1,200	Thomas 1984.
Ross' Gull *Rhodostethia rosea* (R)	-	10	6	Macey 1981.

Table 1. Continued.

Black-legged Kittiwake *Rissa tridactyla*	*tridactyla*	186,000	95,000	Davis *et al.* 1974, Brown *et al.* 1975, Alliston 1977, Nettleship 1980.
Thick-billed Murre *Uria lomvia*	*lomvia*	1,283,000	1,271,000	Nettleship 1980.
	arra	800[1]	800[1]	Ward 1979.
Black Guillemot *Cepphus grylle*	*ultimus*	75,000[4]	60,000[4]	A. Gaston, pers. comm.

1 - individual birds
2 - spring migration
3 - fall migration
4 - estimated
5 - North American population
6 - world population
7 - a portion of the management unit breeds in the NWT
8 - a portion of the management unit moults in the NWT
9 - average of last five years
E - endangered species
R - rare species

Individual site summaries have been prepared according to the following format:

NAME: A prominent topographical feature.

NUMBER: A number which references each site on the accompanying geographic index map of the NWT.

LOCATION: The latitude and longitude of the approximate geographic centre of each site.

SIZE: The approximate area, in square kilometres, of each site. For most seabird colonies, this descriptor is not applicable. Therefore, the length of nesting cliff is also considered to be the area of each site. The indicated boundaries represent the limits of biologically important sites. Management boundaries have not been proposed.

DESCRIPTION: A brief description of the site, indicating: its location relative to prominent topographical or man-made features, prominent topographical features, and dominant vegetation types.

BIOLOGICAL VALUES: Relevant species summaries including: numbers present, seasonal occupation and activities (nesting, staging, moulting, foraging, etc.) which occur at the site. Supplementary information such as the presence of other wildlife and features

of the plant communities which would increase our understanding of the site is also included.

SENSITIVITIES: Types of activities which could destroy or degrade the site.

KNOWN CONFLICTS: Present or proposed activities which could have a negative impact on the site.

STATUS: The legal or formally recognized status of the site.

REFERENCES: Relevant background information plus literature cited in the summary.

MAP: Each site summary is accompanied by an appropriate map. The standard mapping conventions are:

●●●●●●● - location of a colony. For seabird colonies, this symbol also delimits key habitat.

 - extent of a key habitat site.

 - a legally designated area such as a sanctuary or national park.

 - area of nesting concentration.

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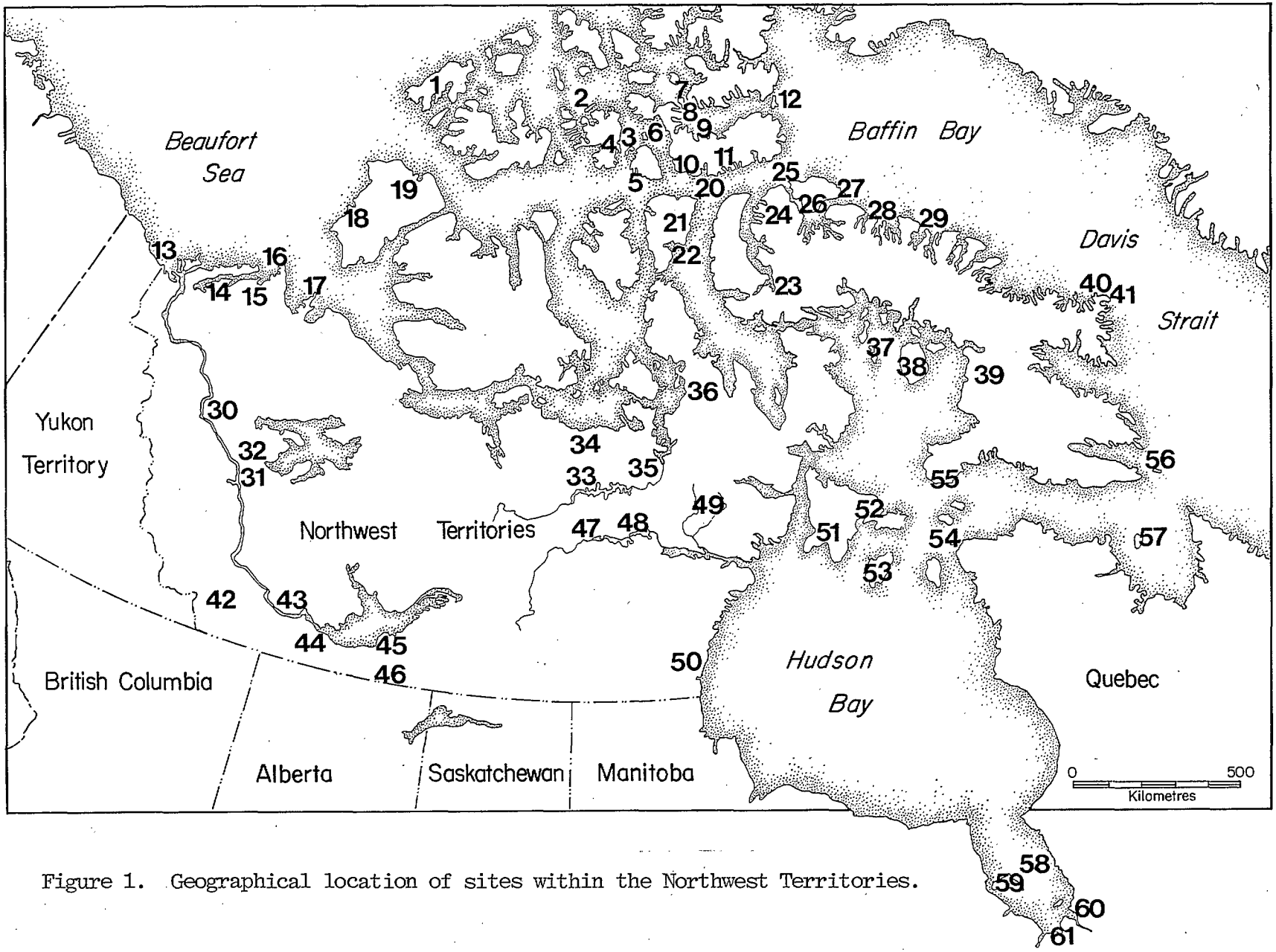

Figure 1. Geographical location of sites within the Northwest Territories.

ALPHABETIC INDEX OF SITES

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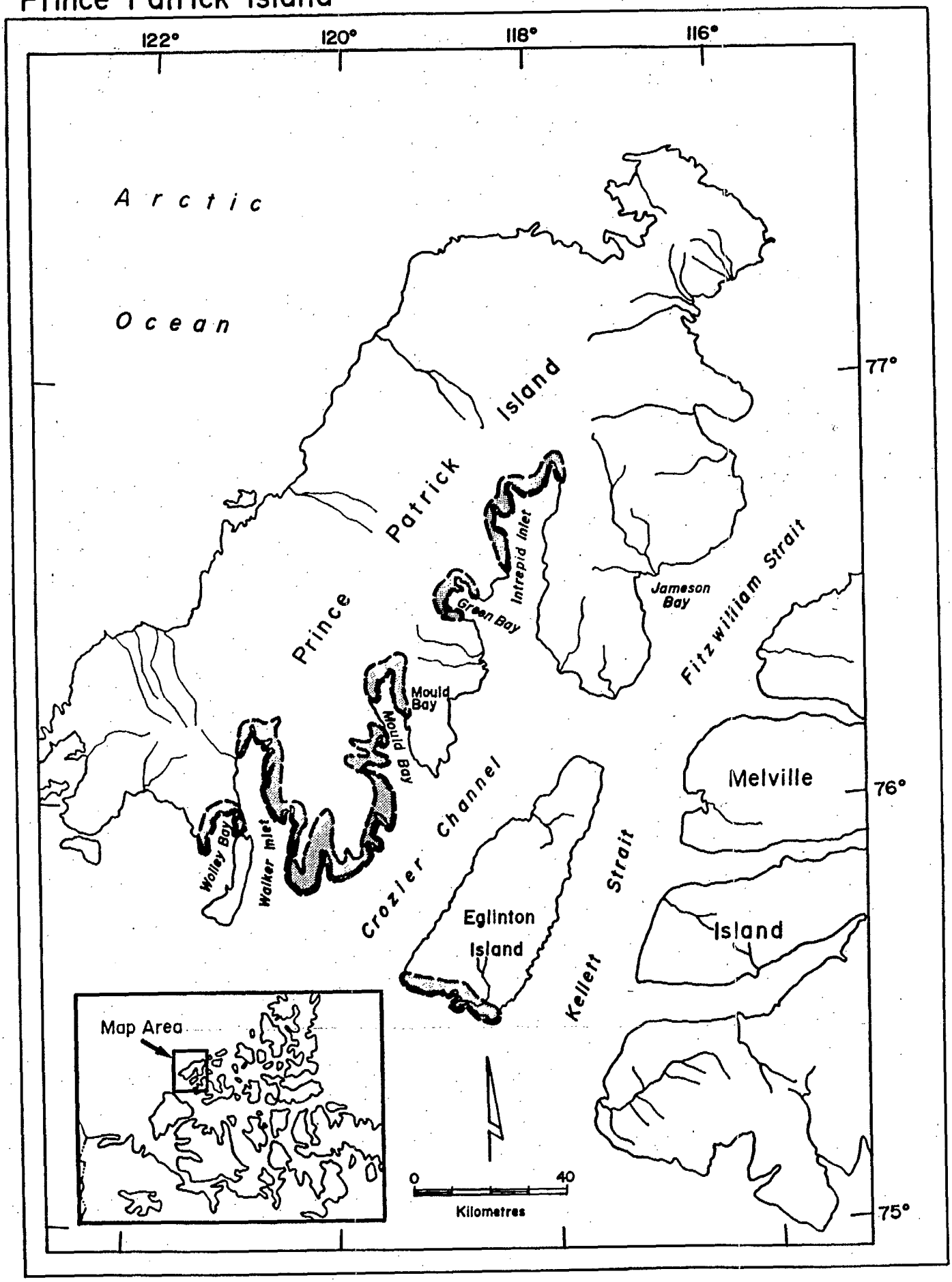
Prince Patrick Island



NAME: PRINCE PATRICK ISLAND

NUMBER: 1

LOCATION: 76°15'N, 119°30'W

SIZE: 1,115 square kilometres

DESCRIPTION:

Prince Patrick Island lies at the western edge of the Queen Elizabeth Islands. Eglinton Island, which lies between Prince Patrick and Melville islands, is surrounded by Crozier Channel to the west and Kellett Strait to the east. The site includes the lowlands at the head of Wooley Bay, the coastal areas of Walker Inlet, Mould Bay, Intrepid Inlet, and the southern coast of Eglinton Island.

Devonian bedrock surrounds much of Wooley and Mould bays (Tozer and Thorsteinsson 1964) whereas Jurassic and Cretaceous sandstones and shales predominate near Intrepid Inlet. Unlike most of the island, south and southeastern Prince Patrick Island exhibits pronounced relief. Escarpments, sandstone bluffs, and sea cliffs reach elevations of 80 m above sea level (Miller et al. 1977). Southern Eglinton Island has limited relief.

Vegetation is sparse throughout most of the island, and many areas approach polar desert conditions (Tozer and Thorsteinsson 1964). The lowland tundra sites are more heavily vegetated and support habitats of grasses, mosses, and sedges (MacDonald 1954).

A meteorological station with an airstrip is situated at Mould Bay.

BIOLOGICAL VALUES:

The coastal lowlands are important nesting and moulting areas for brant. Handley (1950) suggested that both subspecies (nigricans and hrota) were represented on Prince Patrick Island. It now appears that these brant are a

distinct and homogeneous local group intermediate in appearance between Atlantic and black brant (Boyd and Maltby 1979).

In 1973, approximately 530 birds (breeders and non-breeders), were noted between Wooley Bay and Intrepid Inlet. However, in 1974 approximately 2,600 birds were observed in the same areas and a further 855 birds were noted along the southern coast of Eglinton Island. All of these birds were moulting for few brant nested during the 1974 season (Boyd and Maltby 1979). Reliable and up-to-date estimates of the size of this breeding population are needed for available evidence suggests that numbers on the principal wintering area (Puget Sound, Washington) have fallen considerably since 1974 (H. Boyd pers. comm.)

Brant arrive by early June (MacDonald 1954) and begin departing by early August. Fall migration continues until the end of the month (Handley 1950).

These areas are also used by Peary caribou; mainly in the summer months (Miller et al. 1977). The largest concentrations of muskox on Prince Patrick Island were noted in the Mould Bay-Intrepid Inlet area (Miller et al. 1977).

Ringed seals are common in the offshore waters of Fitzwilliam Strait (Beak Consultants Ltd. 1975).

SENSITIVITIES:

Brant are sensitive to disturbance and degradation of their lowland habitats.

KNOWN CONFLICTS:

Seismic activity and some drilling has occurred throughout the area (Beak Consultants Ltd. 1975, Urquhart 1982).

STATUS:

None.

REFERENCES:

Beak Consultants Ltd. 1975. Wildlife surveys, Cape Grassy. A pre-operational study of the distribution and abundance of wildlife in the Cape Grassy area. Unpubl. Rept., Beak Consultants Ltd. for Panarctic Oils Ltd., Calgary. 15 pp.

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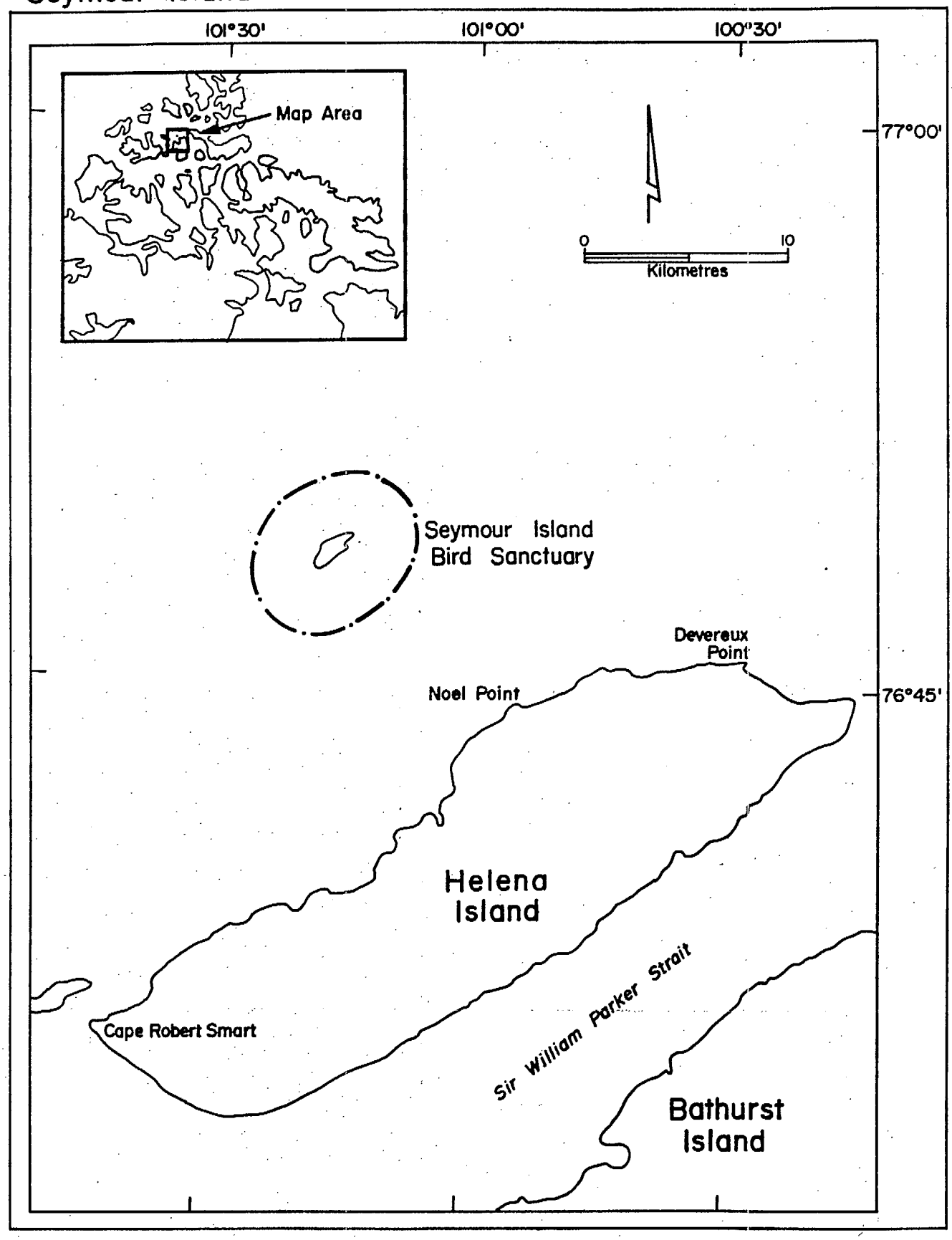
Seymour Island



NAME: SEYMOUR ISLAND

NUMBER: 2

LOCATION: 76°48'N, 101°16'W

SIZE: 8 square kilometres

DESCRIPTION:

Seymour Island, located approximately 30 km to the north of Bathurst Island, "appears as a tiny reef-like projection above the pack-ice in the Berkeley Group of islands" (Nettleship and Smith 1975). It is less than 3 km long and has a maximum elevation of 28 m. Raised beaches occur over much of the island and several freshwater ponds are present. The sparse vegetation cover consists primarily of mosses and lichens.

BIOLOGICAL VALUES:

Seymour Island, with a population of 150 breeding pairs, is the most important nesting site in Canada for the ivory gull. It is the largest known colony in the Canadian Arctic (Nettleship 1980), comprising over 12% of the known breeding population in Canada. This site is also a unique breeding habitat for ivory gulls in Canada. Unlike all other colonies, which occur on nunataks in glacier fields or on rocky limestone plateaus, the birds in this colony breed on raised beaches.

Ivory gulls occupy this site from the end of May to September.

SENSITIVITIES:

Ivory gulls are intolerant of disturbance during the breeding season. Aircraft or human interference could seriously jeopardize their breeding success and the future of the colony. Sheltered bays and ponds on the island which are used as feeding areas could be adversely affected by oil spills.

KNOWN CONFLICTS:

Increased hydrocarbon exploration in the area, could significantly increase marine and air traffic about the island.

STATUS:

Migratory Bird Sanctuary.

REFERENCES:

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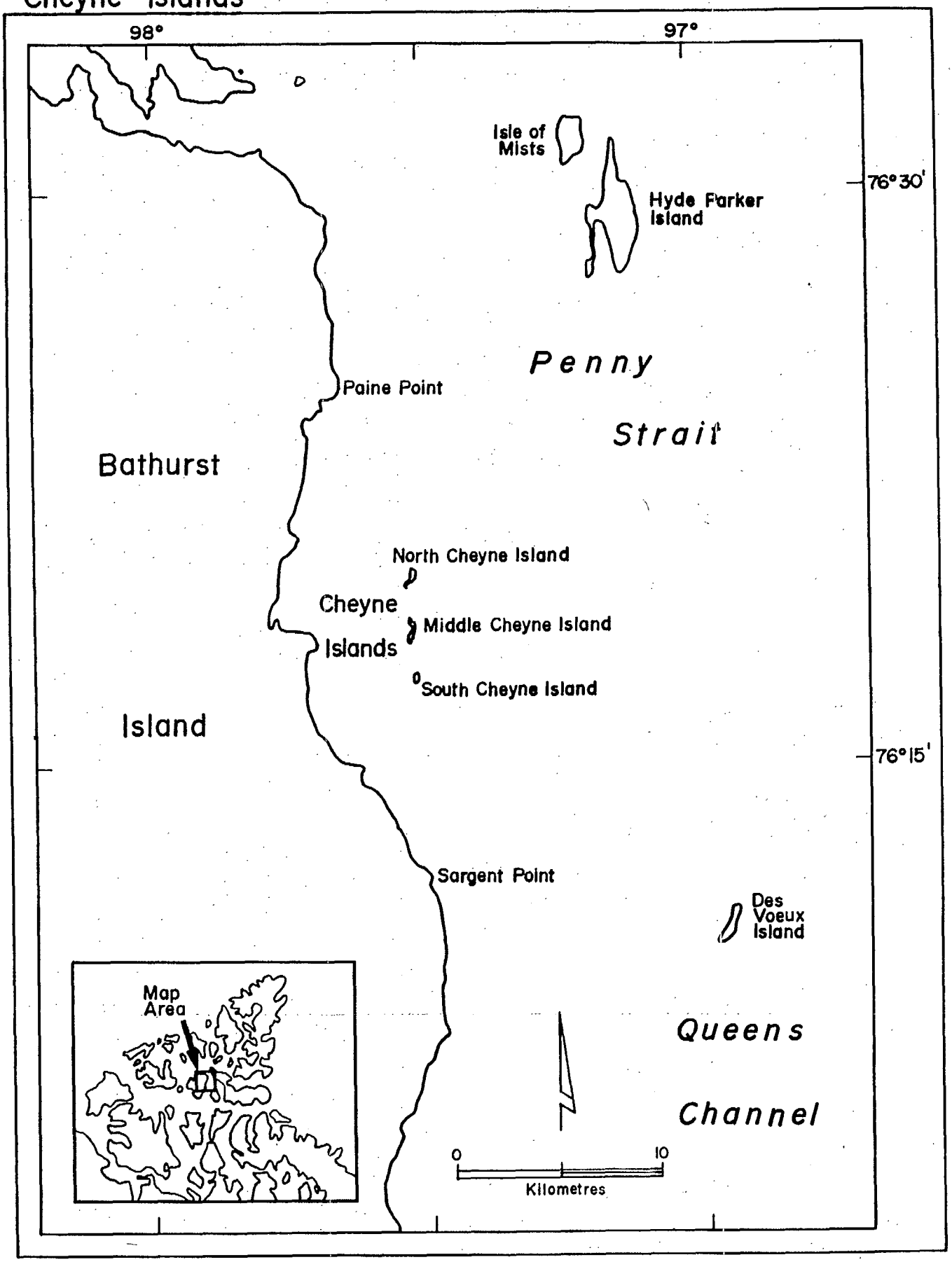
Cheyne Islands
98°
97°
Isle of Mists
Hyde Parker Island
76°30'
Penny
Strait
Paine Point
Bathurst
North Cheyne Island
Cheyne
Islands
Middle Cheyne Island
South Cheyne Island
Island
76°15'
Sargent Point
Des Voeux Island
Map Area
Queens
Channel
0
10
Kilometres

NAME: CHEYNE ISLANDS

NUMBER: 3

LOCATION: 76°18'N, 97°30'W

SIZE: 0.73 square kilometres

DESCRIPTION:

The Cheyne Islands are three small alluvial islands located in Penny Strait about 5 km off the eastern coast of Reindeer Bay, Bathurst Island. They are of low relief; none of the islands exceed 3m above sea level.

Several small polynyas develop, in May or June, along the eastern side of Penny Strait (Stirling and Cleator 1981).

BIOLOGICAL VALUES:

The Cheyne Islands support the only confirmed nesting site of Ross' gulls in the NWT. In 1976, 3 pairs nested on the islands and in 1978, 6 pairs were noted among approximately 20 birds which were present (Macey 1981). Although nests were located in 1976 and 1978, the breeding attempts appeared to be unsuccessful. No nests were found in 1979 but a juvenile was seen flying over Bathurst Island (Macey 1981).

All three islands are used for nesting although the gulls do not breed regularly in any one place. Unlike other breeding grounds where nests are constructed on marshy tundra, the gulls nest directly on gravel reefs.

The birds are paired upon arrival in early June (Macey 1981). Nesting is completed by mid-July.

The polynyas are important feeding areas for the gulls (Macey 1981).

SENSITIVITIES:

Ross' gulls are sensitive to disturbance.

KNOWN CONFLICTS:

None.

STATUS:

None.

REFERENCES:

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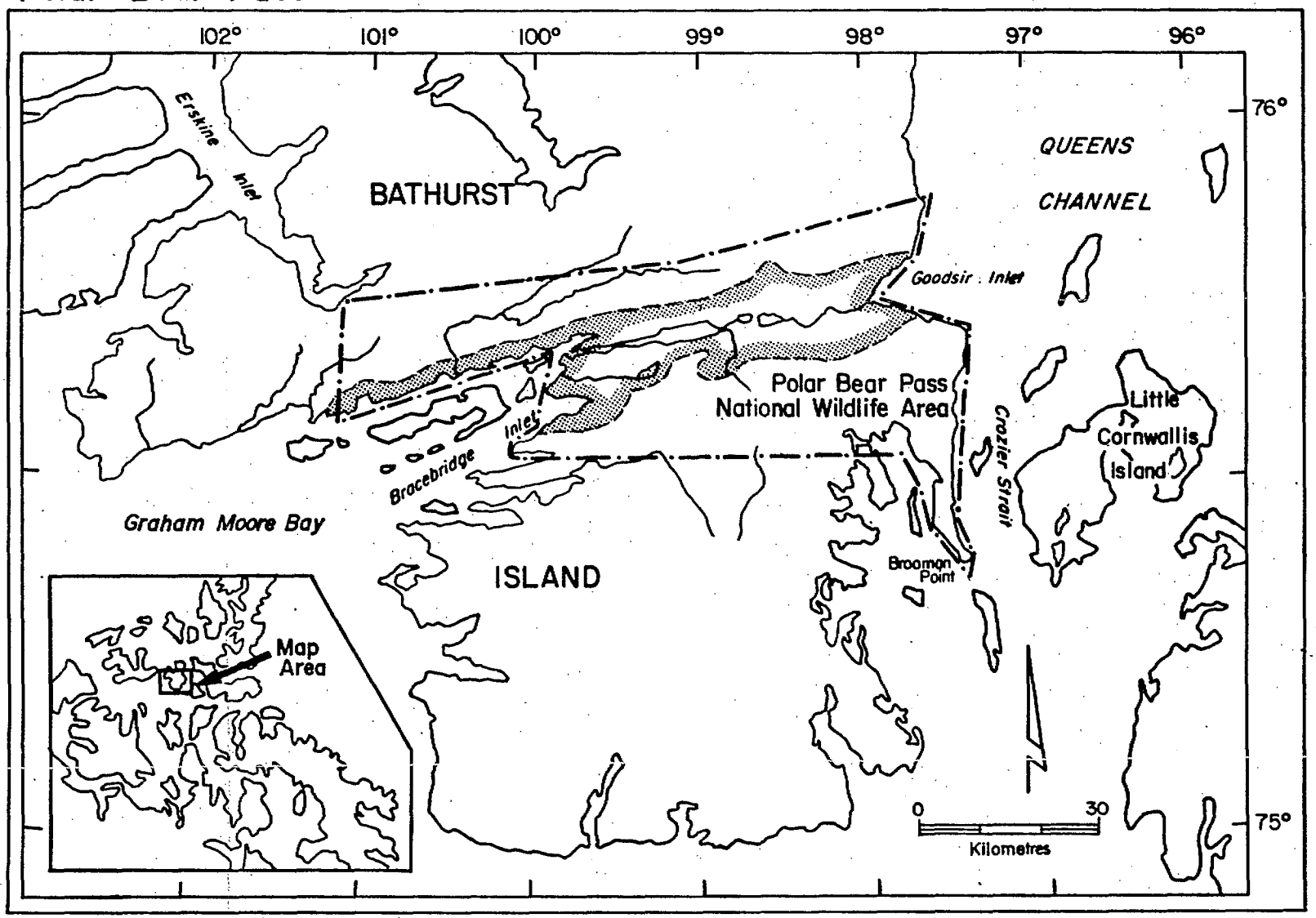
Polar Bear Pass



NAME: POLAR BEAR PASS

NUMBER: 4

LOCATION: 75°43'N, 98°40'W

SIZE: 810 square kilometres

DESCRIPTION:

The area designated as "Polar Bear Pass" encompasses the lowlands between Bracebridge Inlet and Goodsir Inlet, Bathurst Island. The site also includes the entire Brooman Peninsula, the surrounding uplands, and offshore marine areas.

The hills north of this lowland valley are of Ordovician to Devonian origin and consist mainly of limestones and shales (Blake 1964). Polar Bear Pass consists of numerous tundra ponds and lakes and vegetated stream valleys. The lowlands are characterized by permafrost features including frost mounds, low and high-centered polygons, and patterned ground. Vegetation in the low-lying areas consists of lichens interspersed with mosses, grasses, sedges, and flowering plants. Higher elevations approach polar desert conditions, being almost devoid of vegetation. Large areas of fellfields and limestone felsenmeers are common.

Several archaeological sites of the Thule culture, are found within the site. Since 1968, the National Museums of Canada has operated a research station in the area, providing valuable long-term information on the dynamics of a High Arctic ecosystem.

BIOLOGICAL VALUES:

Polar Bear Pass is the most important area for birds on Bathurst Island. Thirty-six of the 53 species of birds recorded within the site also nest there (S. MacDonald pers. comm.). Representative species include king eider, greater snow goose, gulls, jaegers, and shorebirds, especially the sanderling.

Lemmings, arctic fox, muskoxen, and Peary caribou are the most abundant of 8 mammal species observed on the site (Nettleship and Smith 1975). In spring and summer, polar bears regularly pass through the area enroute to Graham Moore Bay which is an important feeding area (Stirling et al. 1979). Ringed seals and walrus occur in offshore waters (Finley et al. 1974) and the latter hauls out on Brooman Point.

SENSITIVITIES:

The wetland area is susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost. Wildlife in the area are sensitive to disturbance.

Pollution of offshore waters would result in the degradation of marine habitats.

KNOWN CONFLICTS:

None.

The extinguishment of a hydrocarbon exploration lease and a mineral claim within the site is presently under negotiation.

STATUS:

Polar Bear Pass is pending designation as a National Wildlife Area. Boundaries of the area coincide with the limits of a proposed IBP site (Nettleship and Smith 1975).

Polar Bear Pass is a RAMSAR site - a Wetland of International Importance (Anon. 1982).

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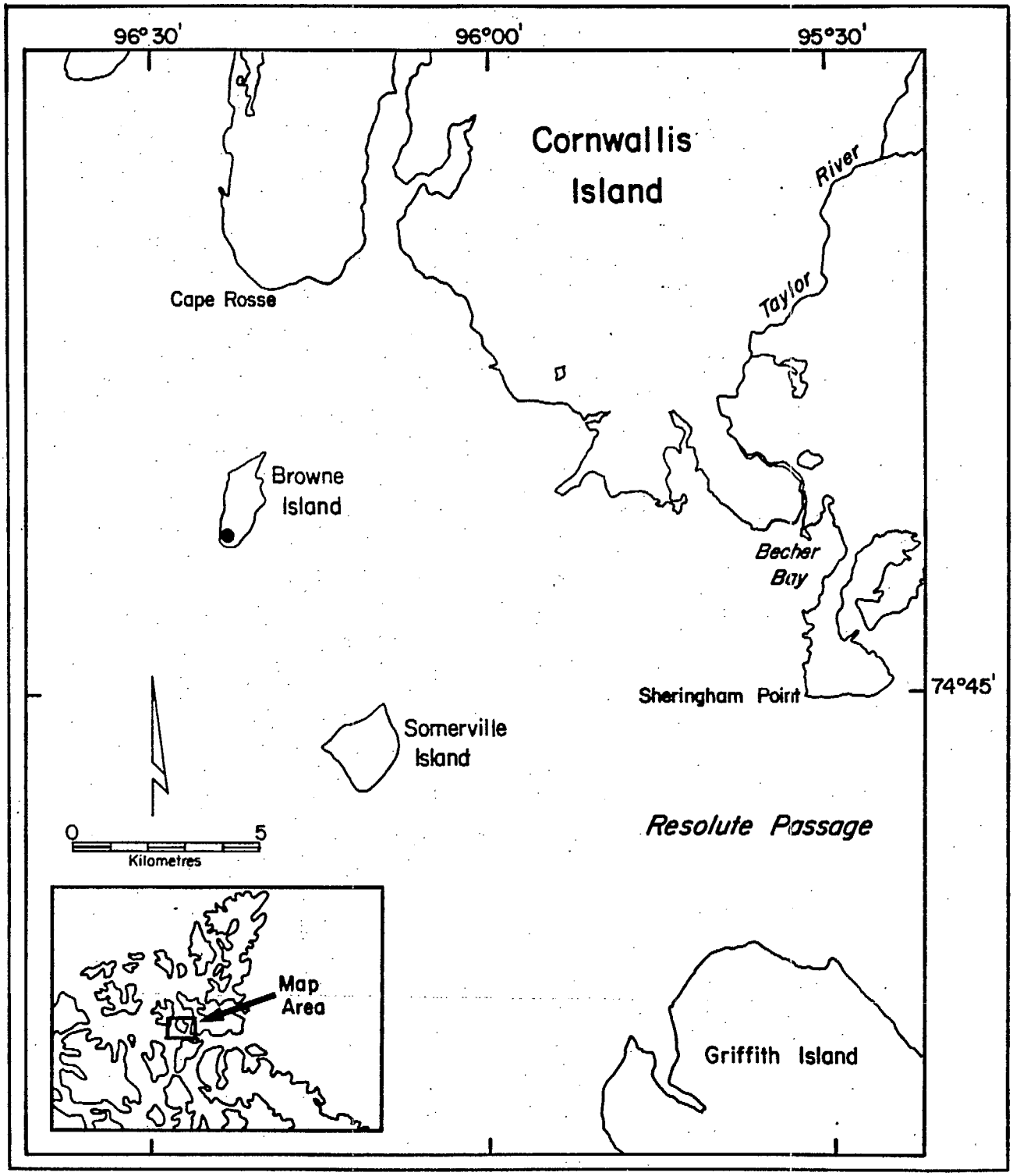
Stirling, I., R.E. Schweinsburg, W. Calvert, and H.P.L. Kiliaan. 1979. Population ecology of the polar bear along the proposed Arctic Islands Gas Pipeline route. ESCOM Rept. No. A1-24, Dept. Indian North. Aff., Ottawa. 93 pp.

Browne Island



NAME: BROWNE ISLAND

NUMBER: 5

LOCATION: 74°49'N, 96°21'W

SIZE: 1 square kilometre

DESCRIPTION:

Browne Island is located in western Barrow Strait about 12 km southwest of Cornwallis Island. The southeastern coastline is bordered by cliffs which reach elevations of over 500 m above sea level. Gentle slopes prevail in the north-central part of the island where raised beach sequences with coarse sands and gravels are common.

BIOLOGICAL VALUES:

A colony of approximately 2,000 pairs of black-legged kittiwakes nest on the south face of the island (Alliston et al. 1976). This number represents approximately 1% of the Canadian population and 2% of the NWT population of black-legged kittiwakes. A decrease in colony size, to 500 pairs, occurred in 1975 and seemed to be related to late ice break-up (Alliston et al. 1976). Further surveys are needed to determine the present size of this colony.

Kittiwakes reach their nesting sites in this area by mid-May. Feeding occurs at ice edges in Barrow Strait where small fish, crustaceans, and marine invertebrates predominate. Most birds have left the area by late September.

Thayer's gulls and glaucous gulls are also found on the island (Alliston et al. 1976). The most abundant marine mammal in offshore waters is the ringed seal although walrus and polar bear are also present.

SENSITIVITIES:

Seabirds are susceptible to disturbance and pollution of offshore waters.

KNOWN CONFLICTS:

None.

STATUS:

None.

REFERENCES:

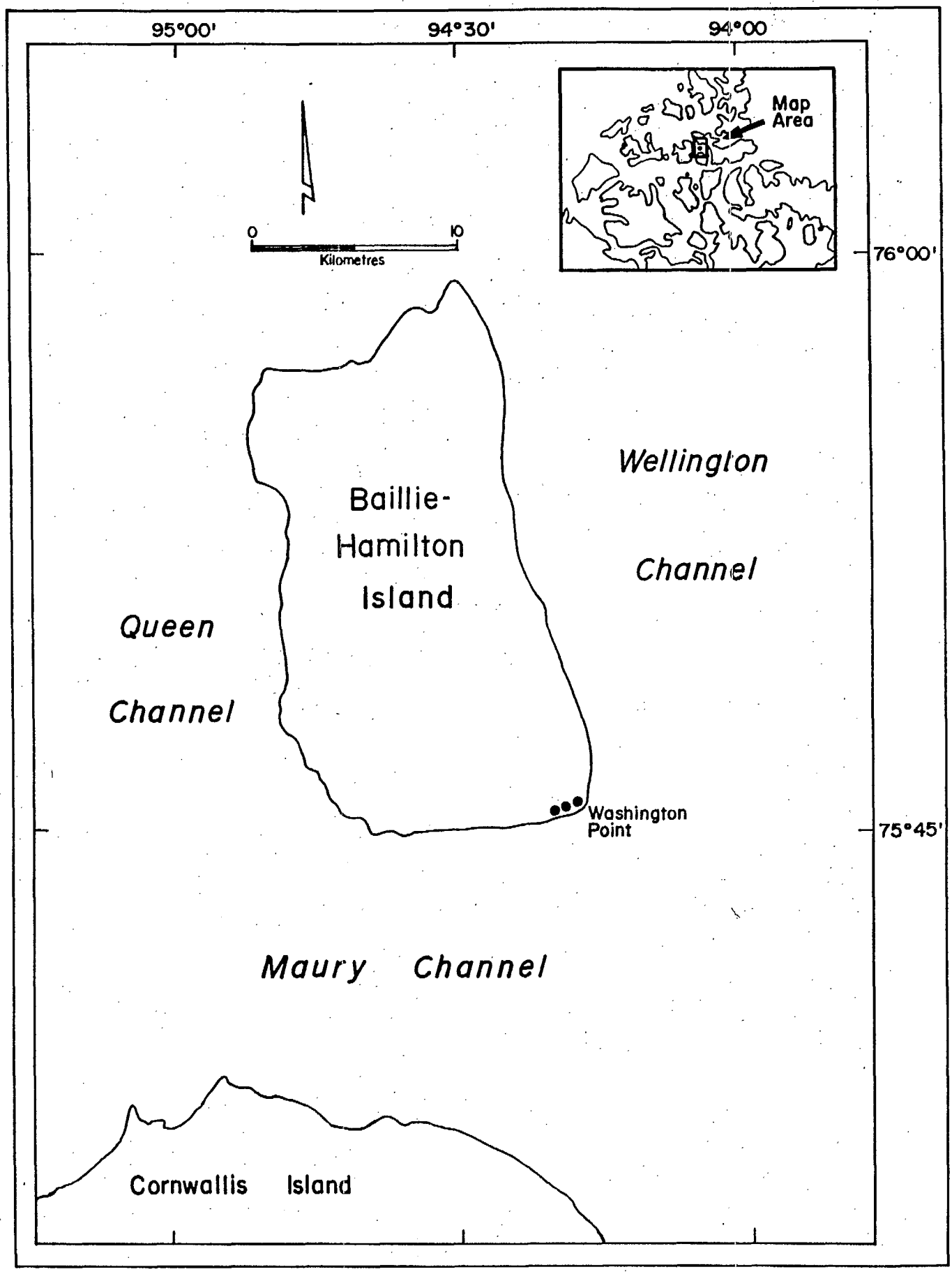
Alliston, W.G., M.S.W. Bradstreet, M.A. McLaren, R.A. Davis, and W.J. Richardson. 1976. Numbers and distributions of birds in the central District of Franklin, NWT, June-August, 1975. Unpubl. Rept., LGL Ltd. for Polar Gas Project, Toronto. 583 pp.

Finley, K.J., R.A. Davis, and W.J. Richardson. 1974. Preliminary studies of the numbers and distribution of marine mammals in the central Canadian Arctic - 1974. Unpubl. Rept., LGL Ltd. for Polar Gas Project, Toronto. 68 pp.

Milne, A.R., and B.D. Smiley. 1978. Offshore drilling in Lancaster Sound: possible environmental hazards. Unpubl. Rept., Dept. Fish. Environ., Sidney. 95 pp.

Stirling, I., and H. Cleator. (Eds.) 1981. Polynyas in the Canadian Arctic. Occ. Paper No. 45, Can. Wildl. Serv., Edmonton. 70 pp.

Baillie - Hamilton Island



NAME: BAILLIE-HAMILTON ISLAND

NUMBER: 6

LOCATION: 75°45'N, 94°17'W

SIZE: 1 square kilometre

DESCRIPTION:

Baillie-Hamilton Island is situated approximately 15 km north of Cornwallis Island. It is a flat-topped island with steep coastal cliffs which reach 215 m above sea level. The cliffs at Washington Point, on the southeast corner, are composed of Lower Devonian limestone (Thorsteinsson 1973).

In January, a polynya develops north of Baillie-Hamilton Island and remains until break-up (Stirling and Cleator 1981).

BIOLOGICAL VALUES:

Approximately 3,000 pairs of black-legged kittiwakes, representing nearly 2% of the Canadian population and over 3% of the NWT population, nest on the cliffs at Washington Point (Netttleship 1980). This island is one of the most northern kittiwake breeding sites in the eastern Canadian Arctic (Nettleship and Smith 1975).

The kittiwakes arrive at the nesting cliffs about mid-May and leave by early October.

A few glaucous gulls and black guillemots also breed at this site.

SENSITIVITIES:

Disturbance at the colony or pollution of marine foraging areas could adversely affect the birds.

KNOWN CONFLICTS:

None.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Nettleship, D.N. 1976. Studies of seabirds at Prince Leopold Island and vicinity, Northwest Territories. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 24 pp.

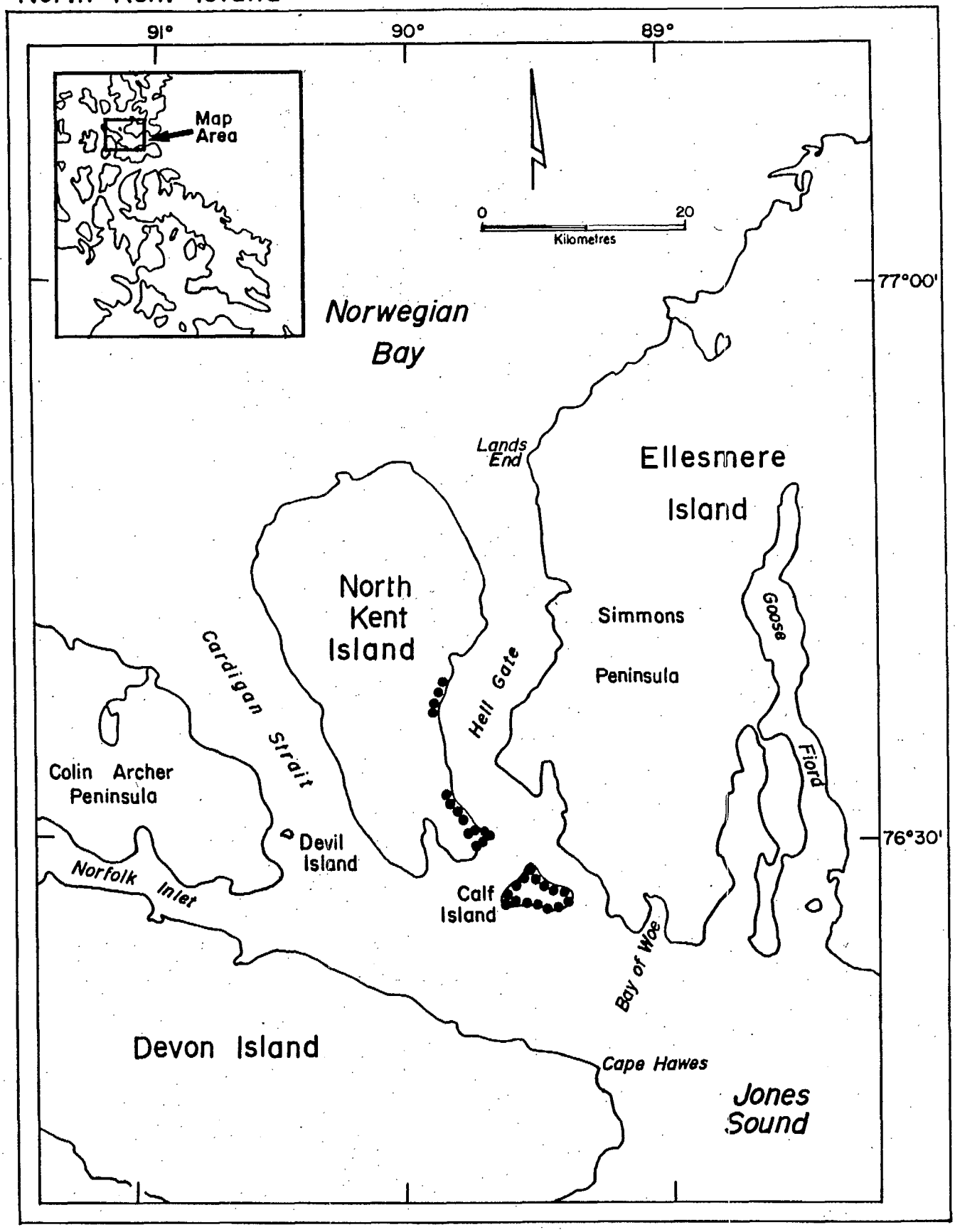
Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Stirling, I., and H. Cleator. (Eds.) 1981. Polynyas in the Canadian Arctic. Occ. Paper No. 45, Can. Wildl. Serv., Edmonton. 70 pp.

Thorsteinsson, R. 1973. Geology of the Baillie-Hamilton Island sheet, NTS 58G. Open file 139, Geol. Surv. Can., Ottawa.

North Kent Island



NAME: NORTH KENT ISLAND

NUMBER: 7

LOCATION: 76°30'N, 89°40'W

SIZE: 16 square kilometres

DESCRIPTION:

This site includes North Kent Island and Calf Island. North Kent Island lies between Colin Archer Peninsula on northwest Devon Island and Simmons Peninsula on southwest Ellesmere Island. The flat-topped, ice-capped island, rises to a maximum height of 600 m above sea level. Steep cliffs occur around most of the island but decrease to a gentle slope at the north end.

Calf Island is a small table-topped island, surrounded by cliffs, situated 5 km southeast of the southern tip of North Kent Island.

Strong currents, flowing from Norwegian Bay to Jones Sound, create a recurring polynya around these islands (Stirling and Cleator 1981).

BIOLOGICAL VALUES:

Approximately 9 km of cliffs along the east side and southeastern end of North Kent Island support four large concentrations of black guillemots. Approximately 3,000 pairs are found in this colony (Nettleship 1980).

Another colony, comprising about 5,000 pairs, occupies the entire periphery of Calf Island (Nettleship 1980).

In total, these colonies represent the second largest concentration of black guillemots in the NWT and constitute approximately 11% of the Canadian population. The site is occupied from May to September.

A common eider colony, of 160 nests, occurs on the talus beach at the southwest tip of Calf Island. A few colonies of glaucous and Thayer's gulls also occur on the island (R. Prach pers. comm.).

Marine mammals including walrus, ringed seal, bearded seal, and narwhal are also attracted to the polynya (Stirling and Cleator 1981).

SENSITIVITIES:

The guillemots are susceptible to disturbance and pollution of their marine foraging areas.

KNOWN CONFLICTS:

None.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

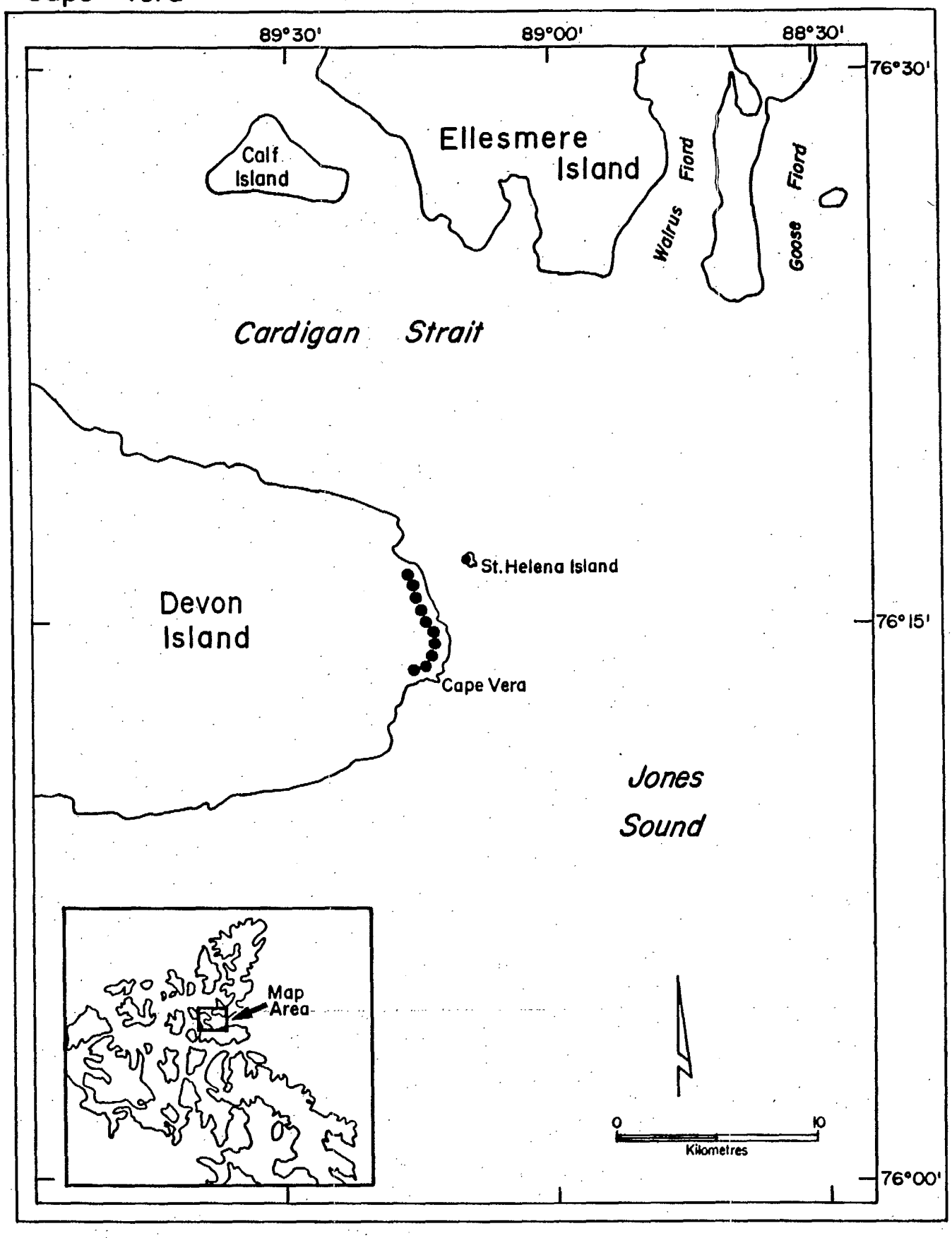
REFERENCES:

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Stirling, I. and H. Cleator. (Eds.) 1981. Polynyas in the Canadian Arctic. Occ. Paper No. 45, Can. Wildl. Serv., Edmonton. 70 pp.

Cape Vera


89°30'
89°00'
88°30'
76°30'
Calf Island
Ellesmere Island
Walrus Fiord
Goose Fiord
Cardigan Strait
St. Helena Island
Devon Island
76°15'
Cape Vera
Jones Sound
Map Area
0
10
Kilometres
76°00'

NAME: CAPE VERA

NUMBER: 8

LOCATION: 76°15'N, 89°15'W

SIZE: 8 square kilometres

DESCRIPTION:

Cape Vera is situated in western Jones Sound at the tip of Colin Archer Peninsula, northwest Devon Island. It has a prominent cliff coastline which rises to an elevation of 245 m above sea level. A scree beach slopes from the base of the steep cliffs to the sea shore.

St. Helena Island is a small, flat-topped island 8 km east of Cape Vera. The topography is a low rock-shelf escarpment with a small eastward-facing cliff near the centre.

A polynya occurs in Cardigan Strait, between North Kent Island and Cape Vera, during most of the year (Stirling and Cleator 1981).

Inuit archaeological sites occur near the base of Cape Vera (R. Prach pers. comm.).

BIOLOGICAL VALUES:

An estimated 7,500 pairs of northern fulmars, 2% of the Canadian population, nest on grassy cliff ledges at Cape Vera (R. Prach pers. comm.). The colony extends along 8 km of cliff face. In addition, hundreds of black guillemots breed on St. Helena Island (Nettleship 1980).

Northern fulmars appear in the area in mid-April and the adults and young leave the breeding cliffs by early October.

The polynya is an important feeding area for the seabirds when they arrive in the area. It is also significant for wintering walrus, ringed seals, bearded seals, and polar bear (Stirling and Cleator 1981).

SENSITIVITIES:

Seabirds are sensitive to disturbance and pollution of their marine habitat.

KNOWN CONFLICTS:

None.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

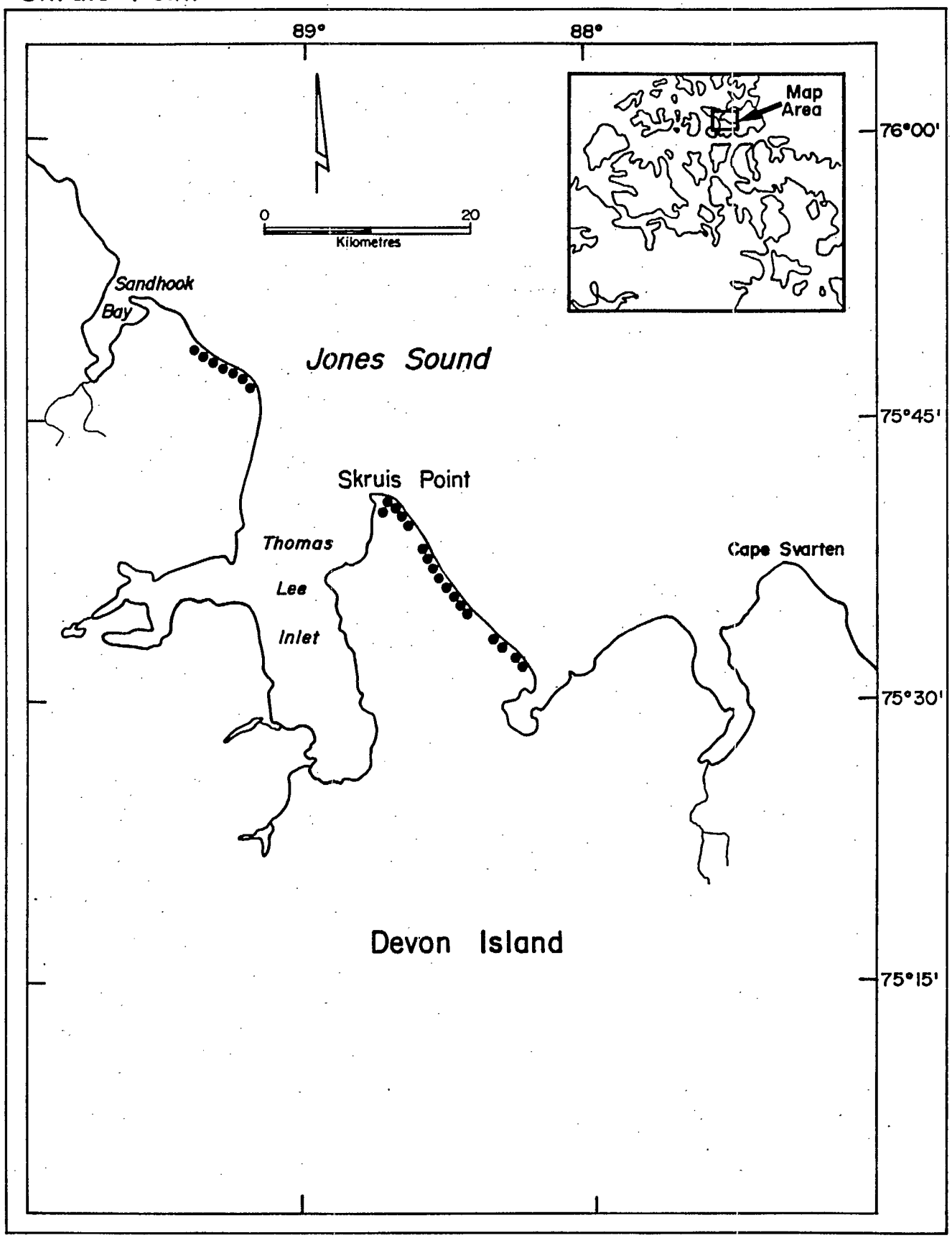
REFERENCES:

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Stirling, I., and H. Cleator. (Eds.) 1981. Polynyas in the Canadian Arctic. Occ. Paper No. 45, Can. Wildl. Serv., Edmonton. 70 pp.

Skruis Point



NAME: SKRUIS POINT

NUMBER: 9

LOCATION: 75°40'N, 88°43'W

SIZE: 31 square kilometres

DESCRIPTION:

Skruis Point occurs midway along the north coast of Devon Island. The steep cliffs which surround Thomas Lee Inlet, reach heights of over 150 m in the Skruis Point area. Inland heights vary from 75 m at the south end of the site to 230 m in the north. The underlying bedrock of the region is of Ordovician origins (Fortier et al. 1963).

BIOLOGICAL VALUES:

Approximately 10,000 pairs of black guillemots breed at this site. This colony, which represents over 13% of the Canadian population, is the largest colony of this species in the Canadian Arctic. The colony stretches over 9 km of cliffs along the northwest shores of the inlet and along 22 km of cliffs southeast of Skruis Point (Nettleship 1980).

The colony sites are occupied from mid-May to early September.

This area serves as a maternity denning area and summer retreat for polar bears (Stirling et al. 1979). Other marine mammals such as ringed seals and walruses are also common.

SENSITIVITIES:

Black guillemots are susceptible to disturbance at their colony and pollution of their marine feeding areas.

KNOWN CONFLICTS:

None.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

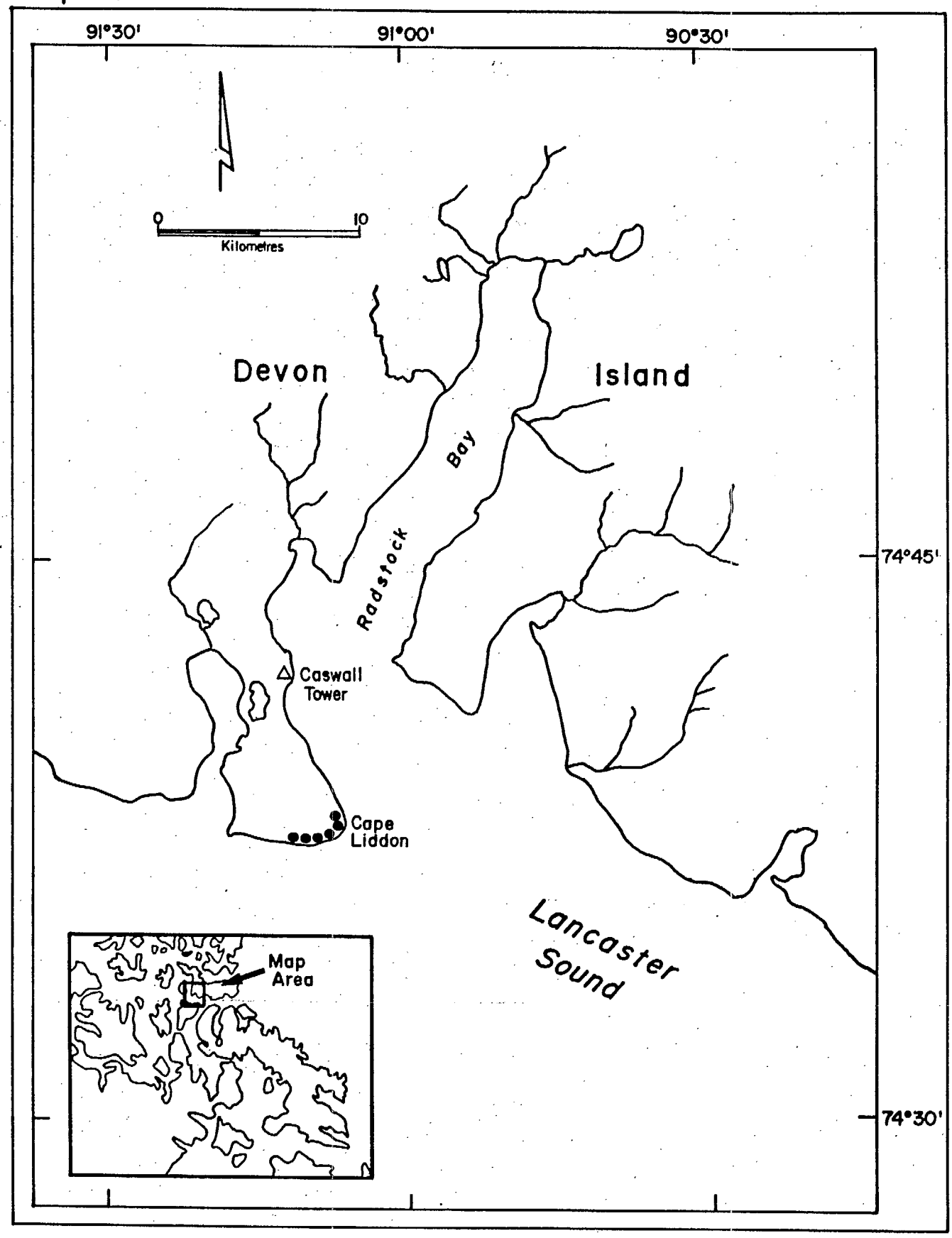
Fortier, Y.O., et al. 1963. Geology of the north-central part of the Arctic Archipelago, Northwest Territories (Operation Franklin). Memoir 320, Geol. Surv. Can., Ottawa. 671 pp.

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Stirling, I., R.E. Schweinsburg, W. Calvert, and H.P.L. Kiliaan. 1979. Population ecology of the polar bear along the proposed Arctic Islands Gas Pipeline route. ESCOM Rept. No. A1-24, Dept. Indian North. Aff., Ottawa. 93 pp.

Cape Liddon


91°30'
91°00'
90°30'
0
10
Kilometres
Devon
Island
Radstock
Bay
74°45'
Caswall
Tower
Cape
Liddon
Lancaster
Sound
Map
Area
74°30'

NAME: CAPE LIDDON

NUMBER: 10

LOCATION: 74°37'N, 91°10'W

SIZE: 3.5 square kilometres

DESCRIPTION:

Cape Liddon is a promontory that juts into Barrow Strait on the west side of Radstock Bay, southwest Devon Island. This part of the plateau on Devon Island is characterized by precipitous cliffs of Silurian limestone which rise over 300 m above sea level (Fortier et al. 1963). Caswall Tower is a high rock stack overlooking Radstock Bay approximately 9 km north of Cape Liddon.

Archaeological sites, including three Inuit houses and 10 to 15 tent rings exist in the area south of Caswall Tower (Nettleship and Smith 1975).

BIOLOGICAL VALUES:

A colony of approximately 10,000 pairs of northern fulmars, representing about 3% of the Canadian population, occupies 3.5 km of cliff ledges at Cape Liddon. A few black guillemots nest around Caswall Tower (Nettleship 1980). The fulmars appear in mid-April and the adults and young leave the breeding cliffs by early October. The highly productive waters of Lancaster Sound and Barrow Strait provide important feeding areas for these seabirds (Nettleship and Gaston 1978).

Large numbers of white whales, narwhals, ringed seals, and harp seals migrate through Lancaster Sound. Polar bears use the indented southern coast of Devon Island for maternity denning and as a summer retreat . Radstock Bay is an important summer retreat for polar bears (Schweinsburg et al. 1982).

SENSITIVITIES:

Breeding seabirds are sensitive to disturbance and pollution of their marine feeding areas.

KNOWN CONFLICTS:

Proposed hydrocarbon exploration and tanker traffic in Lancaster Sound is a potential source of disturbance and marine pollution (Anon. 1982).

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Anonymous. 1982. The Lancaster Sound region: 1980-2000. Green Paper., Dept. Indian Aff. North. Dev., Ottawa. 102 pp.

Fortier, Y.O., et al. 1963. Geology of the north-central part of the Arctic Archipelago, Northwest Territories (Operation Franklin). Memoir 320, Geol. Surv. Can., Ottawa. 671 pp.

Milne, A.R., and B.D. Smiley. 1978. Offshore drilling in Lancaster Sound: possible environmental hazards. Unpubl. Rept., Dept. Fish. Environ., Sidney. 95 pp.

Nettleship, D.N. 1974. Seabird colonies and distributions around Devon Island and vicinity. Arctic 27(2):95-103.

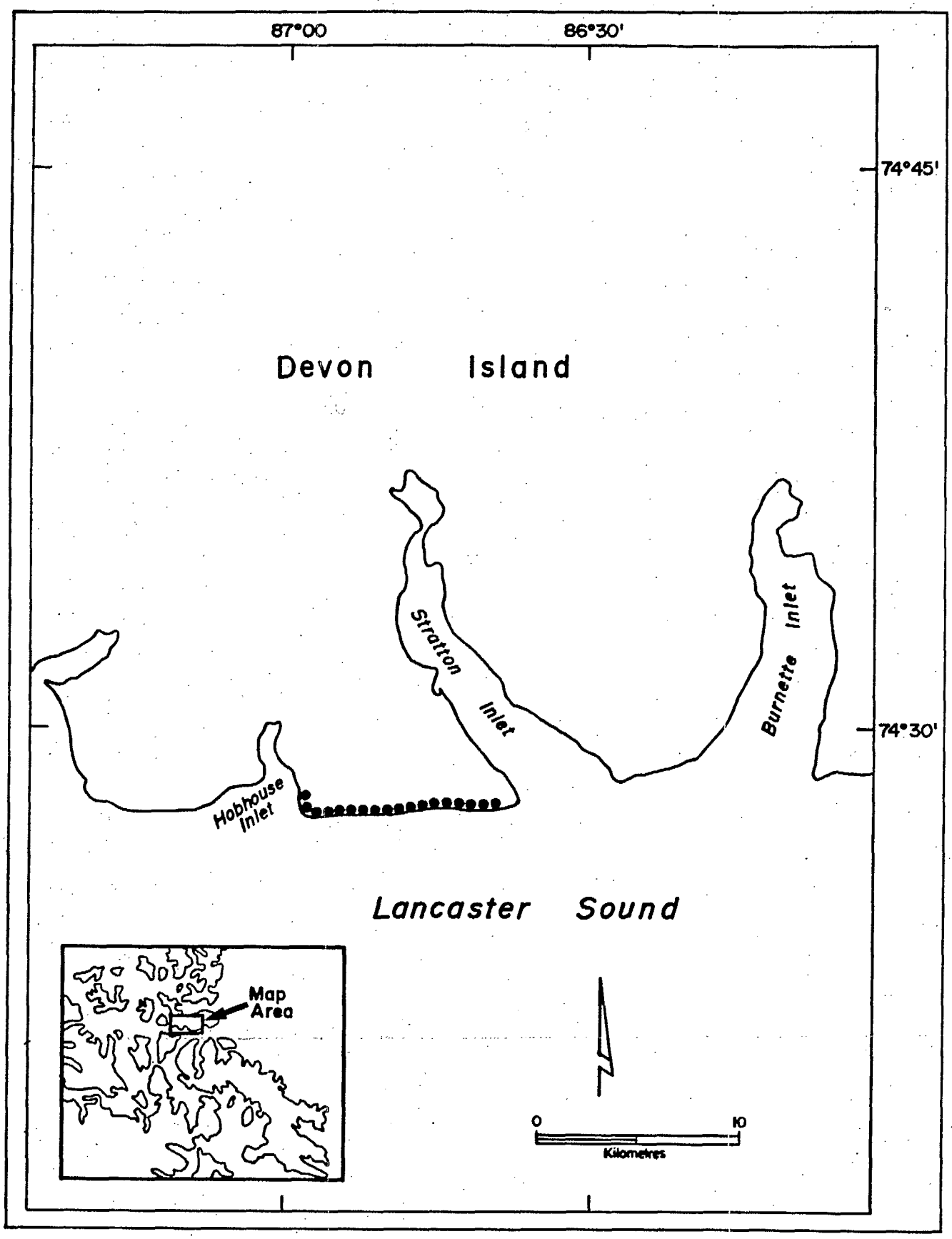
Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and A.J. Gaston. 1978. Patterns of pelagic distribution of seabirds in western Lancaster Sound and Barrow Strait, Northwest Territories, in August and September 1976. Occ. Paper. No. 39, Can. Wildl. Serv., Ottawa. 40 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Schweinsburg, R.E., L.J. Lee, and P. Latour. 1982. Distribution, movement, and abundance of polar bears in Lancaster Sound, Northwest Territories. Arctic 35(1):159-169.

Hobhouse Inlet



NAME: HOBHOUSE INLET

NUMBER: 11

LOCATION: 74°28'N, 86°50'W

SIZE: 10 square kilometres

DESCRIPTION:

Hobhouse Inlet is located along the indented southern coast of Devon Island, 60 km east of Maxwell Bay. Cliffs, over 460 m in height and composed of Silurian and Ordovician sediments, extend along the coast between Hobhouse Inlet and Stratton Inlet (Fortier et al. 1963). The central part of this promontory is covered by a permanent ice cap.

BIOLOGICAL VALUES:

The coast east of Hobhouse Inlet is the breeding site of an estimated 75,000 pairs of northern fulmars (Nettleship 1980). This represents approximately 20% of the Canadian population. The fulmars which occupy grassy rock ledges along 10 km of cliff face appear in mid-April and leave by early October. The highly productive waters of Lancaster Sound and Barrow Strait provide important feeding areas for these seabirds (Nettleship and Gaston 1978).

Lancaster Sound is also important to marine mammals. Large numbers of white whales, narwhals, ringed seals, and harp seals use the sound as a migration route. Polar bears are common in the area throughout the year and use the entire south coast of Devon Island for maternity denning and as a summer retreat (Schweinsburg et al. 1982).

SENSITIVITIES:

Fulmars are sensitive to disturbance at their colony site and to pollution of their marine foraging areas.

KNOWN CONFLICTS:

Proposed petroleum exploration in Lancaster Sound (Anon. 1982) is a potential source of marine pollution. Associated aircraft and ship traffic could also cause disturbance.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Anonymous. 1982. The Lancaster Sound region: 1980-2000. Green Paper., Dept. Indian Aff. North. Dev., Ottawa. 102 pp.

Fortier, Y.O., et al. 1963. Geology of the north-central part of the Arctic Archipelago, Northwest Territories (Operation Franklin). Memoir 320, Geol. Surv. Can., Ottawa. 671 pp.

Milne, A.R., and B.D. Smiley. 1978. Offshore drilling in Lancaster Sound: possible environmental hazards. Unpubl. Rept., Dept. Fish. Environ., Sidney. 95 pp.

Nettleship, D.N. 1974. Seabird colonies and distributions around Devon Island and vicinity. Arctic 27(2):95-103.

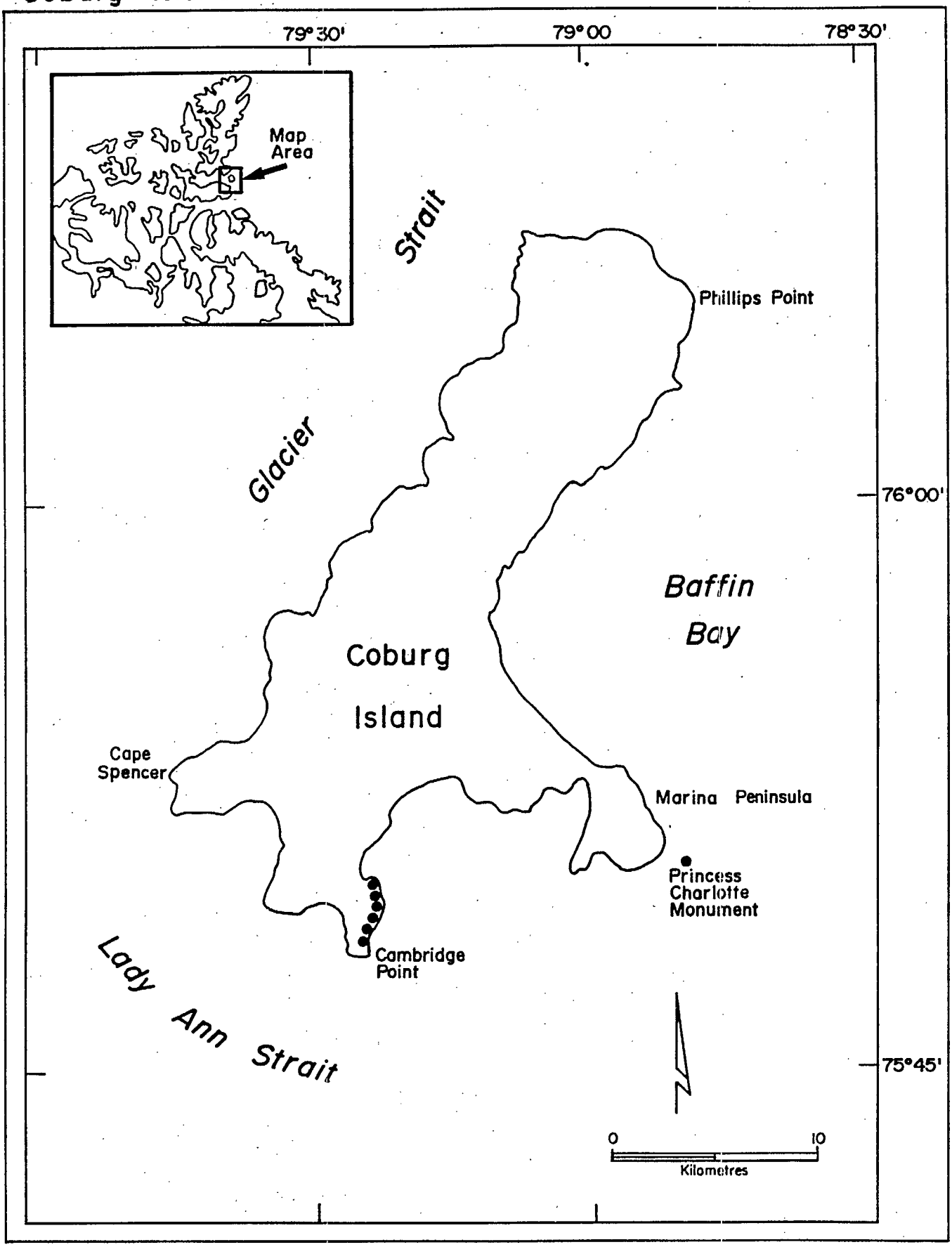
Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and A.J. Gaston. 1978. Patterns of pelagic distribution of seabirds in western Lancaster Sound and Barrow Strait, Northwest Territories, in August and September 1976. Occ. Paper. No. 39, Can. Wildl. Serv., Ottawa. 40 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Schweinsburg, R.E., L.J. Lee, and P. Latour. 1982. Distribution, movement, and abundance of polar bears in Lancaster Sound, Northwest Territories. Arctic 35(1):159-169.

Coburg Island



NAME: COBURG ISLAND

NUMBER: 12

LOCATION: 75°50'N, 79°25'W

SIZE: 6 square kilometres

DESCRIPTION:

Coburg Island is situated in Jones Sound, mid-way between the eastern shores of Devon and Ellesmere islands. It is characterized by very rugged terrain of Precambrian granitic gneiss (Douglas and MacLean 1963) with an ice cap pierced by peaks rising over 800 m above sea level. The coastline is heavily glaciated and there are many prominent cliffs, especially toward the south end.

There are 150 to 300 m cliffs near Cambridge Point at the southern tip of the island. Princess Charlotte Monument, a cone-shaped islet with precipitous cliffs, is located one kilometre off southeast Coburg Island.

An area of open water persists in the vicinity of Coburg Island during the winter then joins the North Water polynya in late spring (Stirling and Cleator 1981).

An archaeological site occurs north of Cape Spencer on the southwest coast.

BIOLOGICAL VALUES:

Thirty thousand pairs of black-legged kittiwakes, representing 16% of the Canadian population and almost one third of the NWT population, nest along 6 km of cliffs at Cambridge Point. This is the largest colony of this species in the NWT (Nettleship 1980).

These cliffs also support 12% (160,000 pairs) of the thick-billed murres in Canada. This is the third largest colony of this species in the NWT (Nettleship 1980).

An estimated 3,000 pairs of northern fulmars breed on Princess Charlotte Monument. Black guillemots and glaucous gulls also nest in the area (Nettleship 1980). Bays at the south end of Coburg Island are used by moulting eiders and oldsquaws.

The seabirds arrive at their breeding grounds in late April, feeding in open leads and polynyas. The young and adults leave the colony by early October.

Polynyas are also important to marine mammals. White whales, narwhal, and bowhead whales feed in the North Water and ringed, bearded, and harp seals are abundant in the area (Stirling and Cleator 1981). Walrus occur in the polynya and haul out in the southern bays of Coburg Island. Polar bears hunt along the floe edges and concentrate in the vicinity of Coburg Island (Kiliaan et al. 1978).

SENSITIVITIES:

Seabirds are sensitive to disturbance at their breeding cliffs and to pollution of their foraging areas.

KNOWN CONFLICTS:

Exploratory hydrocarbon drilling in western Baffin Bay (Anon. 1982) may subject the site to disturbance and pollution.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Anonymous. 1982. The Lancaster Sound region: 1980-2000. Green Paper., Dept. Indian Aff. North. Dev., Ottawa. 102 pp.

Douglas, R.J.W., and B. MacLean. 1963. Geology - Yukon Territory and Northwest Territories. Map 30, Geol. Surv. Can., Ottawa.

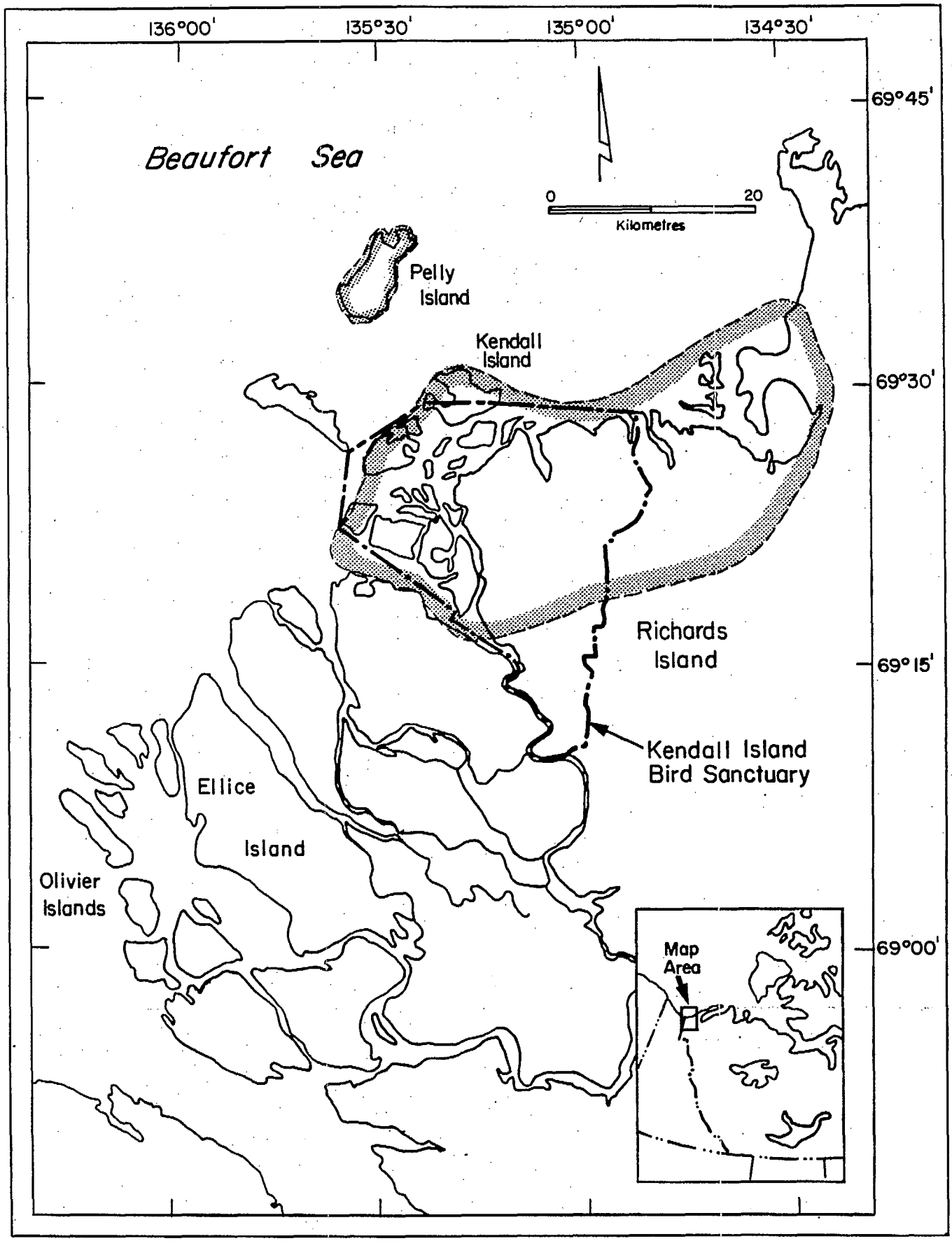
Kiliaan, H.P.L., I. Stirling, and C.J. Jonkel. 1978. Polar bears in the area of Jones Sound and Norwegian Bay. Prog. Note No. 88, Can. Wildl. Serv., Edmonton. 21 pp.

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Stirling, I., and H. Cleator. (Eds.) 1981. Polynyas in the Canadian Arctic. Occ. Paper No. 45, Can. Wildl. Serv., Edmonton. 70 pp.

Mackenzie River Delta



NAME: MACKENZIE RIVER DELTA

NUMBER: 13

LOCATION: 69°20'N, 135°30'W

SIZE: 1,037 square kilometres

DESCRIPTION:

The principal islands within this area include Kendall Island, Pelly Island, and part of Richards Island. These islands are remnants of an ancient preglacial Mackenzie Delta as well as part of the developing modern delta. Much of the area is covered by fluvial deposits of silt and sand. These low deltaic islands are generally marshy and vegetated by sedges, grasses, and Equisetum; shrubs predominate on higher islands. Levees have formed along the shores of the islands as a result of flooding during spring break-up of the river channels. The lowlands of Richards Island are dotted with numerous lakes and ponds and contain several pingos.

BIOLOGICAL VALUES:

The islands of the outer delta are important staging grounds during fall migration. Up to 375,000 lesser snow geese, 23,700 white-fronted geese, 12,200 brant, 1,065 Canada geese and 3,400 tundra swans have been observed here (Koski 1975, 1977). This represents nearly 19% of the white-fronted geese, 29% of the brant (subsp. nigricans) and 4% of the tundra swans which occur in Canada (Bellrose 1976). The peak staging period is from late August to late September.

Small islands south of Kendall Island support a colony of lesser snow geese. Since the 1950's, the colony has ranged in size from only a few to 8,800 birds (Barry and Barry 1982). A 1981 survey indicated that approximately 500 pairs were present (R. Kerbes pers. comm.). Approximately 2,500 tundra swans, 50 sandhill cranes, 400 brant, 2,800 white-fronted geese, dabbling ducks, and sea ducks nest and moult throughout this area (Barry and Barry 1982, Wiseley et al. 1977).

Approximately 100 pairs of brant and 30 pairs of tundra swans nest on Pelly Island. Up to 500 swans also moult on the island. Swan Channel in the northwest part of the site, supports the most dense known concentration of nesting swans. Up to 200 nesting pairs and 1,200 pre-moulting birds occur here annually (T. Barry pers. comm.). White-fronted geese moult in the area of Dennis Lagoon, Harry Channel, and Swan Channel.

The Mackenzie estuary is a calving area for approximately 4,000 white whales. The outer islands of the delta support a significant population of barren-ground grizzly bears.

SENSITIVITIES:

Nesting, staging, and moulting waterfowl are sensitive to disturbance and the degradation of low-lying habitats.

KNOWN CONFLICTS:

The region has been subject to extensive seismic and exploratory drilling activity. Proposals exist for the development of gas processing plants and a hydrocarbon pipeline network in the area. Drilling on offshore artificial islands is presently underway.

STATUS:

A portion of the site lies within the Kendall Island Bird Sanctuary.

The site is also within the Reindeer Grazing Reserve.

REFERENCES:

Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories - a background paper. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 3 Vols. 370 pp.

Barry, S.J., and T.W. Barry. 1982. Seabird surveys in the Beaufort Sea, Amundsen Gulf, and Prince of Wales Strait, 1981 season. Unpubl. Rept., Can. Wildl. Serv. for Dome Petroleum Ltd. and Esso Resources Canada Ltd., Calgary. 52 pp.

Kerbes, R.H. 1983. Lesser snow goose colonies in the western Canadian Arctic. J. Wildl. Manage. 47:523-526.

Koski, W.R. 1975. A study of the distribution and movement of snow geese, other geese, and whistling swans on the Mackenzie Delta, Yukon north slope, and Alaskan north slope in August and September, 1974, including a comparison with similar data from 1973. Chpt. I:1-58 In: W.W.H. Gunn, R.E. Schweinsburg, C.E. Tull, and T.D. Wright (Eds.). Ornithological studies conducted in the area of the proposed gas pipeline route: Northwest Territories, Yukon Territory and Alaska, 1974. Arctic Gas Biol. Rept. Series. Vol. 30.

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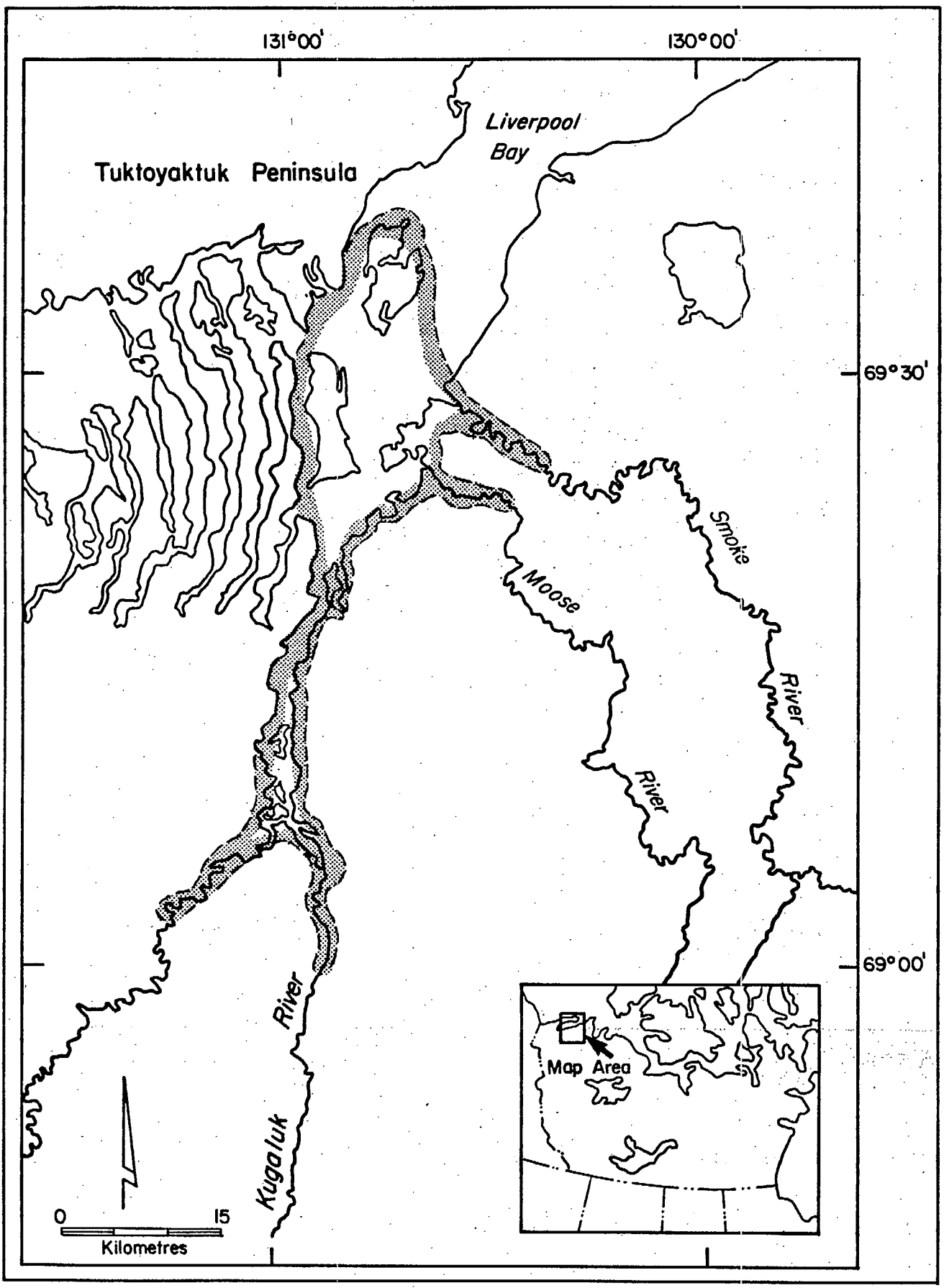
Kugaluk River



NAME: KUGALUK RIVER

NUMBER: 14

LOCATION: 69°20'N, 130°50'W

SIZE: 542 square kilometres

DESCRIPTION:

The Kugaluk River lies south of the Tuktoyaktuk Peninsula and flows into Liverpool Bay. The area is of generally low relief with extensive tidal flats and sandy soils, resulting from glacial deposition. Vegetation consists mainly of meadows and marshes of sedges and grasses. A severe fire in the area caused a regression of the treeline 16 km south of its original limits. A few relict spruce can be seen in the vicinity of the Moose and Smoke rivers.

There is an archaeological site in the northeastern area of the Smoke River delta and an outpost camp at the mouth of the Kugaluk River.

BIOLOGICAL VALUES:

The Kugaluk River and estuary is an important moulting area for several species of waterfowl. Up to 25,000 Canada geese (Short-grass Prairie) have been recorded moulting on the Kugaluk River and Smoke River deltas (Barry 1967 in Sterling and Dzubin 1967). During July and August 1981, 10,000 to 15,000 Canada geese and 7,000 white-fronted geese were observed in this area (Barry and Barry 1982). The latter number constitutes approximately 5% of the white-fronted goose population in Canada. Approximately 500 non-breeding tundra swans were also observed in 1981 (Barry and Barry 1982).

The sedge marshes and sand flats of Campbell Island; the Moose and Smoke River deltas; and the Kugaluk estuary are preferred moulting and feeding sites for Canada geese. Small numbers of this species, as well as lesser snow geese and brant, are known to nest in this area (Barry and Barry

1982). Thousands of fish-eating birds, notably mergansers and glaucous gulls, also use the area. Moulting sea ducks, including scoters, scaup, and oldsquaw are present during mid-to-late summer (Barry and Barry 1982). The largest numbers of birds are recorded in this area during the moulting season, which occurs from July to late August.

The area lies on a migration route for the Bluenose caribou herd. The barren-ground grizzly bear, Arctic fox, red fox, marten, and muskrat are also common. Bearded seals and occasionally, white whales are noted in the Liverpool Bay area.

SENSITIVITIES:

Waterfowl are sensitive to disturbance and the degradation of their lowland habitats. Moulting birds are particularly vulnerable during their flightless period.

KNOWN CONFLICTS:

Oil exploration leases occur within the site. Increased aircraft traffic over the area could result from development activities in the Beaufort Sea and on the Tuktoyaktuk peninsula.

STATUS:

The site lies within the Reindeer Grazing Reserve and is a proposed IBP site (Beckel 1975).

REFERENCES:

Barry, T.W. 1982. Significant wildlife resource areas in the Beaufort Sea, Amundsen Gulf, and Prince of Wales Strait. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 71 pp.

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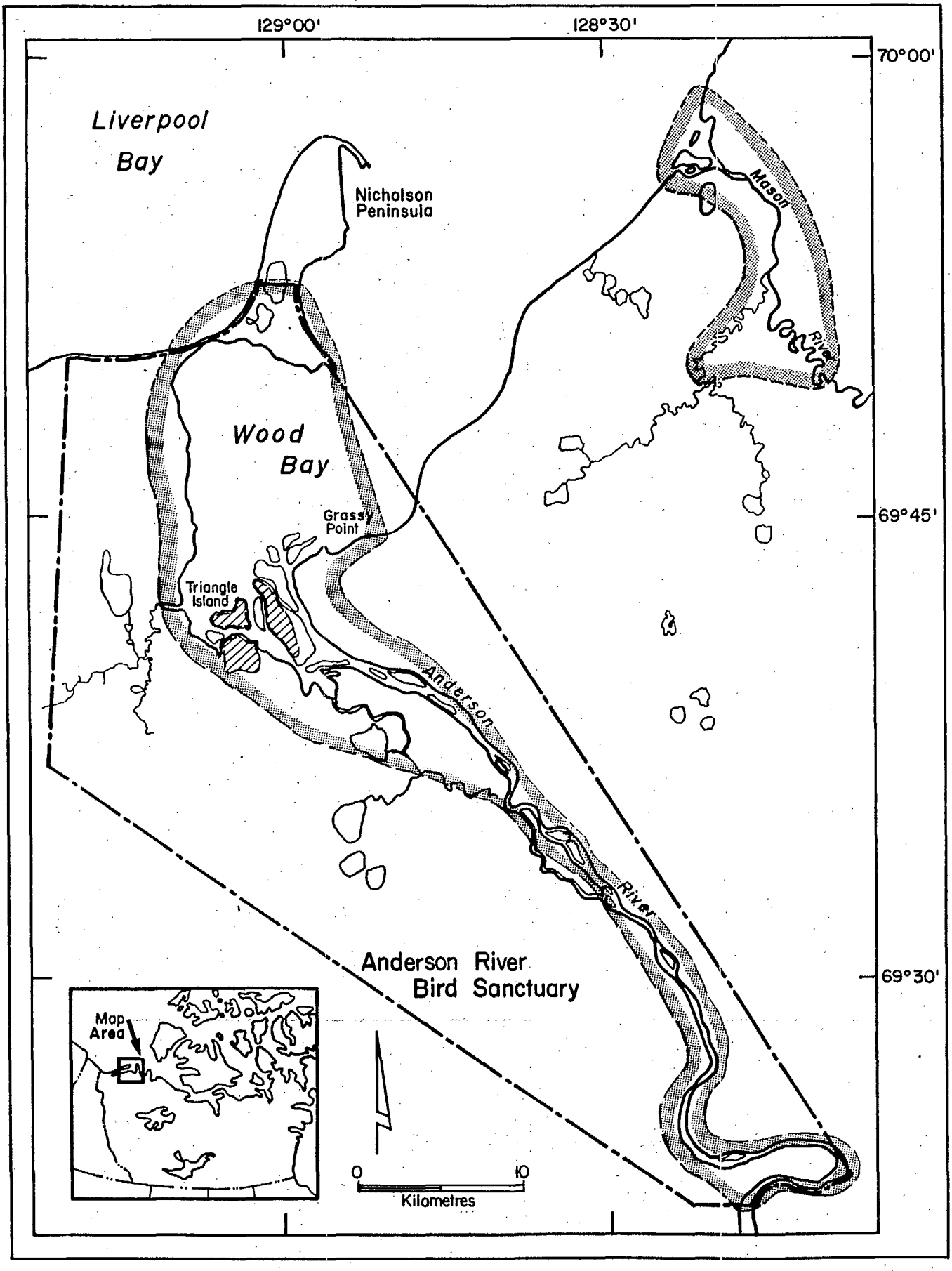
Sterling, T., and A. Dzubin. 1967. Canada goose moult migrations to the Northwest Territories. Trans. North Amer. Wildl. Conf. 32:355-373.

Slaney, F.F., and Co. Ltd. 1977. Environmental evaluation summary of construction and construction support activities related to the proposed ten-year Beaufort Sea offshore exploration program. Unpubl. Rept. for Imperial Oil Ltd., Calgary. Vol. 1. 45 pp.

Anderson River



NAME: ANDERSON RIVER

NUMBER: 15

LOCATION: 69°42'N, 129°00'W

SIZE: 491 square kilometres

DESCRIPTION:

This site includes the land and water surrounding the lower Anderson River. The river spans the transition from spruce forest to Dryas tundra and flows through a gradually widening flood-plain which is flanked by river terraces. The delta of low alluvial islands, channels, and lakes extends northward into the shallow waters of Wood Bay. The surrounding landscape is generally low and rolling and is dotted with lakes and ponds. The lower river passes through sedimentary rocks of Cretaceous origins. Tundra polygons have developed in poorly-drained soils around the river mouth.

Vegetation of the outer delta is primarily sparse grasses, sedges, and arctic willows, whereas upriver, the land becomes increasingly vegetated. Small spruce grow among willows as far north as the river mouth.

There are numerous archaeological sites in the area for the abundance of wildlife and the availability of driftwood once supported an Inuit community.

BIOLOGICAL VALUES:

A colony of lesser snow geese, comprising approximately 4,200 pairs, which occurs on islands in the middle delta (R. Kerbes pers. comm.) represents approximately 4% of the western Arctic population of this species. The outer delta provides nesting habitat for up to 2,500 black brant (Barry and Barry 1982) representing nearly 6% of the Canadian population of this species; the inner delta supports 75 breeding pairs and 1,200 non-breeding tundra swans. White-fronted geese and Canada geese are scattered nesters along streams; 1000 moulting white-fronted geese have been

observed in the area (Barry and Barry 1982). Oldsquaw, scaup, and scoters use the shores of Wood Bay for nesting and moulting, whereas shorebirds use the tidal flats for feeding and staging. The variety of plant communities has resulted in a high diversity of passerine species. Nest sites of raptorial birds are also present in the delta.

Tundra swans arrive in May and leave in late September or early October. Snow geese, brant, and white-fronted geese first appear in late May and begin fall migration at the end of August.

The Mason River delta supports approximately 1,000 nesting and moulting white-fronted geese, 500 tundra swans and Canada geese, 100 pairs of brant, and 70 pairs of glaucous gulls (T. Barry pers. comm.). It is also a feeding area for loons and a brood-rearing area for lesser snow geese from Anderson River.

The eskimo curlew formerly nested in the Anderson River area. Although almost exterminated, seven sightings were made between 1961 and 1980 along the Anderson River from the mouth to 140 km upriver (Gollop and Shier 1978, T. Barry pers. comm.).

Part of the Anderson River area was unglaciated, providing a refugium for some plants and insects which now exhibit a unique geographical distribution.

Barren-ground grizzly bears are fairly common and several denning sites are known . In the past ten years, an increasing number of caribou have moved into the area for the summer (Barry 1982). The proximity of the tree-line also enables moose to inhabit the area.

SENSITIVITIES:

Low-lying areas are susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost. Breeding and moulting birds are sensitive to disturbance.

KNOWN CONFLICTS:

Seismic work was conducted in the area during the 1970's. There have been no recent activities.

STATUS:

Most of the site is included within the Anderson River Bird Sanctuary.

Proposed IBP site (Nettleship and Smith 1975).

The area west of the river is within the Reindeer Grazing Reserve.

REFERENCES:

Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories - a background paper. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 3 Vols. 370 pp.

Barry, T.W. 1961. Proposed migratory bird sanctuaries: Anderson River Delta, Mackenzie District, NWT, Kendall Island and vicinity, Mackenzie River Delta, Mackenzie District, NWT. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 12 pp.

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Barry, S.J., and T.W. Barry. 1982. Seabird surveys in the Beaufort Sea, Amundsen Gulf, and Prince of Wales Strait, 1981 season. Unpubl. Rept., Can. Wildl. Serv. for Dome Petroleum Ltd. and Esso Resources Canada Ltd., Calgary. 52 pp.

Gollop, J.B., and C.E.P. Shier. 1978. Status report on Eskimo curlew (Numenius borealis) in Canada. Can. Wildl. Serv. and Comm. Stat. End. Wildl. Can., Ottawa. 41 pp.

Johnson, S.R., W.J. Adams, and M. R. Morrell. 1975. The birds of the Beaufort Sea. Unpubl. Rept., LGL Ltd. for Can. Wildl. Serv., Beaufort Sea Project, Victoria. 310 pp.

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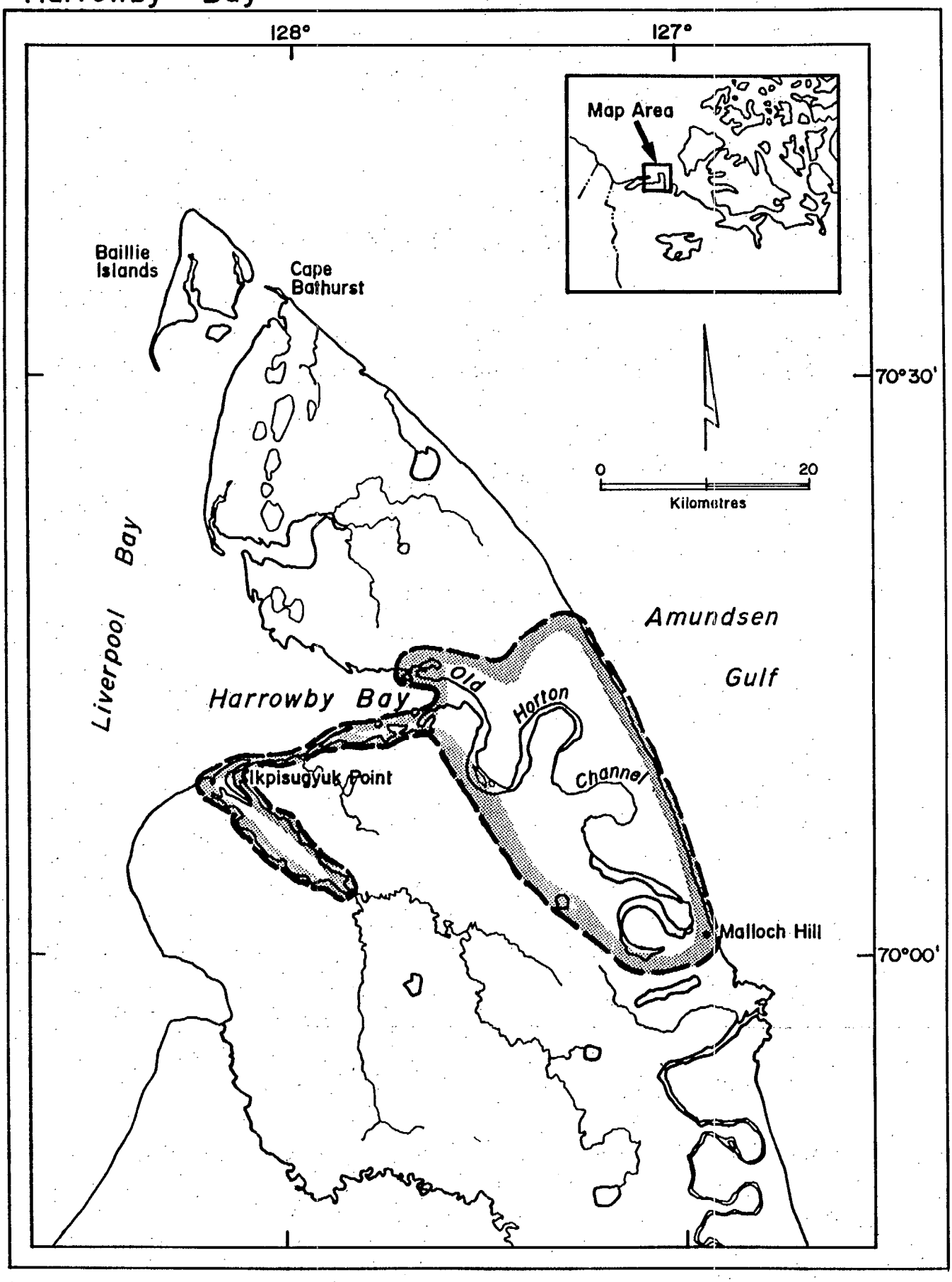
Harrowby Bay



NAME: HARROWBY BAY

NUMBER: 16

LOCATION: 70°10'N, 127°20'W

SIZE: 630 square kilometres

DESCRIPTION:

Harrowby Bay, which opens into the Beaufort Sea, is located on the western side of the Bathurst Peninsula. This bay is the original outlet of the Horton River which, around 1800, broke through its former channel and created a new outlet and delta on the east side of the peninsula.

Recent alluvial deposits cover the area around the bay and to the north, while Cretaceous shale forms the bedrock to the south (Yorath et al. 1975). The north shore consists of low sea cliffs and gravel and sand beaches and spits whereas the south shore is marshy. Inland from southern barrier beaches, the land rises in a series of river terraces to the upland plateau which surrounds the shallow, muddy Ikpisugyuk Bay. This bay empties into Liverpool Bay along rock cliffs near the western entrance of Harrowby Bay.

The old Horton River valley, which consists of oxbow lakes and channels, is well vegetated with sedges and grasses.

BIOLOGICAL VALUES:

The old Horton River bed is an important moulting and feeding ground for non-breeding Canada (Short-grass Prairie) and white-fronted geese. From June 25 to August 5, 1981, approximately 20,000 flightless geese concentrated in the valley (Barry and Barry 1982). The delta at the east end of Ikpisugyuk Bay is also a moulting ground for 500 to 700 white-fronted geese (Barry 1982).

Tundra swans nest on lakes in the area (Speller 1975).

In years when spring snow conditions were poor on Banks Island, up to 5,000 lesser snow geese have nested on the northeast coast of Harrowby Bay. This area is also used by

migrating geese in late August and early September (Barry and Barry 1982).

Caribou occur in the vicinity during the summer since a calving ground of the Bluenose herd occurs on Bathurst peninsula. Barren-ground grizzly bears den in the area and polar bears frequent the leads north of the peninsula (Speller 1975).

Bearded and ringed seals occur in Harrowby Bay in the summer (Barry 1982), while white and bowhead whales spend the summer in Franklin Bay, east of Bathurst peninsula (Speller 1975).

SENSITIVITIES:

The lowland habitats are susceptible to terrain disturbance.

Geese are sensitive to disturbance, particularly during the moulting period.

KNOWN CONFLICTS:

None.

STATUS:

None.

REFERENCES:

Barry, T.W. 1982. Significant wildlife resource areas in the Beaufort Sea, Amundsen Gulf, and Prince of Wales Strait. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 71 pp.

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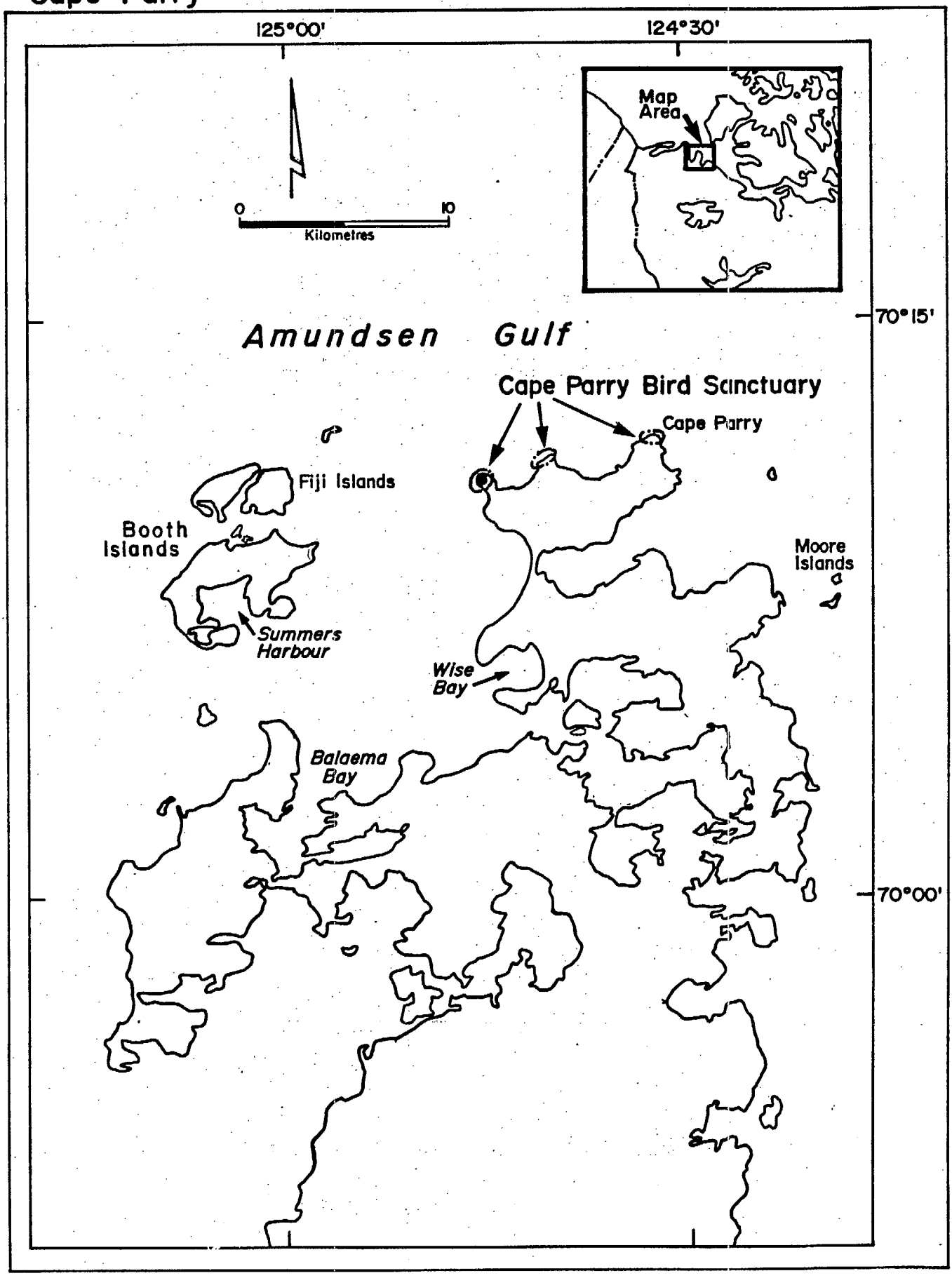
Speller, S.W. 1975. A study of wildlife, land-use, and social interests in the Bathurst peninsula region, Northwest Territories. Unpubl. Rept., Can. Wildl. Serv. for Dept. Indian Aff. North. Dev., Ottawa. 96 pp.

Yorath, C.J., H.R. Balkwill, and R.W. Klassen. 1975. Franklin Bay and Malloch Hill map-areas, District of Mackenzie. Paper 74-36., Geol. Surv. Can., Ottawa. 35 pp.

Cape Parry


125°00'
124°30'
Map Area
0
10
Kilometres
70°15'
Amundsen Gulf
Cape Parry Bird Sanctuary
Cape Parry
Fiji Islands
Booth Islands
Moore Islands
Summers Harbour
Wise Bay
Balaema Bay
70°00'

NAME: CAPE PARRY

NUMBER: 17

LOCATION: 70°12'N, 124°40'W

SIZE: 2.3 square kilometres

DESCRIPTION:

Cape Parry is situated in Amundsen Gulf, approximately 100 km north of Paulatuk, at the northern extremity of the Parry Peninsula.

The underlying limestone forms three outcrops of low coastal cliffs that rise 20 m above sea level. The coastline, which has beaches of sand and gravel, is also deeply incised forming numerous bays and small inlets. The peninsula is sparsely vegetated and is dotted with small lakes and ponds.

Upwelling currents provide a rich marine environment where Cape Parry juts into Amundsen Gulf and separates Franklin Bay from Darnley Bay. These currents also produce open water or leads in the ice near the cape and islands. This polynya was more regular prior to 1970 but is still sufficiently persistent to produce open water in June (Barry and Barry 1982).

BIOLOGICAL VALUES:

The coastal limestone cliffs at Cape Parry provide nesting habitat for the only thick-billed murre colony in the western Canadian Arctic. The colony, located on Police Point numbers approximately 800 birds (Ward 1979, Barry et al. 1981). This colony is at least 1,300 km from the nearest murre colony to the west in Alaska, or to the east at Prince Leopold Island. This is the only known breeding colony of the subspecies Uria lomvia arra in Canada.

A few pairs of black guillemots have been observed nesting on the cliffs and nearby Fiji Islands (Barry et al. 1981, Ward 1979).

Twenty thousand king and common eiders have been recorded in the offshore leads during spring migration. Common eiders also nest on the islands and beaches of Parry Peninsula. Large numbers of oldsquaw, glaucous gulls, and loons use the area during spring migration (Barry et al. 1981, Barry and Barry 1982).

The offshore area, particularly the leads north of the cape, is important for bearded seal, ringed seal, polar bear, white whale, and bowhead whale. Grizzly bears are occasionally observed on the mainland.

SENSITIVITIES:

Seabirds are sensitive to disturbance and the pollution of marine areas.

KNOWN CONFLICTS:

A DEW Line site, situated approximately 5 km from the cliffs has been active since 1955. Low numbers of murres at the Cape Parry colony coincided with the period when natives were living near the DEW Line site before Paulatuk was established in the late 1960's.

STATUS:

Migratory Bird Sanctuary

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories - a background paper. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 3 Vols. 370 pp.

Barry, T.W. 1982. Significant wildlife resource areas in the Beaufort Sea, Amundsen Gulf, and Prince of Wales Strait. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 71 pp.

Barry, S.J., and T.W. Barry. 1982. Seabird surveys in the Beaufort Sea, Amundsen Gulf, and Prince of Wales Strait, 1981 season. Unpubl. Rept., Can. Wildl. Serv. for Dome Petroleum Ltd. and Esso Resources Canada Ltd., Calgary. 52 pp.

Barry, T.W., S.J. Barry, and B. Jacobson. 1981. Seabird survey in the Beaufort Sea, Amundsen Gulf, Prince of Wales Strait, and Viscount Melville Sound, 1980 season. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 69 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

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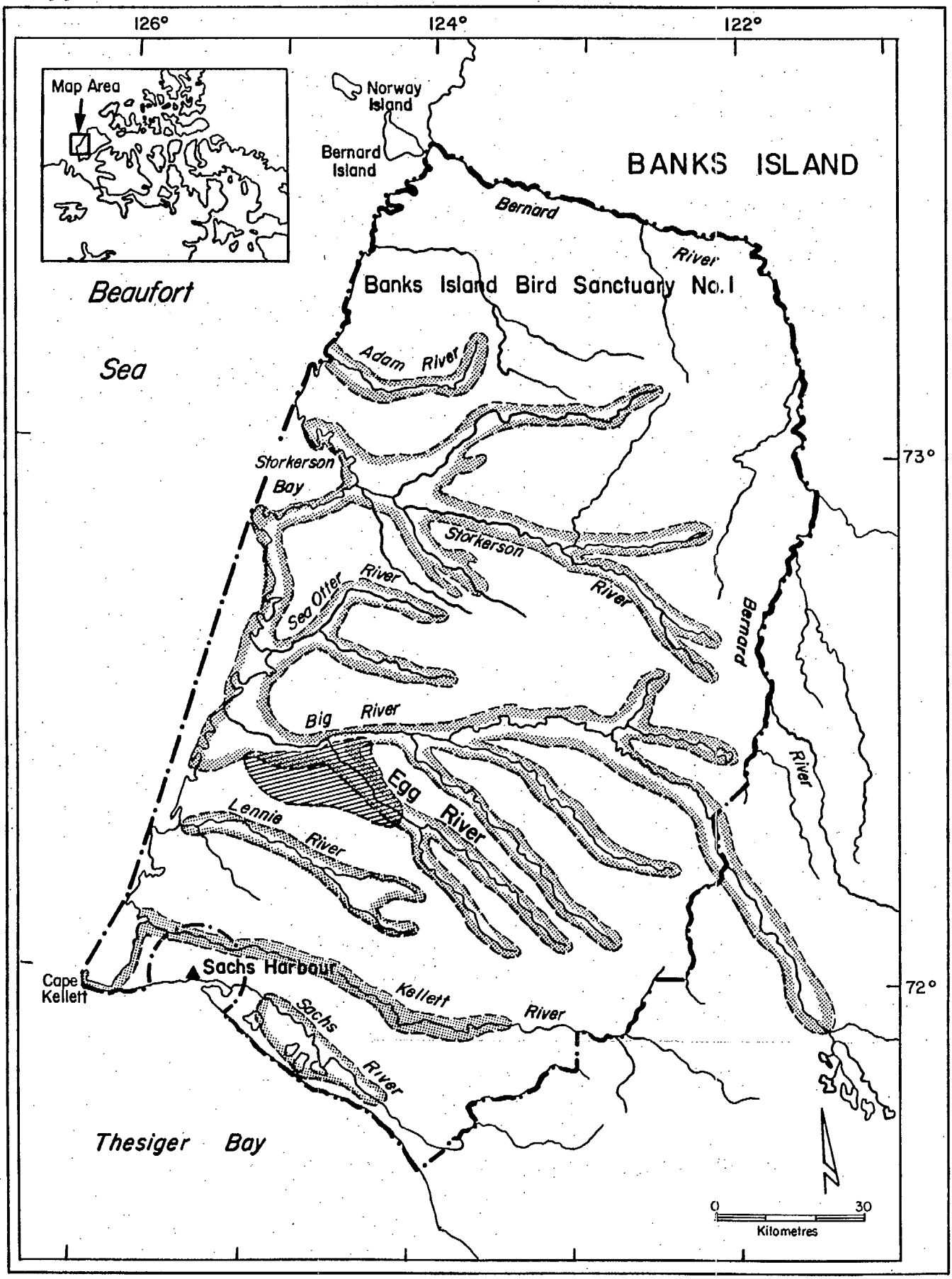
Egg River


126°
124°
122°
Map Area
Norway Island
Bernard Island
BANKS ISLAND
Bernard River
Banks Island Bird Sanctuary No.1
Beaufort Sea
Adam River
Storkerson Bay
Storkerson River
Sea Otter River
Bernard River
Big River
Egg River
Lennie River
Cape Kellett
Sachs Harbour
Kellett River
Sachs River
Thesiger Bay
73°
72°
0
30
Kilometres

NAME: EGG RIVER

NUMBER: 18

LOCATION: 72°40'N, 123°30'W

SIZE: 20,518 square kilometres

DESCRIPTION:

This site is situated in the southwestern quarter of Banks Island which borders the east side of the Beaufort Sea. The area is composed of gently rolling hills that are drained by several westward-flowing rivers. The main rivers occupy broad valleys of gravelly and sandy alluvium and swampy tundra with shallow ponds and large polygons. In lower reaches, the rivers become highly braided and broaden into deltas as they reach the low-lying coast. Undifferentiated glacial drift and late Tertiary sand and gravel covers much of the area (Thorsteinsson and Tozer 1962).

Creeping willow grows over most of the island. The valleys are usually well vegetated with grassy marshes in low flat areas and Dryas and other flowering plants on the drier slopes. Hill-tops are usually barren.

Open water occurs along the Arctic Ocean shorelead system, off the west coast of Banks Island, between December and July. It may join with leads along the south coast or with a polynya which appears in western Amundsen Gulf off Cape Bathurst (Stirling and Cleator 1981).

BIOLOGICAL VALUES:

The confluence of the Big and Egg rivers is near the core of the largest breeding ground for lesser snow geese in the western Arctic. In 1976, 82,500 pairs occupied 605 square km of tundra (Kerbes 1983). The most recent survey in 1981, indicated 99,100 breeding pairs occupying approximately 170 square km of tundra (R. Kerbes pers. comm.). This represents approximately 95% of the western Arctic population and about 15% of the Canadian population of this species.

The geese arrive in late May. After hatching, they disperse to Storkerson Bay, Bernard River, Lennie River, and up the Big River. A few thousand non-breeders move to the Thomsen River to moult from the beginning of July until mid-August. Fall migration begins in late August or early September.

Up to 3,000 black brant nest in the deltas, and on small lakes along the western coast (Barry and Barry 1982). As many as 100,000 king eiders and many thousands of oldsquaw nest in the area. Sandhill cranes and tundra swans are also common.

The shorelead off the west coast of Banks Island provides a staging, feeding, and moulting area on the spring migration route of marine birds.

Polar bears are abundant along the west and southwest coasts during the winter. Most of the maternity dens, in the western Arctic, occur along these coasts (Stirling et al. 1975). The major winter range of Peary caribou on Banks Island extends between the Storkerson and Kellett rivers. The highest density of Arctic fox dens on the island occurs in the dry, hilly country which is drained by the Storkerson, Big, and Kellett rivers. Muskoxen occur throughout the area.

SENSITIVITIES:

Nesting birds are sensitive to disturbance. Low-lying terrain may be damaged by the alteration of natural drainage patterns or the thawing of permafrost.

KNOWN CONFLICTS:

Seismic exploration has previously taken place over much of the island and a few wells have been drilled in northern areas. The potential for further activity within the site remains.

STATUS:

The majority of the site lies within Banks Island Bird Sanctuary No. 1.
The proposed Egg River-Big River IBP site includes part of the site (Nettleship and Smith 1975).

REFERENCES:

Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories - a background paper. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 3 Vols. 370 pp.

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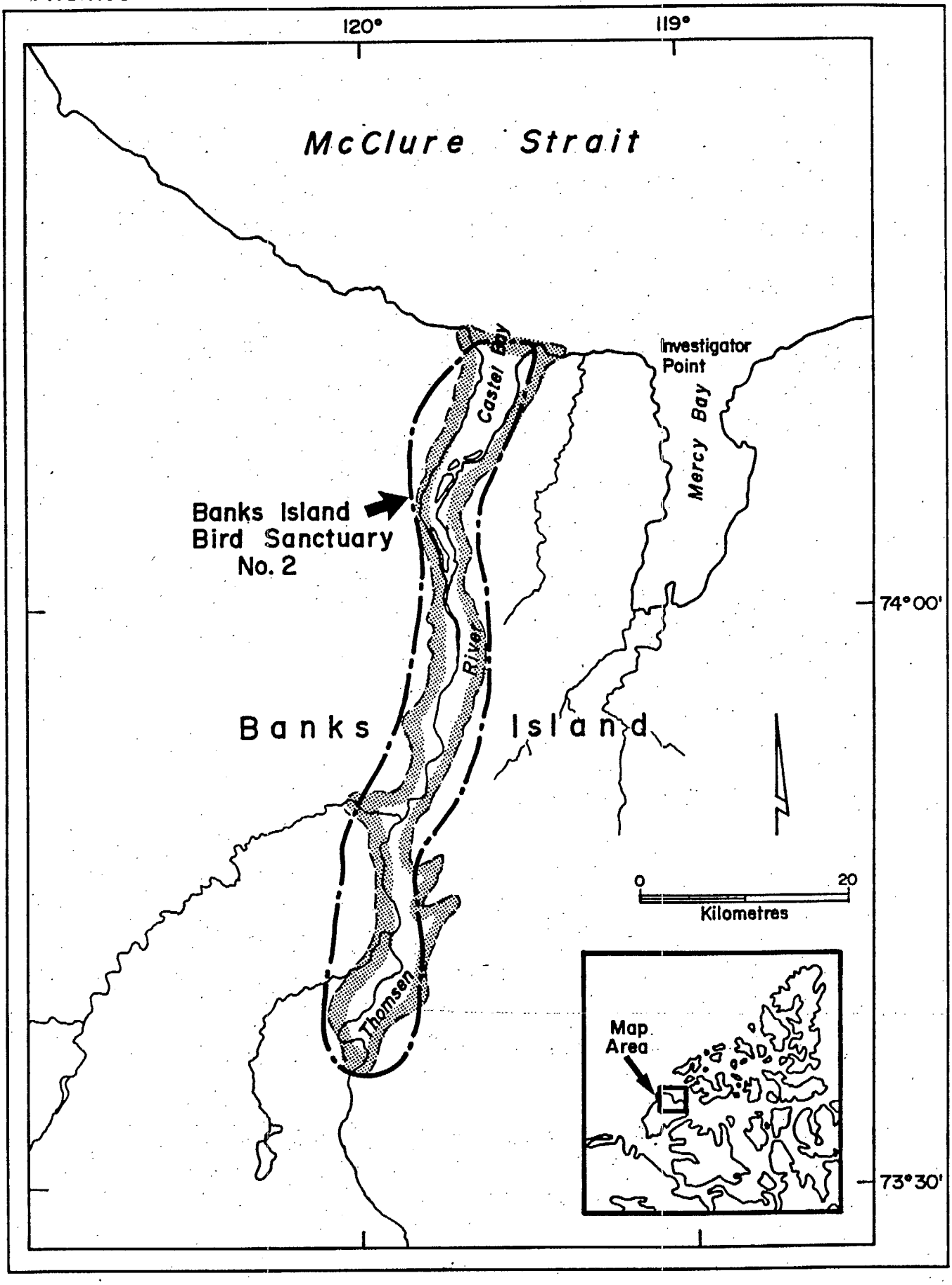
Stirling, I., D. Andriashek, P. Latour, and W. Calvert. 1975. The distribution and abundance of polar bears in the eastern Beaufort Sea. Tech. Rept. No. 2, Beaufort Sea Project, Dept. Environ., Victoria. 59 pp.

Stirling, I., and H. Cleator. (Eds.) 1981. Polynyas in the Canadian Arctic. Occ. Paper No. 45, Can. Wildl. Serv., Edmonton. 70 pp.

Thorsteinsson, R., and E.T. Tozer. 1962. Banks, Victoria, and Stefansson Islands, Arctic Archipelago. Memoir 330, Geol. Surv. Can., Ottawa. 83 pp.

Thomsen River



NAME: THOMSEN RIVER

NUMBER: 19

LOCATION: 74°00'N, 119°45'W

SIZE: 380 square kilometres

DESCRIPTION:

This site is located in north-central Banks Island which borders the east side of the Beaufort Sea. The Thomsen River flows through a flat-bottomed, steep-sided valley surrounded by low, rolling hills which are dissected by gullies and underlain by Devonian and Cretaceous sandstone and shale. The plain grades to lowlands closer to the coast where the river empties into Castel Bay (Thorsteinsson and Tozer 1962). This area is surrounded by deeply cut badland topography of Tertiary sandstone and shale (Zoltai et al. 1980).

The vegetation is dominated by polar desert and Arctic tundra communities. The main types are: dwarf-shrub, lichen-legume, and willow-sedge tundra (Zoltai et al. 1980).

Open water appears at the entrance to M'Clure Strait as early as January or February and disappears by July. In some years, the polynya extends as far east as Mercy Bay (Stirling and Cleator 1981).

BIOLOGICAL VALUES:

About 25,000 moulting lesser snow geese use the Thomsen River valley from the beginning of July to mid-August. These birds are non-breeders, although some birds may disperse to the area after hatching occurs near the Egg River.

Castel Bay and the lower Thomsen River provide habitat for up to 5,000 moulting black brant. Two hundred and fifty moulting Canada geese have also been noted on the river (Beak Consultants 1975). The identity of these birds, however, has been questioned (T. Barry pers. comm.).

Muskoxen are common in this area throughout the year. Peary caribou migrate north in late spring; many moving to the calving grounds in the northeast and northwest part of the island (Urquhart 1973). The arctic fox is common in the area and polar bears are occasionally seen along the northern coast.

SENSITIVITIES:

Moulting geese are sensitive to disturbance.

KNOWN CONFLICTS:

Seismic exploration has occurred over most of the area. Unsuccessful wildcat wells have been drilled to the east and to the west of the site. The potential for further activities is presently unclear.

STATUS:

Much of this site occurs within Banks Island Bird Sanctuary No. 2.

The proposed Shoran Lake IBP site includes the southern part of the site (Nettleship and Smith 1975).

REFERENCES:

Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories - a background paper. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 3 Vols. 370 pp.

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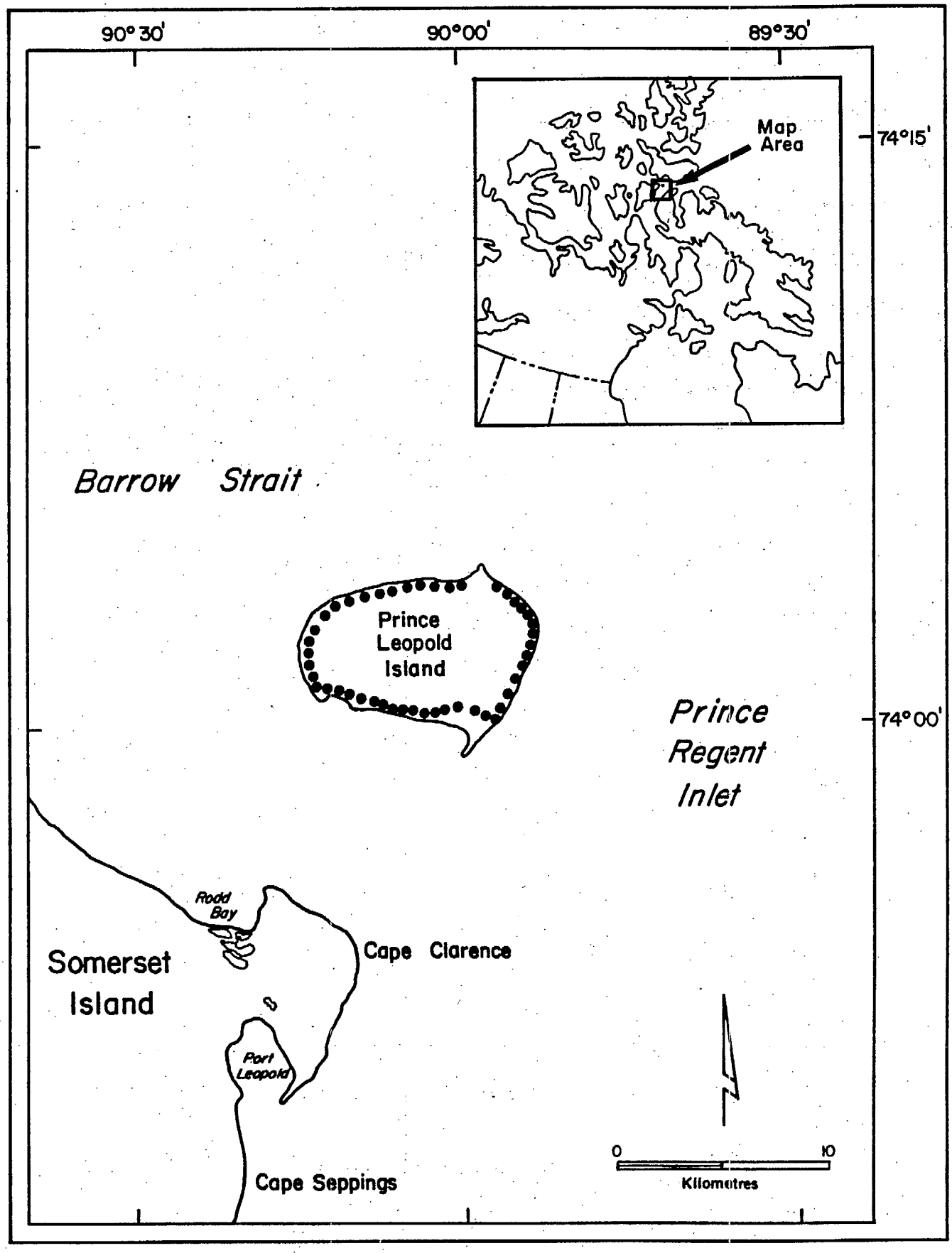
Zoltai, S.C., D.J. Karasiuk, and G.W. Scotter. 1980. A natural resource survey of the Thomsen River area, Banks Island, Northwest Territories. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 153 pp.

Prince Leopold Island



NAME: PRINCE LEOPOLD ISLAND

NUMBER: 20

LOCATION: 70°02'N, 90°00'W

SIZE: 32 square kilometres

DESCRIPTION:

Prince Leopold Island is situated in western Lancaster Sound at the junction of Prince Regent Inlet and Barrow Strait. The island lies approximately 13 km north of Cape Clarence, Somerset Island.

The island is bounded on all sides by vertical cliffs of Silurian sandstone and limestone ranging from 245 to 265 m high. The bases of the north and south cliffs are covered by scree slopes. Gravel spits extend approximately one kilometre outward from the base of the northeast and southeast corners of the island. The Palaeozoic rock tends to fracture into flat slabs resulting in numerous small ledges upon which seabirds nest (Gaston and Nettleship 1981). Access from the beach to the top of the island is possible at only a few places where the plateau is broken by stream-cut gullies.

The sparse vegetation is characterized by mosses, lichens, grasses, and a few dwarf shrubs (Woo and Zoltai 1977).

Several Inuit archaeological sites are located on the east side of the south gravel spit of the island.

BIOLOGICAL VALUES:

Prince Leopold Island supports a major seabird community which includes: 67,000 pairs of northern fulmars, 29,000 black-legged kittiwake pairs, 86,000 thick-billed murre pairs, and 4,000 pairs of black guillemots (Gaston and Nettleship 1981). These numbers represent approximately 18%, 16%, 7%, and 5% of the national population of these respective species.

The site is occupied by the seabirds generally from early May to the end of September. The thick-billed murres nest on the east and northeast cliffs, whereas northern fulmars are located on all cliffs except a section of the north side. Black-legged kittiwakes are most numerous on the north cliff. Black guillemots nest on the west side of the island among scree rock crevices. Two hundred pairs of glaucous gulls are dispersed along the west, south, and east cliffs and Thayer's gulls and ivory gulls are seen irregularly throughout the summer (Nettleship 1976).

Although weasels and lemmings are the only resident land mammals, the island may be visited infrequently by Peary caribou and arctic fox during the winter and spring break-up period. The waters about the island attract marine mammals including white whale, narwhal, walrus, polar bear, ringed seal, and bearded seal.

SENSITIVITIES:

Seabirds are sensitive to disturbance and the pollution of offshore waters.

KNOWN CONFLICTS:

Lancaster Sound, Barrow Strait, and Prince Regent Inlet are areas of potential hydrocarbon exploration (Anon. 1982). A marked increase in air or marine traffic could have a negative effect upon wildlife.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Anonymous. 1982. The Lancaster Sound region: 1980-2000. Green Paper., Dept. Indian Aff. North. Dev., Ottawa. 102 pp.

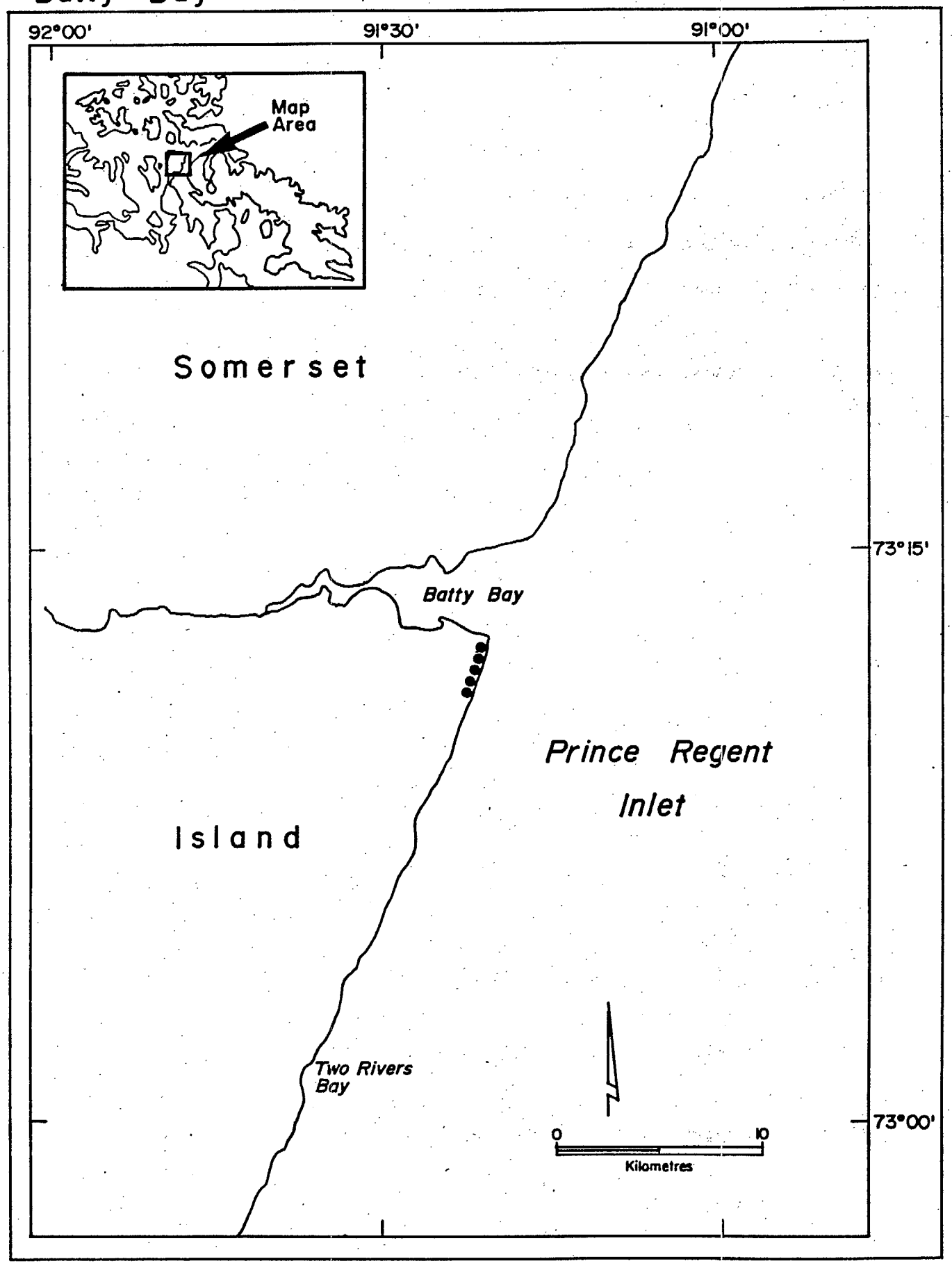
Gaston, A.J., and D.N. Nettleship. 1981. The thick-billed murres of Prince Leopold Island: a study of the breeding ecology of a colonial High Arctic seabird. Monogr. Series No. 6, Can. Wildl. Serv., Ottawa. 350 pp.

Nettleship, D.N. 1976. Studies of seabirds at Prince Leopold Island and vicinity, Northwest Territories. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 24 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Woo, V., and S.C. Zoltai. 1977. Reconnaissance of soils and vegetation of Somerset and Prince of Wales islands, NWT. Fish. Environ. Can., Can. Forest. Serv., Edmonton. 127 pp.

Batty Bay


92°00'
91°30'
91°00'
Map Area
Somerset
73°15'
Batty Bay
Prince Regent Inlet
Island
Two Rivers Bay
73°00'
0
10
Kilometres

NAME: BATTY BAY

NUMBER: 21

LOCATION: 73°14'N, 91°25'W

SIZE: 1 square kilometre

DESCRIPTION:

Batty Bay, located on the eastern coast of Somerset Island, is composed of an inner and outer bay, separated by shallows. The eastern end of Batty Bay is 5 km wide and empties into Prince Regent Inlet. The shores of Batty Bay are primarily Silurian limestone cliffs, up to 305 m in height, with extensive scree slopes. Near the mouth of the bay, there are tidal flats of sand or mud on the north and south coasts. On the south shore, near the mouth of the inner bay, there are alluvial marine beach deposits of Pleistocene seashells (Fortier et al. 1963).

The ice-free conditions in this area are exceptional, with open water extending from Lancaster Sound into Prince Regent Inlet along Somerset Island's east coast. Cracks and shoreleads may develop in the ice along this coast early in January (Stirling and Cleator 1981).

Several archaeological sites are located on the northern shore of the bay.

BIOLOGICAL VALUES:

The cliffs and offshore ice conditions at Batty Bay are favourable to seabirds; cracks and shoreleads in the ice give seabirds early access to the cliffs. A colony of 2,000 pairs of black-legged kittiwakes, representing 1% of the Canadian population, occupies the narrow cliff ledges surrounding the bay (Nettleship and Gaston 1978). These cliffs are occupied from May to September.

Depending upon the ice conditions, migrating king and common eiders extensively use the east coast of Somerset Island for staging. In mid-June, many of these staging eiders are present in the vicinity of Batty Bay (Alliston et al. 1976).

Spring shoreleads in Prince Regent Inlet also provide an important corridor for migrating sea mammals. Approximately 100 white whales have been observed in Batty Bay during July and August, migrating south from Lancaster Sound into Creswell Bay and the more southerly reaches of Prince Regent Inlet (Sergeant and Hay 1979). The site is also utilized by small numbers of walrus in the summer and Arctic fox and polar bear in the winter.

SENSITIVITIES:

Seabirds are sensitive to disturbance and pollution of their marine foraging areas.

KNOWN CONFLICTS:

Prince Regent Inlet, south to approximately Batty Bay, is an area of low-to-moderate potential for oil and gas exploration and development. Prince Regent Inlet is also a potential shipping corridor during the summer (Anon. 1982).

STATUS:

None.

REFERENCES:

Alliston, W.G., M.S.W. Bradstreet, M.A. McLaren, R.A. Davis, and W.J. Richardson. 1976. Numbers and distribution of birds in the central District of Franklin, NWT, June-August 1975. Unpubl. Rept., LGL Ltd. for Polar Gas Project, Toronto. 589 pp.

Anonymous. 1982. The Lancaster Sound region: 1980-2000. Green Paper., Dept. Indian Aff. North. Dev., Ottawa. 102 pp.

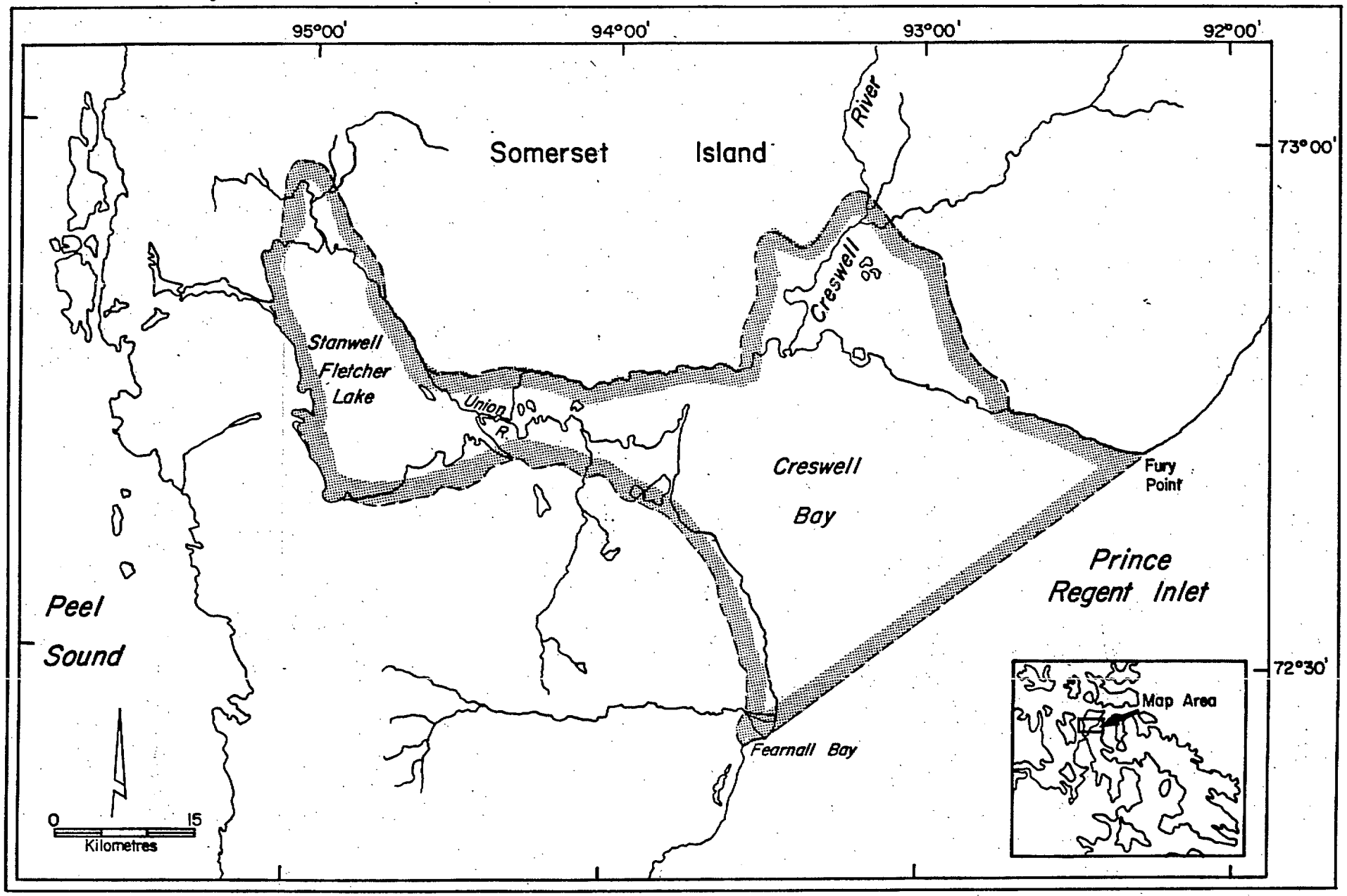
Fortier, Y.O., et al. 1963. Geology of the north-central part of the Arctic Archipelago, Northwest Territories (Operation Franklin). Memoir 320, Geol. Surv. Can., Ottawa. 671 pp.

Nettleship, D.N., and A.J. Gaston. 1978. Pelagic distribution of seabirds in western Lancaster Sound and Barrow Strait, Northwest Territories, in August and September, 1976. ESCOM Rept. No. A1-09, Dept. Indian North. Aff., Ottawa. 73 pp.

Sergeant, D.E., and K. Hay. 1979. Migratory sea mammal populations in Lancaster Sound. ESCOM Rept. No. A1-21, Dept. Indian North. Aff., Ottawa. 31 pp.

Stirling, I., and H. Cleator. (Eds.) 1981. Polynyas in the Canadian Arctic. Occ. Paper No. 45, Can. Wildl. Serv., Edmonton. 70 pp.

Creswell Bay



NAME: CRESWELL BAY

NUMBER: 22

LOCATION: 72°45'N, 93°40'W

SIZE: 2,178 square kilometres

DESCRIPTION:

Creswell Bay opens into Prince Regent Inlet midway along the east side of Somerset Island.

A barren, slightly dissected plateau of Palaeozoic limestone comprises much of Somerset Island north of Creswell Bay. Lowland areas extend around Creswell Bay and Stanwell-Fletcher Lake. Extensive tidal flats occur along the north shore of the bay. The Union River drains Stanwell-Fletcher Lake through a low, rocky area and the western shore of the lake is bounded by cliffs of the western upland of Precambrian gneiss. The south shore of Creswell Bay is formed by low limestone hills and ridges. A well vegetated thermokarst area exists along the Creswell River and north of Stanwell-Fletcher Lake.

A lead develops offshore along the entire eastern coast of Somerset island in January and in spring, a transverse lead occurs across Prince Regent Inlet south of Creswell Bay (Stirling and Cleator 1981).

Relics of two Dorset settlements and five Thule sites have been found in the Creswell Bay area.

BIOLOGICAL VALUES:

In 1974, 2,700 greater snow geese, representing approximately 1% of the Canadian population, used the area for moulting. In 1975, two hundred and fifty pairs of snow geese nested in the thermokarst area north of Creswell Bay (Alliston et al. 1976). Nearly 1,800 adult geese and 25 young were also noted here in mid-July, 1977 (Patterson and Alliston 1978). The geese arrive in the area in early June and depart by the end of August.

King eiders nest in the area and over 7,000 eiders staged along the coast in 1975. The thermokarst area was also used by 450 to 700 pairs of breeding oldsquaws and 4,700 moulting birds. Thousands of shorebirds nest in the thermokarst area and stage along the coastal mudflats. Creswell Bay is used by foraging northern fulmars and black-legged kittiwakes. Peregrine falcons have also been seen in the area (Alliston et al. 1976).

White whales calve in Creswell Bay and small numbers of narwhal and bowhead whales are present during the summer. Creswell Bay is a summer retreat and a possible denning area for polar bears (Stirling et al. 1979).

The Stanwell-Fletcher basin is a wintering area for caribou and a small herd of muskoxen which established itself in the area during the winter of 1975 (Russell et al. 1979).

SENSITIVITIES:

The lowlands, used by geese, are susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost. Nesting and moulting geese are also sensitive to disturbance.

KNOWN CONFLICTS:

Mineral exploration has occurred in the area. Prince Regent Inlet is a potential area for oil and gas exploration and is also a potential summer shipping corridor (Anon. 1982).

STATUS:

The area around Stanwell-Fletcher Lake and south of inner Creswell Bay is a proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Anonymous. 1982. The Lancaster Sound region: 1980-2000. Green Paper., Dept. Indian Aff. North. Dev., Ottawa. 102 pp.

Alliston, W.G., M.S.W. Bradstreet, M.A. McLaren, R.A. Davis, and W.J. Richardson. 1976. Numbers and distributions of birds in the central District of Franklin, NWT, June-August, 1975. Unpubl. Rept., LGL Ltd. for Polar Gas Project, Toronto. 583 pp.

Davis, R.A., M. Bradstreet, C. Holdsworth, M. McLaren, and W.J. Richardson. 1974. Studies of the numbers and distribution of birds in the central Canadian Arctic - 1974: a preliminary report. Unpubl. Rept., LGL Ltd. for Polar Gas Project, Toronto. 238 pp.

Fortier, Y.O., et al. 1963. Geology of the Arctic Archipelago, Northwest Territories (Operation Franklin). Memoir 320, Geol. Surv. Can., Ottawa. 671 pp.

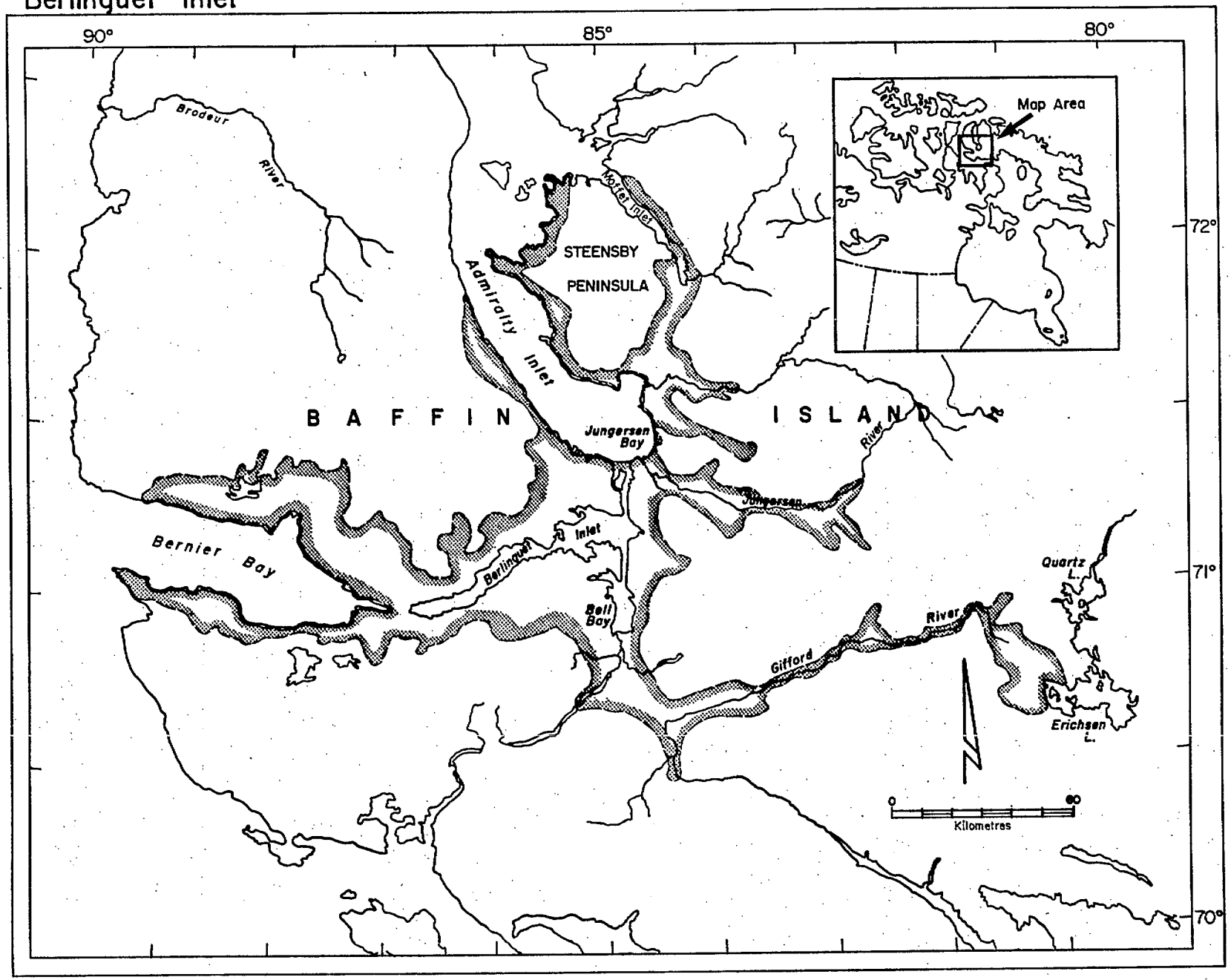
Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Russell, R.H., E.J. Edmonds, and J. Roland. 1979. Caribou and muskoxen habitat studies. ESCOM Rept. No. A1-26, Dept. Indian North. Aff., Ottawa. 140 pp.

Stirling, I., and H. Cleator. (Eds.) 1981. Polynyas in the Canadian Arctic. Occ. Paper No. 45, Can. Wildl. Serv., Edmonton. 70 pp.

Stirling, I., R.E. Schweinsburg, W. Calvert, and H.P.L. Kiliaan. 1979. Population ecology of the polar bear along the proposed Arctic Islands Gas Pipeline route. ESCOM Rept. No. A1-24, Dept. Indian North. Aff., Ottawa. 93 pp.

Berlinguet Inlet



NAME: BERLINGUET INLET

NUMBER: 23

LOCATION: 71°15'N, 85°50'W

SIZE: 11,141 square kilometres

DESCRIPTION:

This site encompasses the coastal zone and surrounding lowlands of Bernier Bay, Berlinguet Inlet and southern Admiralty Inlet on northwestern Baffin Island.

The shores of the bays and inlets are generally low, but hills rising to elevations of 150 to 300 m occur near the coast in some areas. Numerous small lakes are found in the coastal areas south of Admiralty Inlet and in the Moffet Inlet region.

The area is predominantly a gently rolling, coastal plain of very low relief. Lowland vegetation complexes of sedge-grass and tundra polygons occur in the river valleys.

BIOLOGICAL VALUES:

The site is one of the most important moulting and breeding areas for greater snow geese in Canada. Heyland and Boyd (1970) state that a major portion of the Canadian breeding population utilize the area. A partial survey of the site in July, 1969 revealed 6,700 greater snow geese. In July, 1979, Reed et al. (1980) recorded over 2,000 greater snow geese in one section of the site. A more complete survey in August 1980 disclosed 14,700 birds, which is 7% of the North American population (Reed and Dupuis 1980, Anon. 1980).

Broods of Canada geese, which represent the most northeasterly breeding records of this species, were observed in 1980(Reed and Dupuis 1980) and 1983 (A. Reed pers. comm.).

Terns, gulls, fulmars, sea ducks, and peregrine falcons nest and feed within the area (Reed and Dupuis 1980, Kemper 1976).

The waters of the area are used by ringed seal, bearded seal, and polar bear. The islands of Admiralty Inlet are important as a summer retreat for polar bears (Kemper 1976).

SENSITIVITIES:

Wildlife in the area, particularly nesting greater snow geese, are sensitive to disturbance. The low-lying areas are susceptible to terrain disturbance and marine waters are susceptible to pollution.

KNOWN CONFLICTS:

Hydrocarbon exploration and proposed oil tanker traffic through Lancaster Sound are potential sources of oil spills.

STATUS:

None.

REFERENCES:

Anonymous. 1981. A greater snow goose management plan. Can. Wildl. Serv., U.S. Fish Wildl. Serv. and Atlantic Flyway Council. 68 pp.

Blackadar, R.G. 1965. Geological reconnaissance of the Precambrian of northwestern Baffin Island, Northwest Territories. Paper 64-42, Geol. Surv. Can., Ottawa. 11 pp.

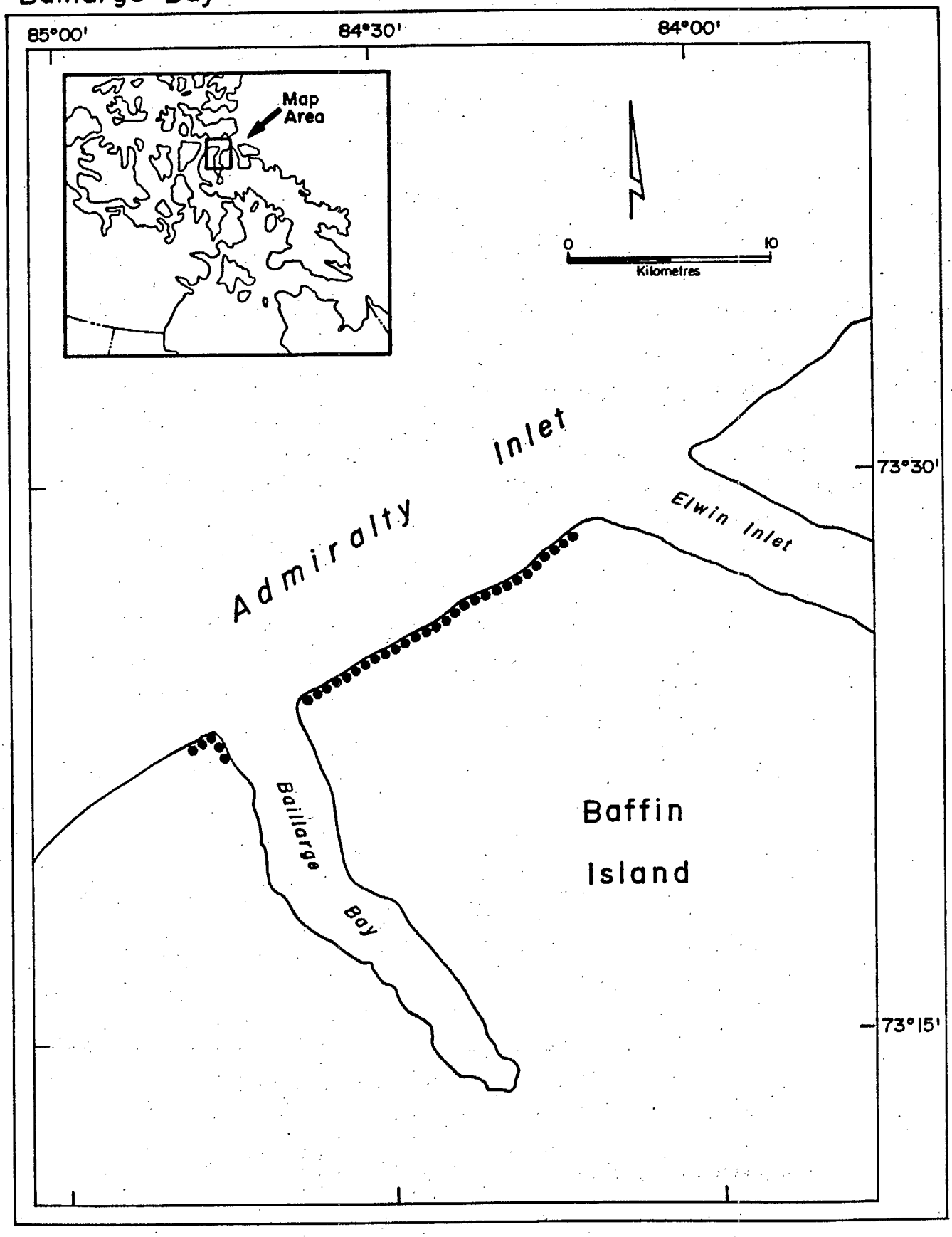
Heyland, J.D., and H. Boyd. 1970. An aerial reconnaissance of the eastern Canadian Arctic, 20-29 July, 1969, in search of greater snow geese. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 23 pp.

Kemper, B. (Ed.) 1976. Environmental baseline studies: 1975 Strathcona Sound program. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 119 pp.

Reed, A., and P. Dupuis. 1980. A preliminary report on greater snow geese and Atlantic brant investigations near Foxe Basin and northern Baffin Island, NWT, August 1980. Unpubl. Rept., Can. Wildl. Serv., Ste. Foy. 25 pp.

Reed, A., P. Dupuis, K. Fischer, and J. Moser. 1980. An aerial survey of breeding geese and other wildlife in Foxe Basin and northern Baffin Island, Northwest Territories, July 1979. Prog. Note. No. 114, Can. Wildl. Serv., Ottawa. 21 pp.

Baillarge Bay



NAME: BAILLARGE BAY

NUMBER: 24

LOCATION: 73°25'N, 84°30'W

SIZE: 16 square kilometres

DESCRIPTION:

Baillarge Bay is situated at the northeastern tip of Admiralty Inlet on north Baffin Island. The site is located approximately 40 km north of the settlement of Arctic Bay.

Steep, rugged cliffs up to 610 m high occur along the coast of Admiralty Inlet between Baillarge Bay and Elwin Inlet. The cliffs, which are composed chiefly of Ordovician sandstone, limestone, and dolomite, are part of a dissected plateau that covers much of northwestern Baffin Island (Lemon and Blackadar 1963).

BIOLOGICAL VALUES:

A major northern fulmar colony, of over 25,000 breeding pairs, extends continuously from Baillarge Bay northeast to Elwin Inlet; a linear distance of slightly more than 16 km (Nettleship 1980). This colony represents approximately 7% of the Canadian population of this species. The fulmars nest on bare or grassy rock ledges and in crevices in the cliff face from about 100 m above the sea up to the top of the cliffs. The highest density of breeding birds is found from the northeast tip of Baillarge Bay east to the mid-point of the promontory. The birds appear in late April and leave the area by late September or early October.

The high productivity of Lancaster Sound also attracts marine mammals such as white whales, ringed seals, and harp seals. Narwhals remain in the deep fiords of Admiralty Inlet during the summer (Sergeant and Hay 1979). Polar bears use the area as a summer retreat, concentrating in deep bays where the ice persists (Stirling et al. 1979).

SENSITIVITIES:

The fulmars are sensitive to disturbance and the pollution of marine foraging areas.

KNOWN CONFLICTS:

Proposed hydrocarbon exploration in Lancaster Sound (Anon. 1982) is a potential source of disturbance and oil pollution.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Anonymous. 1982. The Lancaster Sound region: 1980-2000. Green Paper., Dept. Indian Aff. North. Dev., Ottawa. 102 pp.

Kemper, B. (Ed.) 1976. Environmental baseline studies: 1975 Strathcona Sound program. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 119 pp.

Lemon, R.R.H., and R.G. Blackadar. 1963. Admiralty Inlet area, Baffin Island, District of Franklin. Memoir 328, Geol. Surv. Can., Ottawa. 84 pp.

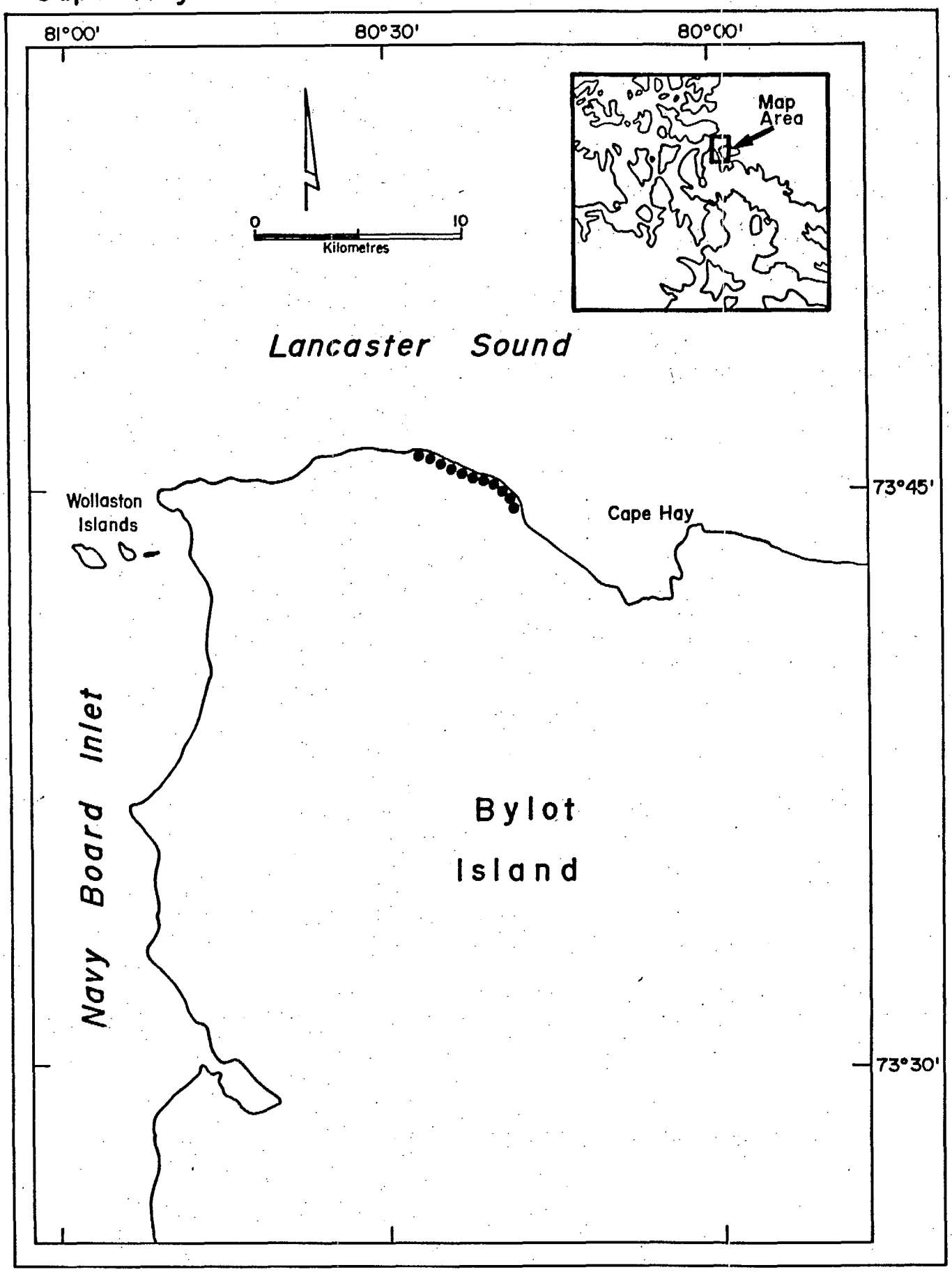
Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9., Can. Wildl. Serv., Ottawa. 330 pp.

Sergeant, D.E., and K. Hay. 1979. Migratory sea mammal populations in Lancaster Sound. ESCOM Rept. No. A1-21, Dept. Indian North. Aff., Ottawa. 31 pp.

Stirling, I., R.E. Schweinsburg, W. Calvert, and H.P.L. Kiliaan. 1979. Population ecology of the polar bear along the proposed Arctic Islands Gas Pipeline route. ESCOM Rept. No. A1-24, Dept. Indian North. Aff., Ottawa. 93 pp.

Cape Hay


81°00'
80°30'
80°00'
Map Area
0
10
Kilometres
Lancaster Sound
Wollaston Islands
Cape Hay
73°45'
Navy Board Inlet
Bylot Island
73°30'

NAME: CAPE HAY

NUMBER: 25

LOCATION: 73°45'N, 80°22'W

SIZE: 3.5 square kilometres

DESCRIPTION:

Cape Hay is located on the northwestern tip of Bylot Island, which is situated northeast of Baffin Island at the entrance to Lancaster Sound. Most of the island consists of the Precambrian metamorphic rock of the Byam Martin Mountains which reach a height of 1,900 m above sea level. Numerous glaciers radiate from these mountains toward the sea. Vertical cliffs of Precambrian dolomite (Jackson and Davidson 1975) rise 60 to 460 m above sea level near Cape Hay.

BIOLOGICAL VALUES:

The number of birds at this colony may have declined over the past 25 years for early estimates (Tuck 1970) were much higher than recent counts. Latest surveys indicate that approximately 140,000 pairs of thick-billed murres and 20,000 pairs of black-legged kittiwakes are present at this site (Nettleship 1980).

This site is the fourth largest colony of thick-billed murres in the NWT, comprising approximately 11% of the Canadian population. It also supports approximately 11% of the Canadian population and 21% of the NWT population of black-legged kittiwakes. It is, therefore, the third largest colony of this species in the NWT.

The site is occupied from late May until September.

Lancaster Sound is a major migration route for marine mammals. White whales, narwhals, ringed seals, and harp seals migrate westward past Cape Hay. Polar bears are numerous in the Lancaster Sound area and use the northern coast of Bylot Island for maternity denning and as a summer retreat (Schweinsburg et al. 1982).

SENSITIVITIES:

Seabirds colonies are sensitive to disturbance and the pollution of offshore waters. Thick-billed murres are particularly sensitive for they are flightless when they depart from their colonies.

KNOWN CONFLICTS:

Proposed hydrocarbon exploration in eastern Lancaster Sound (Anon. 1982) will be a potential source of both disturbance and pollution.

STATUS:

Cape Hay occurs within Bylot Island Bird Sanctuary.

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Anonymous, 1982. The Lancaster Sound region: 1980-2000. Green Paper., Dept. Indian Aff. North. Dev., Ottawa. 102 pp.

Jackson, G.D., and A. Davidson. 1975. Bylot Island map area, District of Franklin. Paper 74-29, Geol. Surv. Can., Ottawa. 12 pp.

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Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

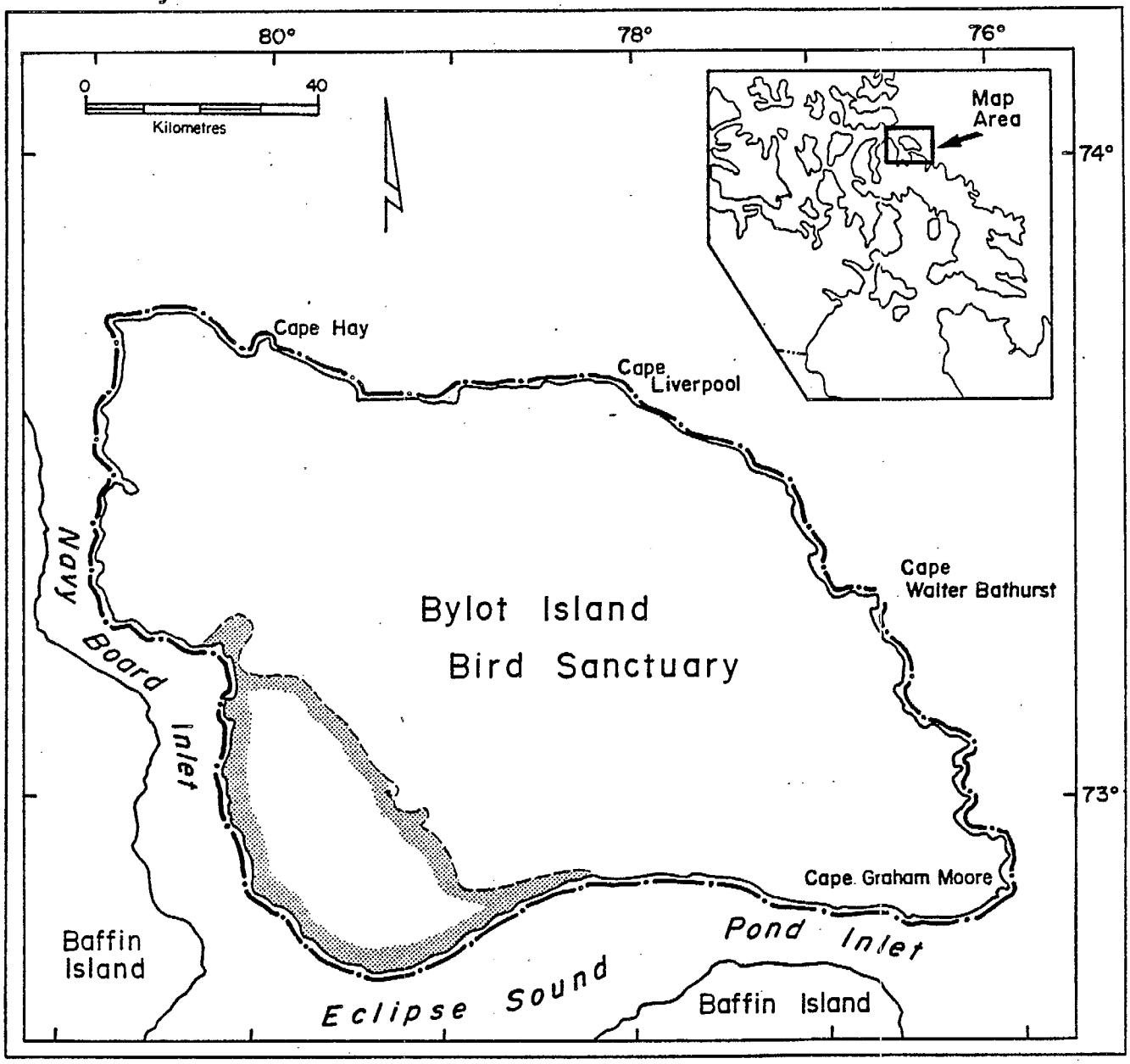
Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Schweinsburg, R.E., L.J. Lee, and P. Latour. 1982. Distribution, movement, and abundance of polar bears in Lancaster Sound, Northwest Territories. Arctic 35(1):159-169.

Tuck, L.M. 1960. The murres: their distribution, populations, and biology. A study of the genus Uria. Monogr. Series No. 1., Can. Wildl. Serv., Ottawa. 260 pp.

Tuck, L.M. 1970. Seabird colonies along the coasts of Labrador and the eastern Canadian Arctic. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 21 pp.

South Bylot Island



NAME: SOUTH BYLOT ISLAND

NUMBER: 26

LOCATION: 72°55'N, 79°30'W

SIZE: 1,511 square kilometres

DESCRIPTION:

Bylot Island is situated northeast of Baffin Island at the entrance to Lancaster Sound. Most of the island consists of the Precambrian metamorphic rock of the Byam Martin Mountains which reach a maximum height of 1,900 m above sea level. Numerous glaciers radiate towards the sea from this central mountain chain.

In the southwest corner of the island, a rolling outwash plain cut by glacial rivers rises 60 m above the water and slopes gradually upward to the mountains. Dominant vegetation types are low shrub-herb tundra and shrub-sedge tundra (Zoltai et al. 1983). Heath, willow, and flowering plants are common along ravines and river valleys.

BIOLOGICAL VALUES:

This southwest lowland is a major breeding ground for greater snow geese. Nesting colonies of 25 to 300 pairs are scattered throughout the area. The population has increased from approximately 15,000 geese in 1957 (Lemieux 1959) to 37,500 breeding adults, 39,000 goslings and 7000 non-breeding adults in 1982 -- approximately 35% of the total population of this subspecies (A. Reed pers. comm.). Approximately 23,300 adults and 24,200 goslings were recorded in 1983 (Reed 1983). The birds arrive, already paired, in early June and depart in September, when ice forms on the ponds.

Red-throated loons, oldsquaws, king eiders, and shorebirds also breed in this area. Bylot Island is a major summer retreat for polar bears in the Lancaster Sound area (Schweinsburg et al. 1982).

SENSITIVITIES:

Greater snow geese are sensitive to disturbance and to pollution of near-shore waters.

KNOWN CONFLICTS:

Increased tourist-related activities could be a source of disturbance (Marshall Macklin Monaghan Ltd. 1982).

STATUS:

This site occurs within Bylot Island Bird Sanctuary.

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Jackson, G.D., and A. Davidson. 1975. Bylot Island map-area, District of Franklin. Paper 74-29, Geol. Surv. Can., Ottawa. 12 pp.

Lemieux, L. 1959. The breeding biology of the greater snow goose on Bylot Island, Northwest Territories. Can. Field-Nat. 73:117-128.

Marshall Macklin Monaghan Ltd. 1982. Community tourism development plan - Pond Inlet. Unpubl. Rept. for GNWT Econ. Dev. Tour., Yellowknife. 79 pp.

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Reed, A. 1983. Report on Canadian Wildlife Service's studies on wild geese in the eastern Canadian Arctic, July and August, 1983. Unpubl. Rept., Can. Wildl. Serv., Ste. Foy. 7 pp.

Schweinsburg, R.E., L.J. Lee, and P. Latour. 1982. Distribution, movement, and abundance of polar bears in Lancaster Sound, Northwest Territories. Arctic 35(1):159-169.

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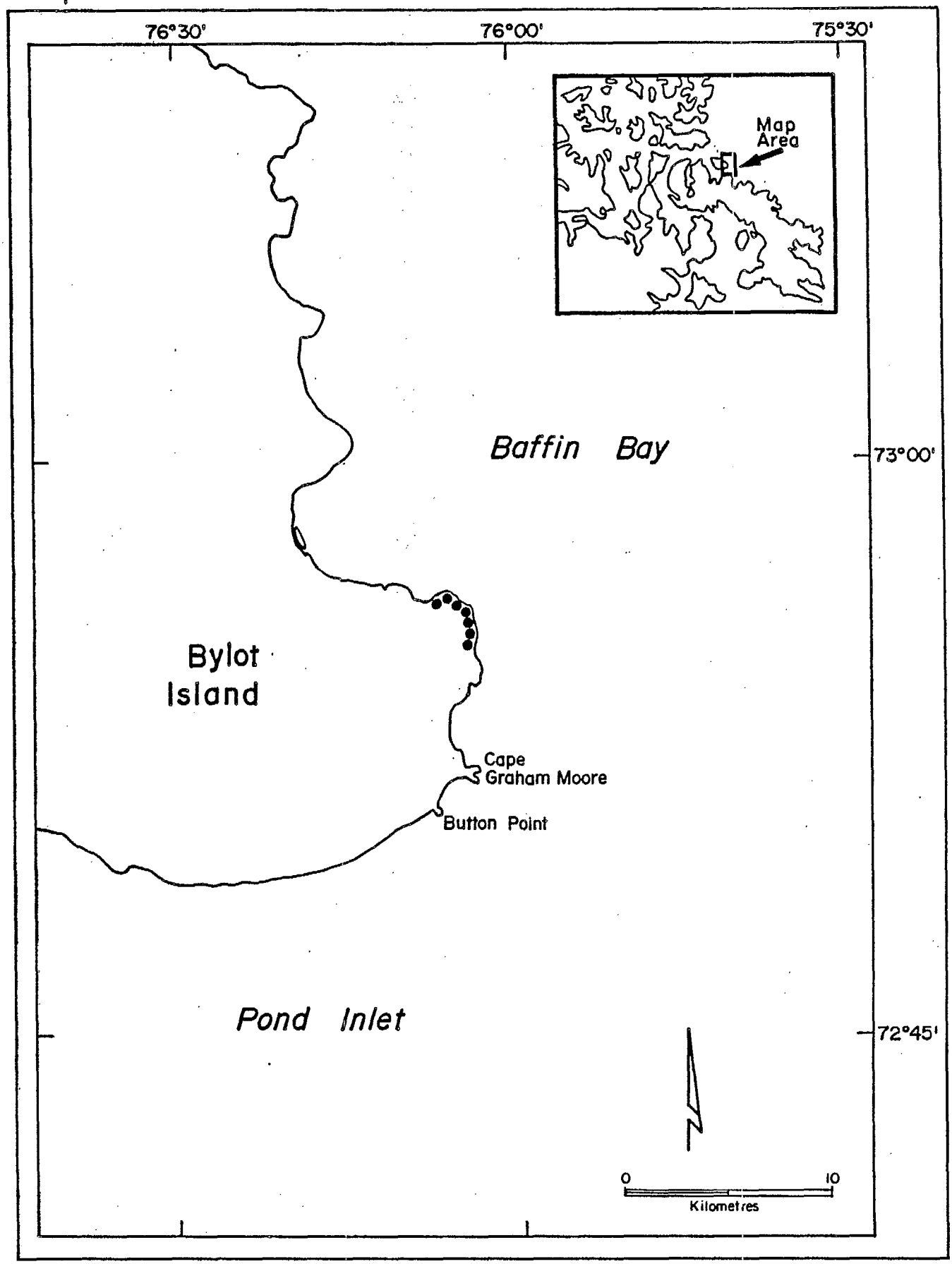
Cape Graham Moore



NAME: CAPE GRAHAM MOORE

NUMBER: 27

LOCATION: 72°55'N, 76°05'W

SIZE: 0.8 square kilometres

DESCRIPTION:

Cape Graham Moore is situated on the southeastern tip of Bylot Island which lies northeast of Baffin Island at the entrance to Lancaster Sound. Most of the island consists of the Precambrian metamorphic rock of the Byam Martin Mountains which reach a height of 1,900 m above sea level. Numerous glaciers extend from these mountains toward the sea.

At the southeastern tip of Bylot Island, steep cliffs of metasedimentary and metavolcanic rock rise 150 m above the sea (Jackson et al. 1975).

BIOLOGICAL VALUES:

A colony of thick-billed murres and black-legged kittiwakes is located on the cliffs about 7 km north of Cape Graham Moore. Approximately 20,000 pairs of murres and 3,000 pairs of kittiwakes occupy 0.8 km of cliff face (Nettleship 1980). This colony constitutes over 1% of the Canadian population of each of these species.

The birds arrive in May and leave the colony in September.

White whales, narwhals, harp seals, and ringed seals migrate through Pond Inlet or north along the coast of Bylot Island into Lancaster Sound. The north and east coast of Bylot Island is a maternity denning area and summer retreat for polar bears (Schweinsburg et al. 1982).

SENSITIVITIES:

Seabird colonies are sensitive to disturbance and the pollution of offshore waters. Thick-billed murres are

particularly sensitive because they are flightless when they depart from their colonies.

KNOWN CONFLICTS:

Proposed hydrocarbon exploration in eastern Lancaster Sound (Anon. 1982) is a potential source of both disturbance and pollution.

Increased tourist-related activities (Marshall Macklin Monaghan Ltd. 1982) could also be a source of disturbance.

STATUS:

Cape Graham Moore occurs within Bylot Island Bird Sanctuary.

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Anonymous, 1982. The Lancaster Sound region: 1980-2000. Green Paper., Dept. Indian Aff. North. Dev., Ottawa. 102 pp.

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Renaud, W.E., W.G. Johnston, and K.J. Finley. 1981. The avifauna of the Pond Inlet region, NWT. Amer. Birds 35(2):119-129.

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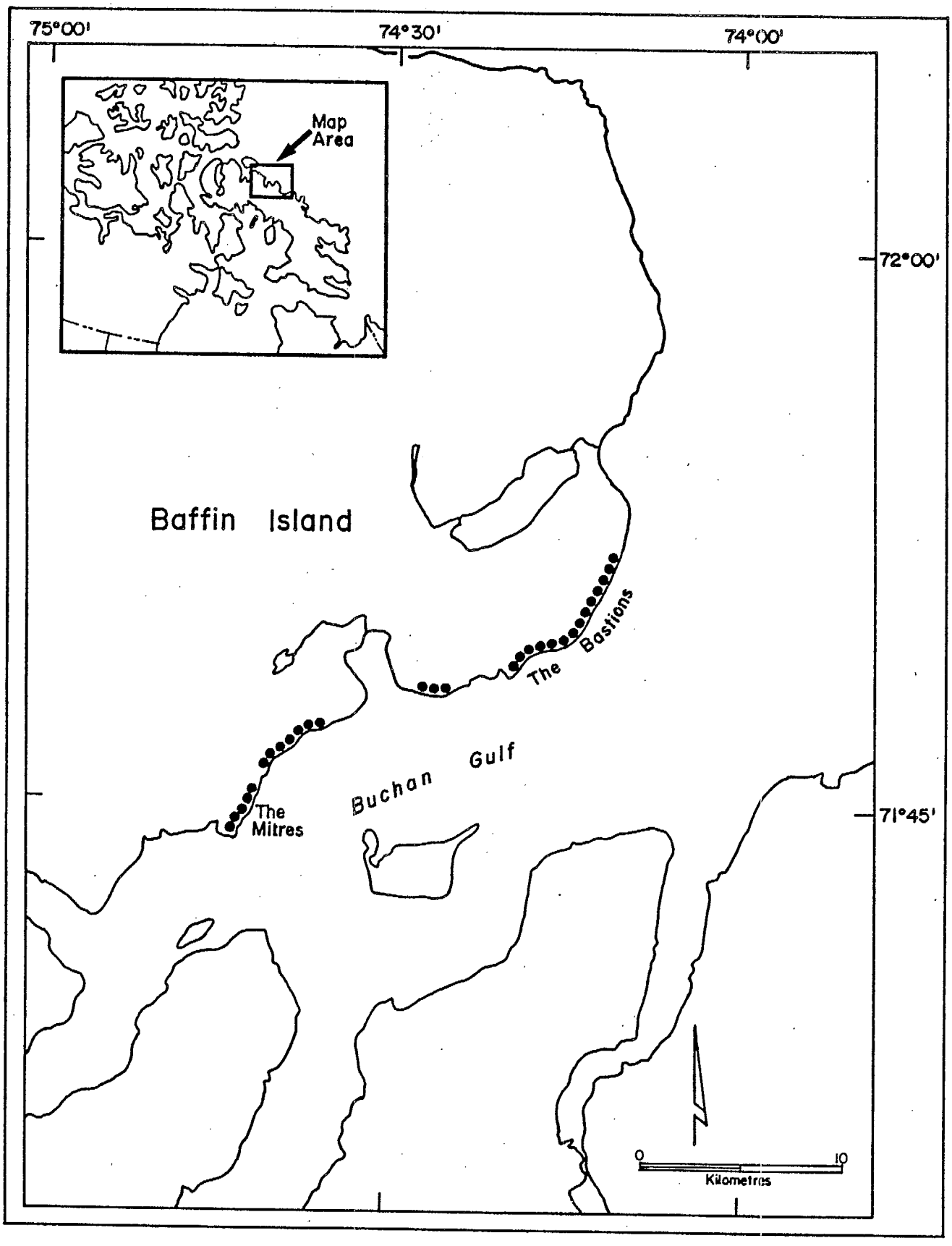
Buchan Gulf


75°00'
74°30'
74°00'
72°00'
71°45'
Map Area
Baffin Island
The Bastions
Buchan Gulf
The Mitres
0
10
Kilometres

NAME: BUCHAN GULF

NUMBER: 28

LOCATION: 71°50'N, 74°30'W

SIZE: 22 square kilometres

DESCRIPTION:

Buchan Gulf is situated on the eastern coast of north Baffin Island about 200 km south of Pond Inlet. The region is part of the Davis Highlands of the Canadian Shield and is underlain by Precambrian metamorphic rock (Jackson et al. 1975). The Highlands are a mountain belt covered by glaciers and penetrated by long fiords.

The north coast of Buchan Gulf is formed by two promontories, The Bastions and The Mitres. These precipitous cliffs rise over 600 m above the sea.

BIOLOGICAL VALUES:

Approximately 25,000 pairs of northern fulmars breed on the grassy rock ledges and pinnacles of The Bastions and The Mitses (Nettleship 1980). The colony, which extends for 22 km along the cliffs, represents approximately 7% of the Canadian population of northern fulmars.

The birds arrive in the area by late April and by early October, the young and adults have left the colony site.

A few narwhal occur in the fiords which extend from Buchan Gulf.

SENSITIVITIES:

Seabirds are sensitive to disturbance and pollution of their marine feeding areas.

KNOWN CONFLICTS:

Proposed hydrocarbon exploration in western Baffin Bay could result in increased disturbance and pollution of offshore waters.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Anonymous. 1979. Initial environmental assessment. Proposed Baffin Bay exploratory drilling program. Unpubl. Rept., Petro-Canada Ltd., Calgary. 414 pp.

Jackson, G.D., A. Davidson, and W.C. Morgan. 1975. Geology of the Pond Inlet map-area, Baffin Island, District of Franklin. Paper 74-24., Geol. Surv. Can., Ottawa. 33 pp.

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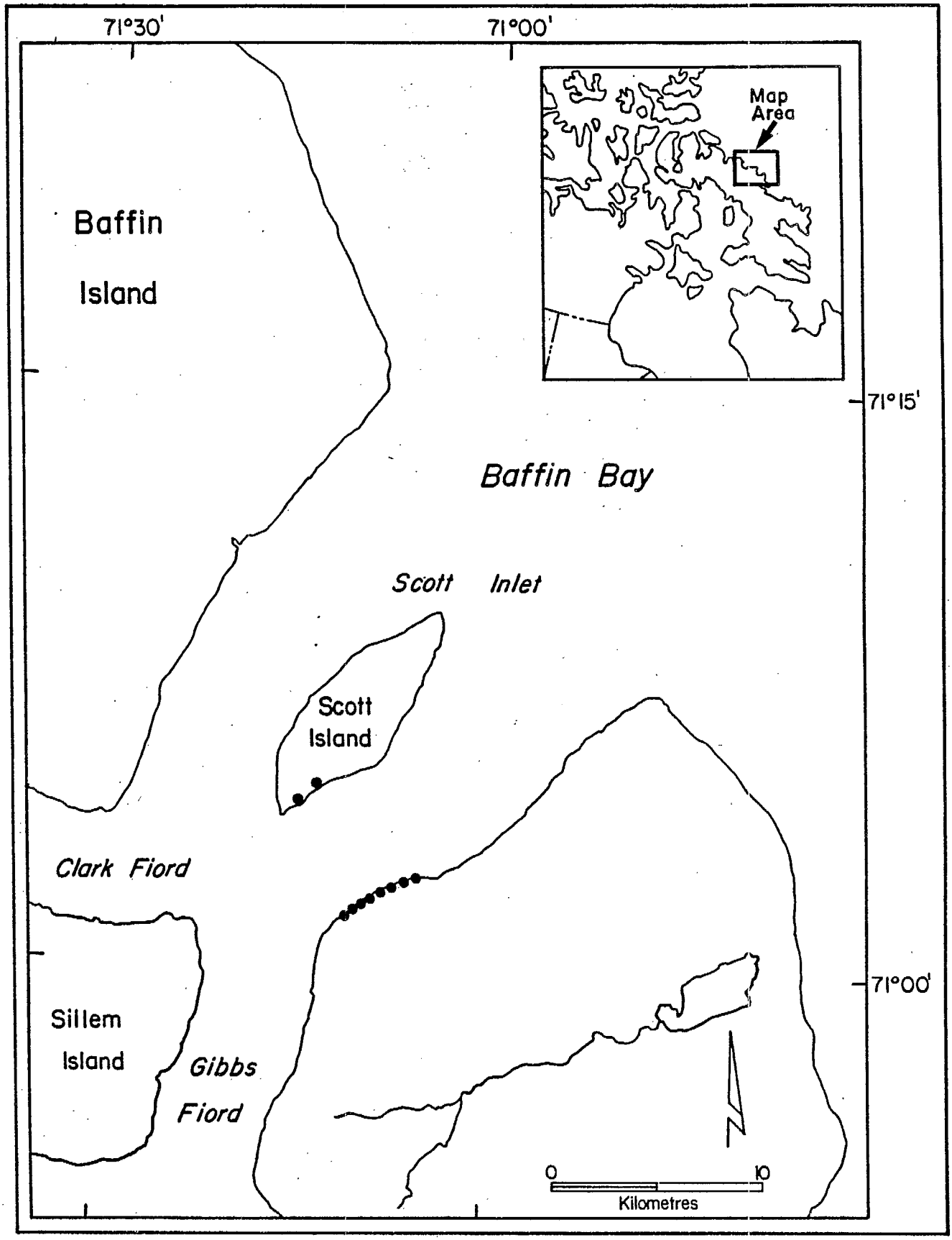
Scott Inlet


71°30'
71°00'
Map Area
Baffin Island
71°15'
Baffin Bay
Scott Inlet
Scott Island
Clark Fiord
Sillem Island
Gibbs Fiord
71°00'
0
10
Kilometres

NAME: SCOTT INLET

NUMBER: 29

LOCATION: 71°03'N, 71°08'W

SIZE: 5 square kilometres

DESCRIPTION:

Scott Inlet is located on the east coast of Baffin Island, about 120 km northwest of the settlement of Clyde. The entrance to the inlet is divided by Scott Island, an island some 600 m high and 11 km long. About 6 km southwest of Scott Island, the inlet is further divided by Sillem Island into Gibbs Fiord to the south and Clark Fiord to the north. Precipitous cliffs, up to 365 m high, line the southern coastline of Scott Island and the adjacent mainland. Numerous ice caps and extensive snow fields cover much of Sillem Island and the surrounding mainland.

BIOLOGICAL VALUES:

A colony, of approximately 25,000 breeding pairs of northern fulmars, extends for 5 km along the southeast mainland side of Scott Inlet, immediately north of the entrance to Gibbs Fiord (Nettleship 1980). This colony represents approximately 7% of the Canadian population. The fulmars occupy the rock ledges of the steep coastal cliffs and pinnacles from early April to late September.

Approximately 100 pairs of glaucous gulls nest in two colonies on southwest Scott Island and are also scattered throughout the fulmar colony (Nettleship 1980).

White whales and narwhals concentrate in the offshore waters of Baffin Bay. Walrus, polar bear, and harp, bearded, and ringed seals also frequent the area near Scott Inlet.

SENSITIVITIES:

Fulmars are sensitive to disturbance and pollution of offshore feeding areas.

KNOWN CONFLICTS:

The area is presently subject to minimal marine and air traffic. However, activities could increase markedly if the proposed hydrocarbon exploration in Lancaster Sound proceeds (Anon. 1982).

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

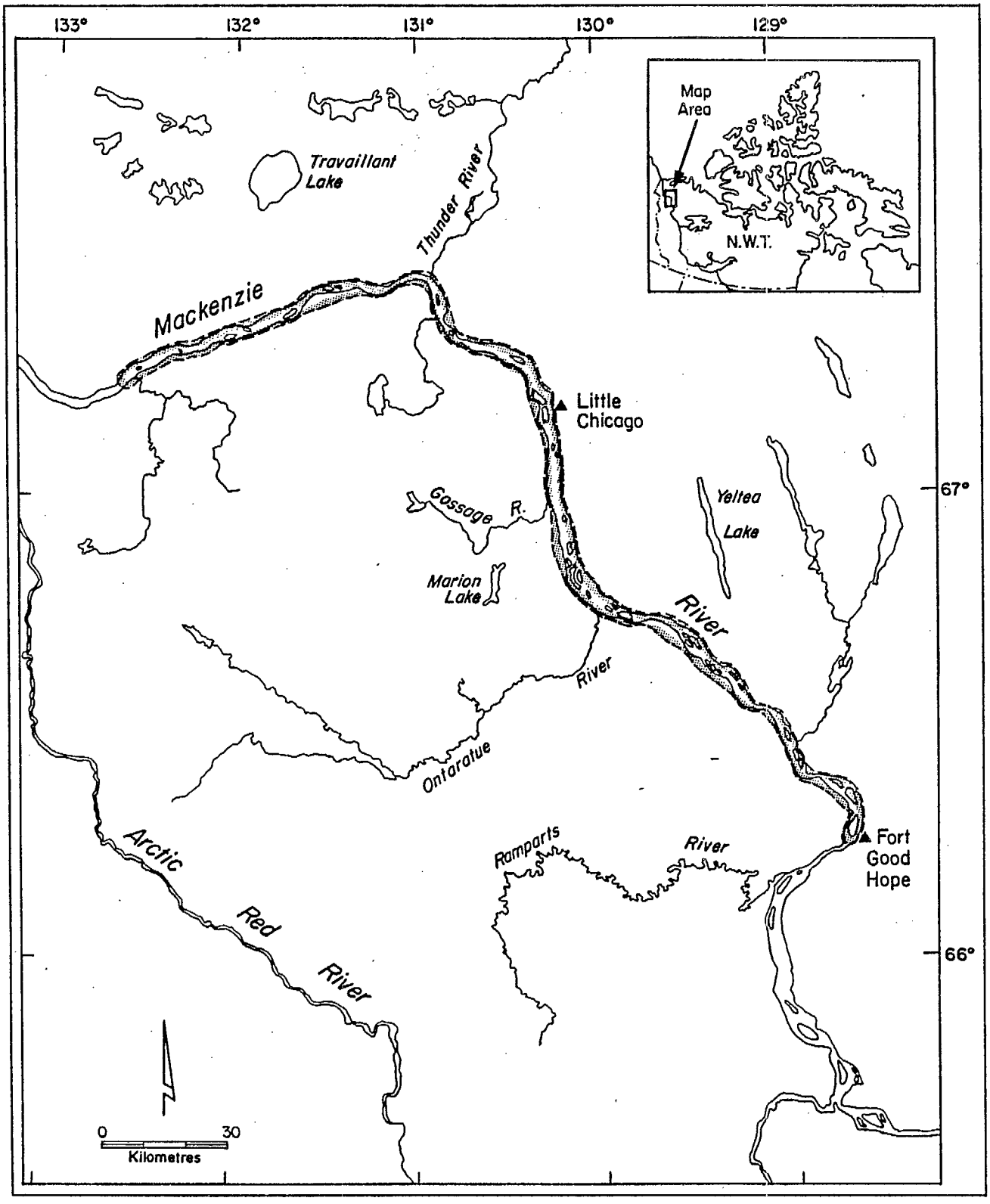
Anonymous. 1979. Initial environmental assessment. Proposed Baffin Bay exploratory drilling program. Unpubl. Rept., Petro-Canada Ltd., Calgary. 414 pp.

Anonymous. 1982. The Lancaster Sound region: 1980-2000. Green Paper., Dept. Indian Aff. North. Dev., Ottawa. 102 pp.

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Mackenzie River Islands



NAME: MACKENZIE RIVER ISLANDS-MANITOU ISLAND TO TREE RIVER

NUMBER: 30

LOCATION: $67^{0}00'$N, $130^{0}10'$W

SIZE: 829 square kilometres

DESCRIPTION:

This area includes the islands along a 270 km segment of the Mackenzie River between the settlements of Fort Good Hope and Arctic Red River.

Numerous alluvial deposits, ranging from exposed sand bars to well-forested islands, bisect the Mackenzie River. The islands and adjacent floodplains are composed of sediments overlying Devonian-aged bedrock.

The perimeter of many of these low-lying islands are flooded each spring. As a result, central areas support mature stands of white spruce and balsam poplar while willow growth abounds in peripheral areas. Broad muddy or sandy shorelines are also common around many of the islands

BIOLOGICAL VALUES:

Virtually the entire population of lesser snow geese which breeds in the western Arctic migrates down the Mackenzie River valley. The river islands between Norman Wells and Arctic Red River are traditional spring stop-over points for migrating swans and geese (Barry 1967, Campbell and Shepard 1973, Salter et al. 1974). When the geese arrive in early or mid-May, the migrating flocks congregate on river islands where open water is available (Barry 1967). The open water and accompanying exposed shorelines provide the only habitat for feeding, resting, and mating during migration.

In 1973, the major buildup of snow geese occurred by 14 May; 13,830 geese had arrived in the Little Chicago area by that time (Salter et al. 1974). In 1972, 61,413 snow geese were observed on 20 May and 63,916 snow geese were noted on 25 May in the same area (Campbell and Shepard 1973).

Similarly, 1,061 tundra swans were observed between Norman Wells and Tree River on 14 May 1973 (Salter et al. 1974) whereas 3,255 swans were noted on 20 May and 1,936 swans were recorded on 25 May, 1972 (Campbell and Shepard 1973). The 1973 season was earlier than the 1972 season and apparently fewer swans and geese staged in this area prior to dispersing to breeding areas.

During 1973 aerial surveys between Ten Mile Island and Tree River, Salter et al. (1974) counted 26,027 waterfowl on 14 May and only 1,348 one week later. Similarly, in 1972, despite a peak of 112,836 waterfowl along the river on 25 May, less than 10,000 waterfowl remained by 29 May (Campbell and Shepard 1973). Use of the river islands is intense but of short duration.

These islands may also be used in the fall by geese forced south prematurely by poor weather (Barry 1967).

Heavy utilization of these islands during the winter by moose may be attributed to their unique habitat characteristics. The combination of poplar stands for cover and abundant willow for browse provides ideal winter habitat (Ruttan 1974).

SENSITIVITIES:

Staging waterfowl are sensitive to disturbance. Pollution of riverine areas and major fluctuations in water levels could also have detrimental affects on the waterfowl and their habitats.

KNOWN CONFLICTS:

This area is down stream from the Norman Wells oil field expansion project.

STATUS:

None.

REFERENCES:

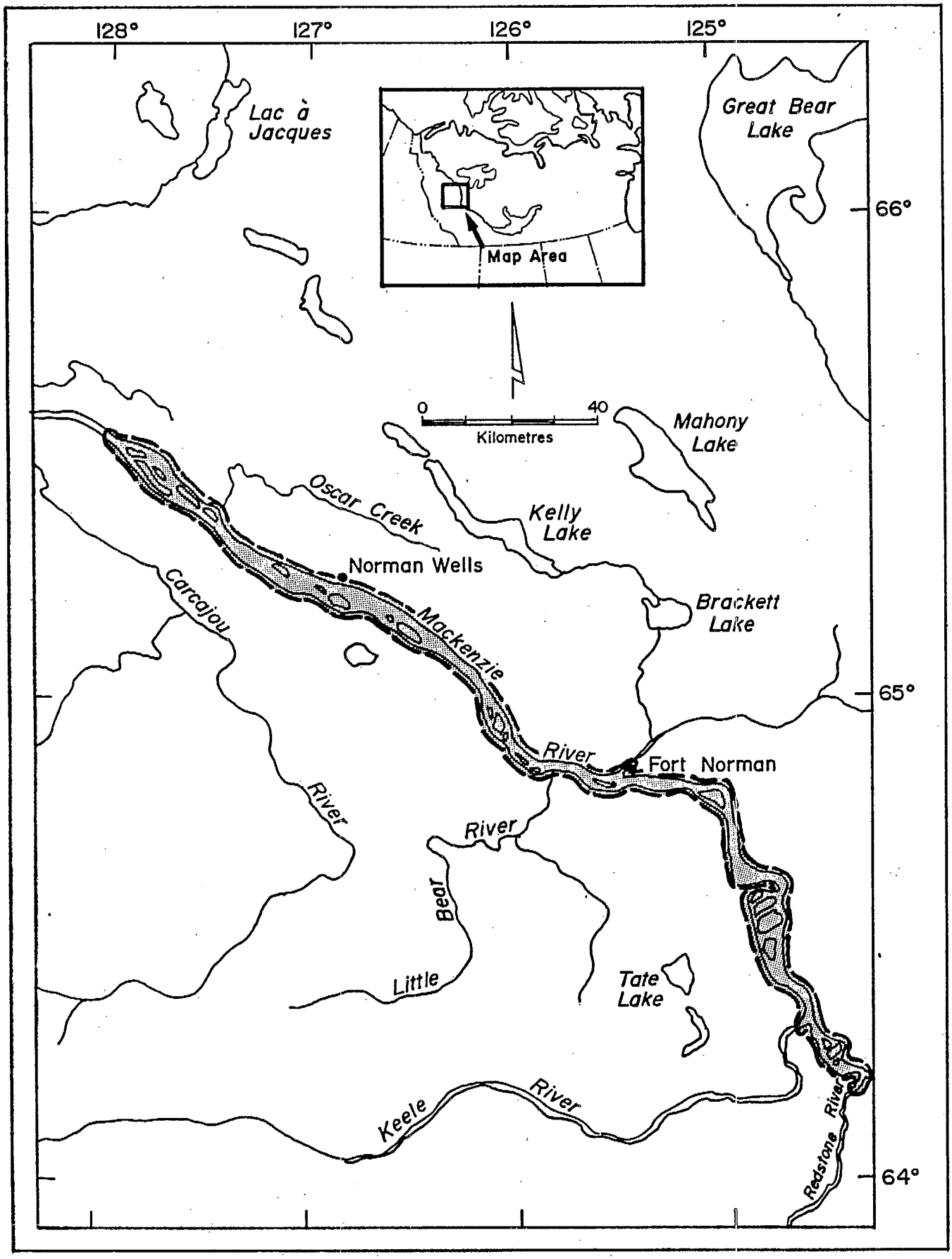
Barry, T.W. 1967. The geese of the Anderson River delta, Northwest Territories. Ph.D. Thesis, University of Alberta, Edmonton.

Campbell, R.W., and M.G. Shepard. 1973. Spring waterfowl migration on the Mackenzie River from Norman Wells to Arctic Red River, NWT, 1972. In: Interim Report No.3(2)., Appendix III. Towards an environmental impact assessment of the portion of the Mackenzie Gas Pipeline from Alaska to Alberta. Environmental Protection Board, Winnipeg. 47 pp.

Ruttan, R.A. 1974. Observations of moose in the northern Yukon Territory and Mackenzie River valley, 1972. In: R.A. Ruttan and D.R. Wooley (Eds.). Studies of furbearers associated with proposed pipeline routes in the Yukon and Northwest Territories. Arctic Gas Biological Report Series 9(6):1-45.

Salter, R., W.J. Richardson, and C. Holdsworth. 1974. Spring migration of birds through the Mackenzie valley, NWT, April-May, 1973. In: W.W.H. Gunn, W.J. Richardson, R.E. Schweinsburg, and T.D. Wright (Eds.). Ornithological studies in the Mackenzie valley, 1973. Arctic Gas Biological Report Series 28(2):1-168.

Mackenzie River Islands



NAME: MACKENZIE RIVER ISLANDS-REDSTONE RIVER TO PATRICIA ISLAND

NUMBER: 31

LOCATION: 64°53'N, 125°35'W

SIZE: 1,088 square kilometres

DESCRIPTION:

This area includes the islands along a 250 km segment of the Mackenzie River from the Redstone River to Patricia Island. The communities of Fort Norman and Norman Wells are located along this segment of the river.

Primarily Cretaceous bedrock underlies the west side of the Mackenzie River whereas Devonian, Ordovician, Silurian, and Cambrian rock are found on the east side, forming the uplift ridges at the Franklin Mountains. Within this stretch of the river there are numerous islands including some which are quite large and not of alluvial origin. Near Norman Wells, the Mackenzie River has a broad, shallow stream bed; recent fine-grained alluvium borders many of the islands and point bars (Geddes and McCourt 1982). Low-Lying alluvial islands composed of fine-grained sediments are found in the area of Norman Wells.

White spruce and balsam poplar predominate on alluvial flats, with white birch on upper terraces and levees. Willow and Equisetum are the major components of the riparian communities on the low-lying alluvial flats and along island margins. Shoreline vegetation around ponds usually consists of sedge (Carex spp.), Equisetum spp., and willows. Pond weed and emergents are found in the shallow ponds and abandoned channels (Geddes and McCourt 1982).

BIOLOGICAL VALUES:

The Mackenzie River is a major spring migration corridor for waterfowl, particularly lesser snow geese. Virtually the

entire western Arctic population of lesser snow geese pass through this area each spring (Campbell and Shepard 1973).

In 1972, an estimated 95,000 lesser snow geese used the Mackenzie River. In 1972, a peak of 92,521 birds were noted on May 25 on islands near Norman Wells (Campbell and Shepard 1973). In 1973, peak goose migration past Norman Wells occurred on May 9, with 16,204 geese, of which 14,590 were lesser snow geese, being observed (Salter et al. 1974). R. Webb Environmental Services Ltd. (1980) counted a maximum of 22,775 lesser snow geese on the river islands on May 9, 1980.

Fewer geese used the area in 1981 and 1982 (R. Webb Environmental Services Ltd. 1983). A maximum of 3,681 lesser snow geese were observed on a single island in 1981. Other islands received minimal use. A similar pattern was noted in 1982. Numbers of all geese declined once the river ice cleared and the islands flooded (R. Webb Environmental Services Ltd. 1980).

White-fronted geese, Canada geese, swans, and diving ducks also use the open water around the islands during spring migration (R. Webb Environmental Services 1980). Dabbling ducks are the first waterfowl to arrive, followed by dark geese, lesser snow geese, swans, and lastly, diving ducks. Feeding on Equisetum species and willow catkins dominates activity during spring staging. Dabbling ducks also use the islands for courtship and copulation (Campbell and Shepard 1973).

The islands provide prime winter moose habitat (Ruttan 1974). Moose usually move to the islands in December and return to the mainland in March and April (Ruttan 1974).

SENSITIVITIES:

Staging waterfowl are sensitive to disturbance. Pollution of feeding areas and major fluctuations in water levels are detrimental to waterfowl habitat.

KNOWN CONFLICTS:

The expansion of activities at the Norman Wells oilfield includes dredging and creating artificial islands in the river. The Mackenzie River is also heavily used by barge traffic.

STATUS:

None.

REFERENCES:

Campbell, R.W., and M.G. Shepard. 1973. Spring waterfowl migration on the Mackenzie River from Norman Wells to Arctic Red River, NWT, 1972. In: Interim Report 3(2)., Appendix 3. Toward an environmental impact assessment of the portion of the Mackenzie Gas Pipeline from Alaska to Alberta. Environmental Protection Board, Winnipeg. 47 pp.

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Ruttan, R.A. 1974. Observations of moose in the northern Yukon Territory and Mackenzie River valley, 1972. In: R.A. Ruttan and D.R. Wooley (Eds.). Studies of furbearers associated with proposed pipeline routes in the Yukon and Northwest Territories. Arctic Gas Biological Report Series 9(6):1-45.

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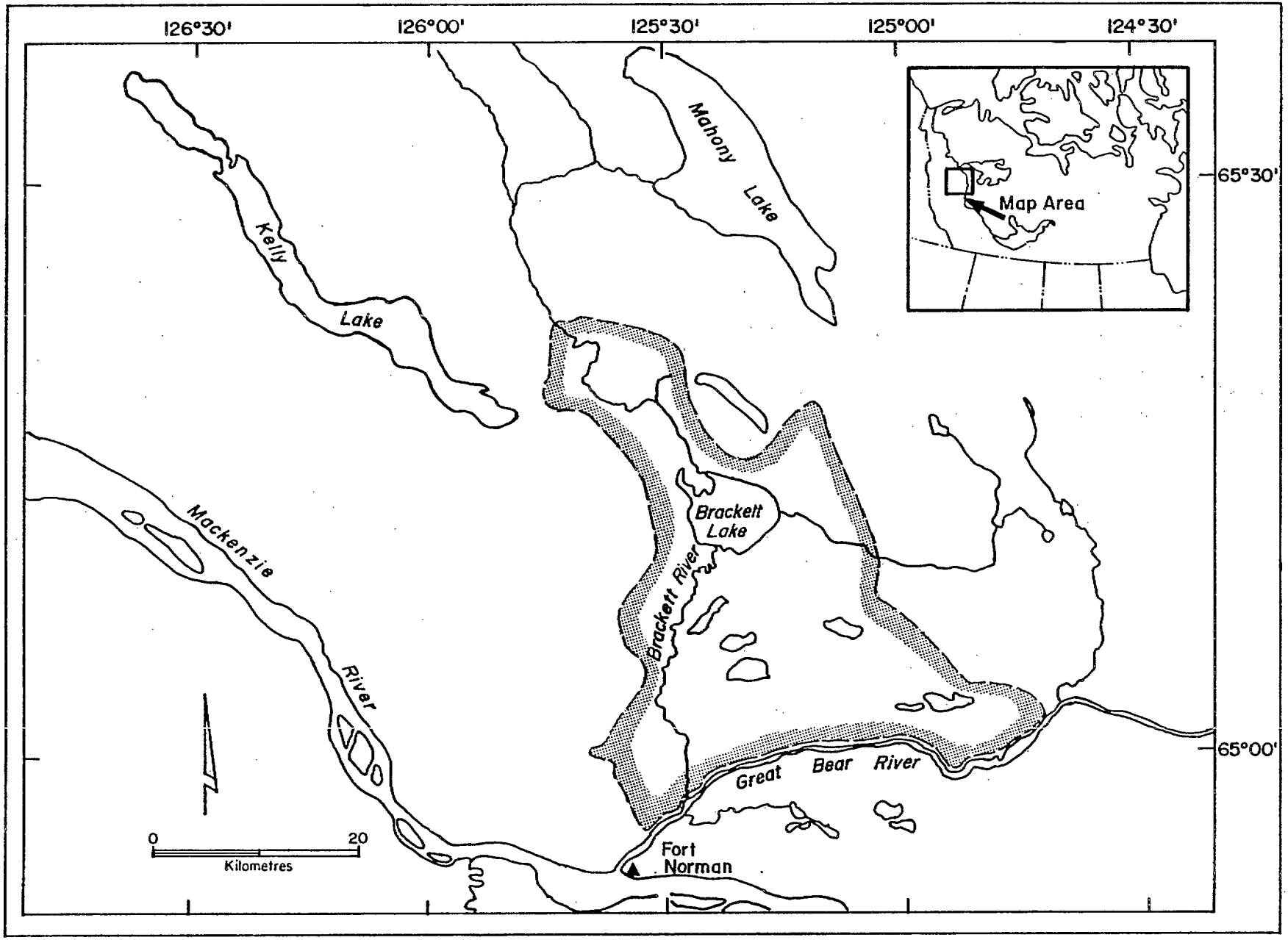
Brackett Lake



NAME: BRACKETT LAKE

NUMBER: 32

LOCATION: 65°15'N, 125°10'W

SIZE: 1,343 square kilometres

DESCRIPTION:

The Brackett Lake area is located just north of the confluence of the Great Bear and Brackett rivers. The area is approximately 8 km northeast of the community of Fort Norman.

The wetlands and lakes surrounding Brackett Lake are on a low-lying, post-glacial lake bed. Black spruce bogs, ericaceous shrubs and extensive raised peat beds are the dominant vegetation features. The shores of lakes and ponds are lined with sedge meadows.

BIOLOGICAL VALUES:

A dense breeding population of ducks (31 birds/km^2) has been recorded for the Brackett Lake area (Davis 1974). Over 5,000 white-fronted geese and an estimated 12,000 ducks have been recorded on the north and east shores of the lake and at the mouth of the Loche River in early September (Barry 1958). Brackett and Kelly Lakes are also heavily utilized as fall staging areas. Approximately 500 white-fronted geese and 1,500 tundra swans have been observed during fall migration (Salter 1974).

Shorebirds such as dowitchers, snipe, solitary sandpipers, and yellowlegs also stage at Brackett Lake during autumn migration.

Moose, black bear, muskrat, and beaver are common in this area. River otters also inhabit the Loche and Brackett rivers.

SENSITIVITIES:

Waterfowl, particularly moulting birds, are sensitive to disturbance. Low-lying habitats are susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost.

KNOWN CONFLICTS:

A pipeline, currently under construction, passes through the southwest corner of the area as does the proposed Mackenzie Highway corridor.

STATUS:

Proposed IBP site (Beckel 1975).

REFERENCES:

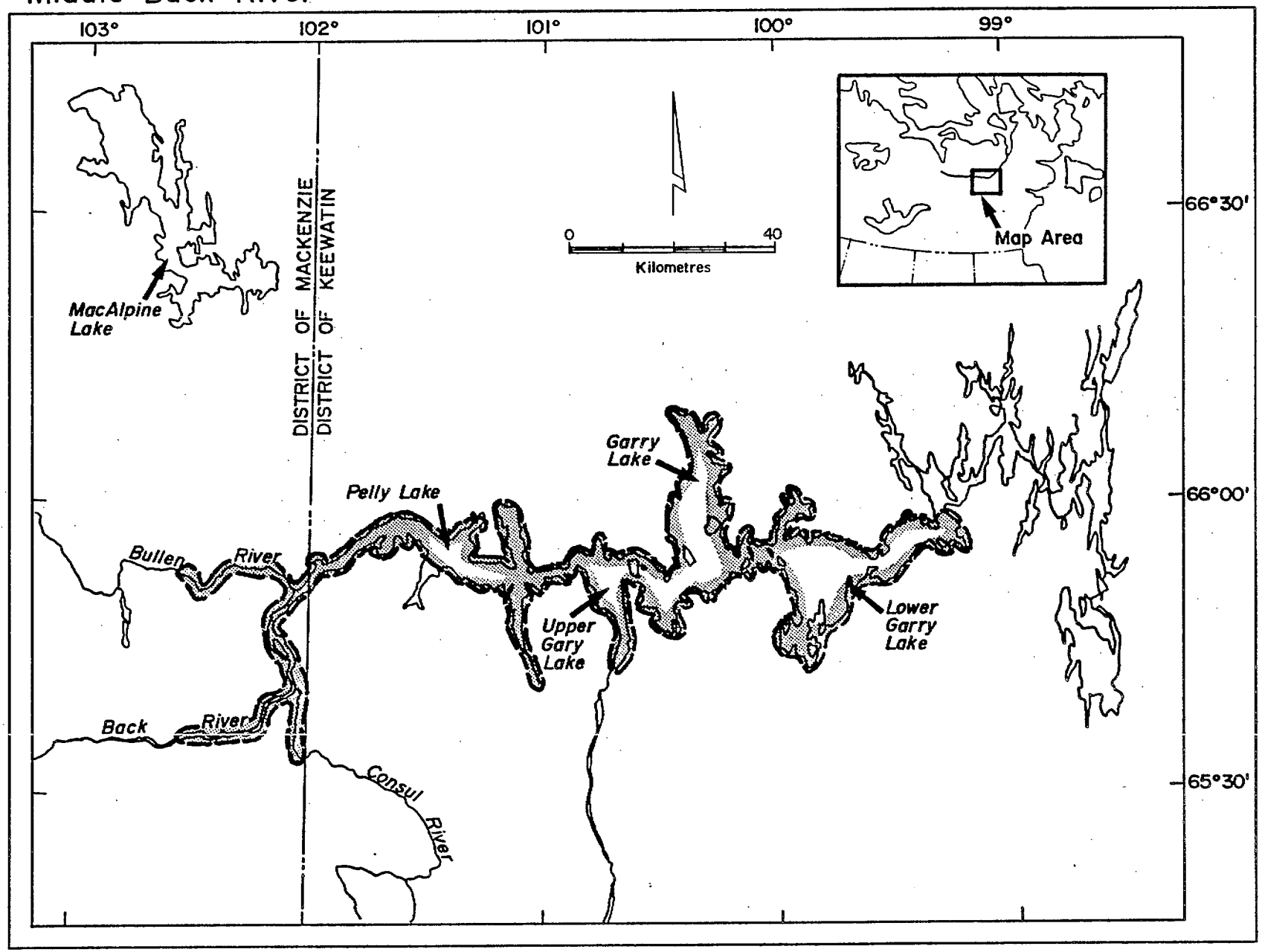
Barry, T.W. 1958. Waterfowl investigations and wildlife surveys of the western Arctic and some of the central Arctic islands. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 13 pp.

Beckel, D.K.B.(Ed.) 1975. IBP ecological sites in subarctic Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 10, Univ. Lethbridge, Lethbridge. 163 pp.

Davis, R.A. 1974. Aerial survey of bird populations along the route of the proposed gas pipeline in the Mackenzie District, NWT,summer 1971. Chpt. I:1-156. In: W.W.H. Gunn and J.A. Livingstone (Eds.). Bird distribution and populations ascertained through aerial survey techniques, 1972. Arctic Gas Biol. Rept. Series., Vol. 11.

Salter, R. 1974. Autumn migration of birds through the central and upper Mackenzie Valley region, 1972. Chpt.II:1-83. In: W.W.H. Gunn and J.A. Livingstone (Eds.). Bird migration on the North Slope and in the Mackenzie Valley regions. Arctic Gas Biol. Rept. Series., Vol.13.

Middle Back River



NAME: MIDDLE BACK RIVER

NUMBER: 33

LOCATION: 65°55'N, 100°20'W

SIZE: 1,514 square kilometres

DESCRIPTION:

This site encompasses the Back River, from a point 10 km west of the McKinley River downstream 70 km to the west end of Pelly Lake. It also includes all northern and southern bays of Pelly Lake, Upper Garry Lake, Garry Lake, and Lower Garry Lake to 99°W. The site is situated approximately 240 km northwest of the settlement of Baker Lake.

Pleistocene glacial features are evident in this area of low relief (Wright 1967). Drumlins with continuous and discontinuous eskers which are oriented in a north-south direction are common. Silt, sand, and gravel predominate along the river-lake system. The underlying bedrock is of Proterozoic origin, consisting mainly of granitic and allied rocks (Wright 1967).

Wet sedge-graminoid meadows occur along stream and lake banks (Sterling and Dzubin 1967).

BIOLOGICAL VALUES:

This site supports up to 3,000 moulting large Canada geese (B. c. maxima and moffitti) (Sterling and Dzubin 1967). Since Canada goose populations have expanded markedly over the last 15 years, further studies are required to determine the number of birds presently using the site. This group of moulting birds is thought to be from the Pacific Flyway.

Premoulting flocks generally arrive about mid-June. By mid-August the geese have regained their ability to fly and begin to leave the area (Kuyt 1966, Sterling and Dzubin 1967).

The geese feed on the sedge-graminoid meadows and use the waters of the streams and rivers as retreats during the moulting period (Sterling and Dzubin 1967).

The calving grounds for the Beverly caribou herd lie along the southern boundary of this area.

SENSITIVITIES:

Moulting geese are sensitive to disturbance.

KNOWN CONFLICTS:

Some mineral exploration occurs in the vicinity.

STATUS:

The southwest end of the area borders the Thelon Game Sanctuary.

REFERENCES:

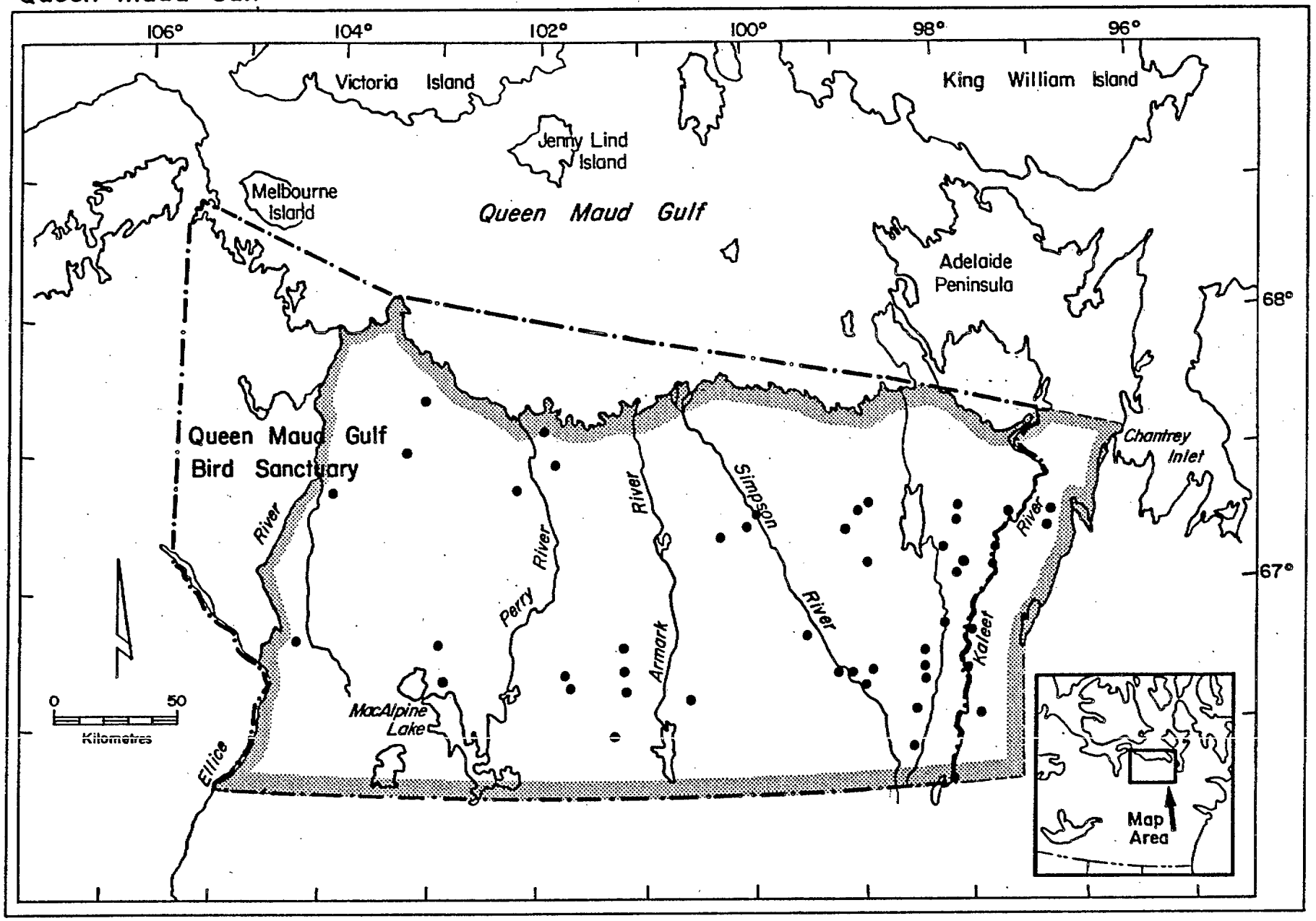
Dzubin, A.X., R.T. Sterling, and E. Kuyt. 1978. Large Canada geese moulting in the Northwest Territories. Unpubl. Rept., Can. Wildl. Serv., Saskatoon. 62 pp.

Kuyt, E. 1966. Further observations on large Canada geese moulting on the Thelon River, Northwest Territories. Can. Field-Nat. 80:63-69.

Sterling, T., and A. Dzubin. 1967. Canada goose moult migrations to the Northwest Territories. Trans. N. Amer. Wildl. Conf. 32:355-373.

Wright, G.M. 1967. Geology of the southeastern barren grounds, parts of the districts of Mackenzie and Keewatin, (Operations Keewatin, Baker, Thelon). Mem. 350, Geol. Surv. Can., Ottawa. 91 pp.

Queen Maud Gulf



NAME: QUEEN MAUD GULF

NUMBER: 34

LOCATION: 67°00'N, 100°30'W

SIZE: 53,925 square kilometres

DESCRIPTION:

The northern border of this site is bounded by Queen Maud Gulf and is situated approximately 75 km south of the community of Cambridge Bay. The landscape is dominated by a generally flat plain of post-glacial marine emergence which extends approximately 135 km inland from the coast. The lowland consists of Precambrian bedrock overlain with glacial till and marine clays and silts. Relief is provided by rock outcrops, drumlins, and old beach ridges which are most evident in the southern and western regions of the lowlands.

The vegetation consists of wet, sedge meadows and marsh tundra in low-lying areas, interspersed with upland plant communities of lichen-moss-vascular plant associations (Ryder 1969).

BIOLOGICAL VALUES:

In 1982, a total of 49 goose colonies were recorded within this site (R. Kerbes pers. comm.). Most of the colonies are scattered throughout the Queen Maud Gulf Bird Sanctuary, although several are located outside the sanctuary, within 15 km of its eastern boundary. An estimated total of 45,350 pairs of Ross' geese nested in association with approximately 53,000 pairs of lesser snow geese (R. Kerbes pers. comm.). These totals represent over 90% of the world's population of Ross' geese and approximately 8% of the Canadian population of lesser snow geese. The area also supports populations of nesting and moulting Canada geese, Atlantic and black brant, white-fronted geese, and tundra swans.

Geese arrive in late May. Brood rearing and moulting occurs throughout the area and geese begin leaving during the last week of August.

The Bathurst caribou herd calving grounds are located both west of the Ellice River and east towards the Perry River. Over 6,000 muskoxen are estimated to be present within the boundaries of the sanctuary (Urquhart 1982). Ringed seals are the most abundant marine mammal found in offshore waters.

SENSITIVITIES:

All wildlife, particularly moulting and nesting geese, are sensitive to disturbance. Low-lying habitats are sensitive to terrain disturbance.

KNOWN CONFLICTS:

None.

STATUS:

Much of the goose nesting area is included within the Queen Maud Gulf Bird Sanctuary.

The sanctuary has been designated as a RAMSAR site - a Wetland of International Importance (Anon. 1982).

REFERENCES:

Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories - a background paper. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 3 Vols. 370 pp.

Anonymous. 1982. Canadian sites designated as Wetlands of International Importance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 89 pp.

Barry, T.W. 1960. Waterfowl reconnaissance in the western Arctic. Arctic Circ. 13(4):51-58.

Kerbes, R.H., M.R. McLandress, G.E.J. Smith, G.W. Beyersbergen, and B. Godwin. 1983. Ross' goose and snow goose colonies in the central Canadian Arctic. Can. J. Zool. 61:168-173.

Ryder, J.P. 1967. The breeding biology of Ross' goose in the Perry River region, Northwest Territories. Rept. Series No. 3, Can. Wildl. Serv., Ottawa. 56 pp.

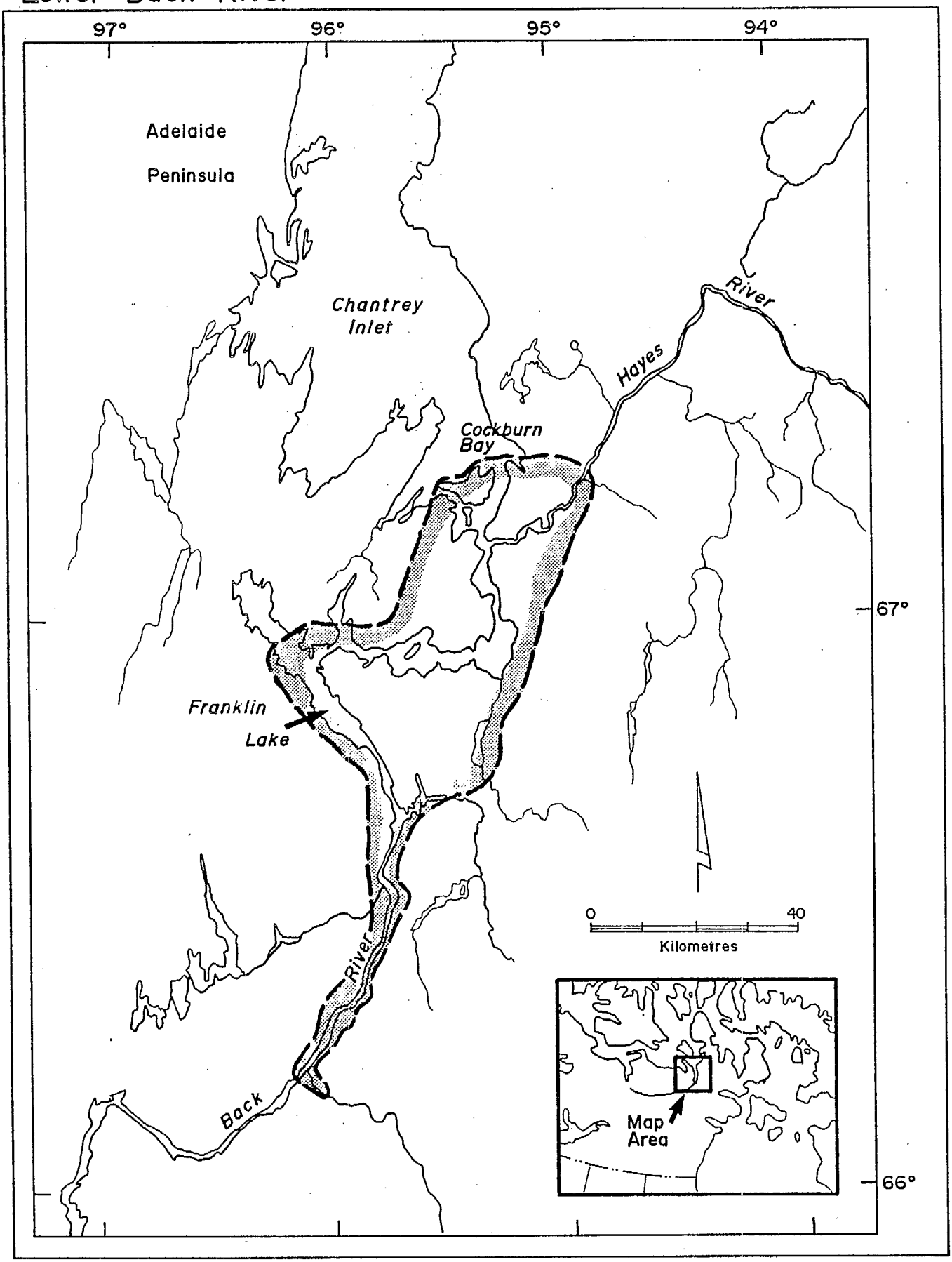
Ryder, J.P. 1969. Nesting colonies of Ross' goose. Auk 86(2):282-289.

Ryder, J.P. 1971. Distribution and feeding biology of the lesser snow geese in central arctic Canada. Waterfowl 22:18-28.

Ryder, J.P. 1972. Biology of nesting Ross' geese. Aredea 60:185-215.

Urquhart, D.R. 1982. Muskox. Life history and current status of muskoxen in the NWT. Unpubl. Rept., GNWT Wildl. Serv., Yellowknife. 39 pp.

Lower Back River



NAME: LOWER BACK RIVER

NUMBER: 35

LOCATION: 67°00'N, 95°21'W

SIZE: 2,640 square kilometres

DESCRIPTION:

This site includes an area along the lower Back River from the junction of the Herman River downstream, along the southern and eastern shores of Franklin Lake, to the junction of the Hayes River and north to Cockburn Bay. The site varies from 10 km to 30 km in width and occurs approximately 200 km north of the settlement of Baker Lake.

BIOLOGICAL VALUES:

The lower reaches of the Back River and its tributaries and the southern and eastern shores of Franklin Lake, are important moulting areas for Canada geese and lesser snow geese (Allen and Hogg 1979). Over 900 moulting Canada geese were recorded between the Herman River and Chantrey Inlet in mid-July, 1976. Approximately 620 birds were also recorded on July 9, 1977 (Allen and Hogg 1979). Most of these moulting birds are thought to belong to the sub-species maxima (Dzubin et al. 1978).

Over 4,700 moulting and brood-rearing lesser snow geese were also recorded in the same area on July 12, 1976. A colony is suspected around Madam Daly Lake, as the largest numbers of moulting geese and broods were noted in this area (McLaren et al. 1977).

The presence of open water at the Hayes River delta attracts spring migrants, including 762 Canada geese, nearly 600 lesser snow geese, 724 brant, and 236 tundra swans in 1976 (Zdan and Brackett 1978). King eiders, scoters, loons, and shorebirds were also noted.

Barren-ground caribou and scattered muskoxen inhabit the area (Fisher and Duncan 1976). Arctic char, lake trout, and whitefish are common in the Back River and Hayes River drainages (Hatfield et al. 1977). Ringed seals are common in Chantrey Inlet (Boyd et al. 1978).

SENSITIVITIES:

Staging and moulting geese are sensitive to disturbance.

KNOWN CONFLICTS:

A proposed Polar Gas Pipeline route passes through the area.

STATUS:

None.

REFERENCES:

Allen, D.L., and T.H. Hogg. 1979. Bird studies in the Keewatin District. ESCOM Rept. No. A1-27, Can. Wildl. Serv. for Dept. Ind. North. Aff., Ottawa. 129 pp.

Boyd, D.H., R.E. Schmidt, W. Heyden, I.W. Dickson, and Interdisciplinary Systems Ltd. 1978. Possible effects of the Arctic Islands pipeline on living resource use. ESCOM Rept. No. A1-02, Can. Wildl. Serv. for Dept. Ind. North. Aff., Ottawa. 238 pp.

Dzubin, A.X., R.T. Sterling, and E. Kuyt. 1978. Large Canada geese moulting in the Northwest Territories. Unpubl. Rept., Can. Wildl. Serv., Saskatoon. 62 pp.

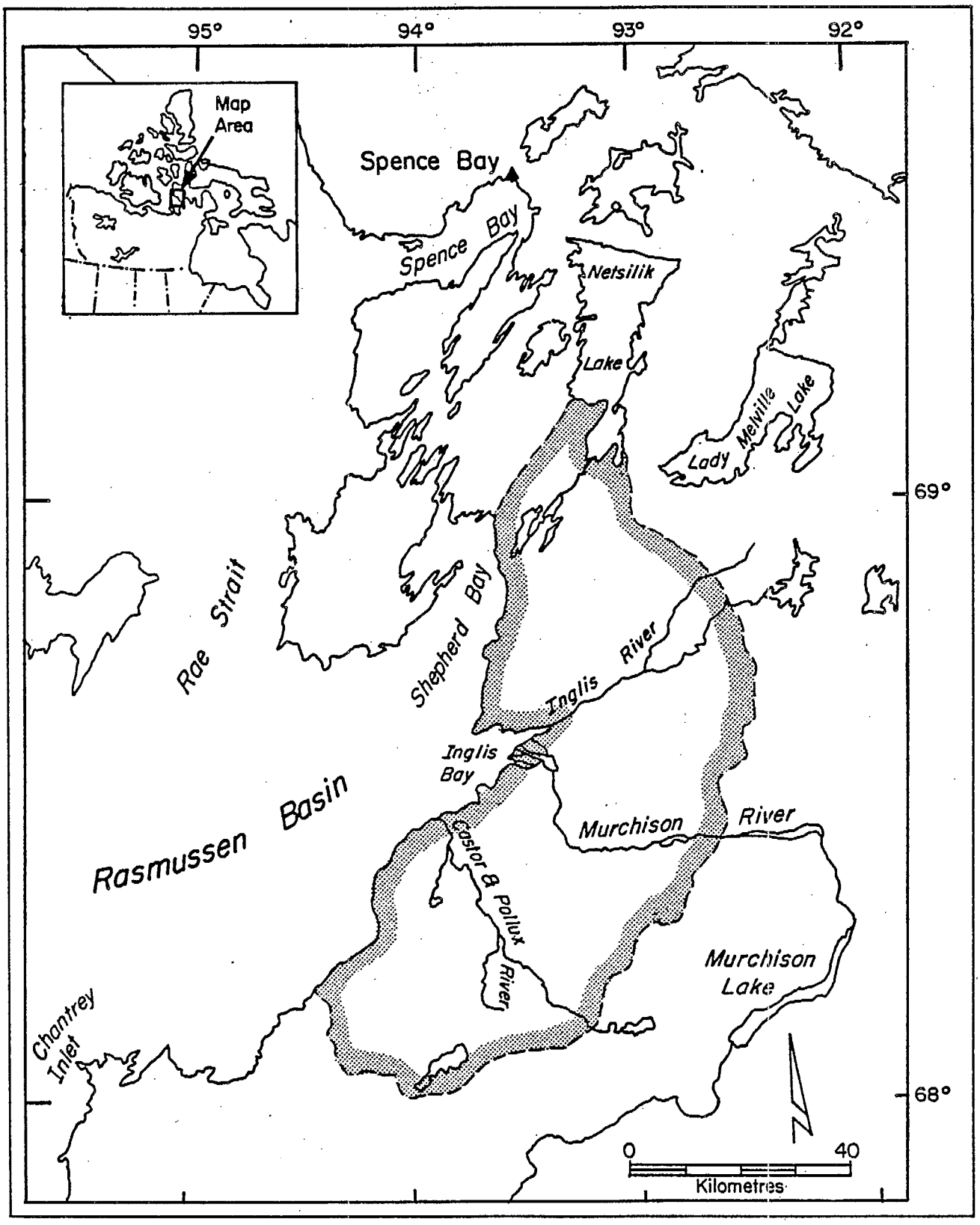
Fischer, C.A., and E.A. Duncan. 1976. Ecological studies of caribou and muskoxen in the Arctic Archipelago and northern Keewatin. Unpubl. Interim Rept., Renewable Res. Consulting Ltd. for Polar Gas Project, Toronto. 194 pp.

Hatfield, C.T., G.R. Peterson, W.M. Bengeyfield, G.L. Williams, and G.M. Smith. 1977. Survey of selected living aquatic resources along the proposed Polar Gas Pipeline route from Spence Bay, NWT to Longlac, Ontario, 1976. Vols. I and II. Unpubl. Rept., Hatfield Consulting Ltd. for Polar Gas Project, Toronto. 103 pp., 105 pp., and 26 maps.

McLaren, P.L., M.A. McLaren, and W.G. Alliston. 1977. Bird populations in the Rasmussen Basin lowlands, NWT, June-September, 1976. Unpubl. Rept., LGL. Ltd. for Polar Gas Project, Toronto. 350 pp.

Zdan, R.W., and D.B. Brackett. 1978. Migratory bird population surveys in the District of Keewatin and Somerset Island, 1976. ESCOM Rept. No. A1-18, Can. Wildl. Serv. for Dept. Ind. North. Aff., Ottawa. 111 pp.

Rasmussen Lowlands



NAME: RASMUSSEN LOWLANDS

NUMBER: 36

LOCATION: 68°40'N, 93°00'W

SIZE: 5,278 square kilometres

DESCRIPTION:

The Rasmussen lowlands extend along the east side of Rae Strait and Rasmussen Basin, from the south shore of Netsilik Lake to approximately 45 km north of Chantrey Inlet. The settlement of Spence Bay is located about 55 km north of the site.

The lowlands, which are of Paleozoic origin, represent an area of recent marine emergence. The southern portion of the lowlands is flat, poorly drained, and covered with marine silts and sands with an occasional esker or rock outcrop. Approximately 10 km north of the Inglis River, glacial moraine protrudes through the marine sediments forming the gently rolling Ross Hills. Numerous lakes and ponds are scattered throughout the lowlands. The escarpment of the Wager Highlands occurs along the eastern border.

Vegetation in the lowlands varies from partially-vegetated, dry tundra to densely-vegetated, sedge marsh. Tussocky sedge meadows and sedge marshes are predominant.

BIOLOGICAL VALUES:

The lowlands support a high diversity and high density of summering birds. Forty-six species, of which 35 are known to breed, occur in this area (McLaren et al. 1977).

The Rasmussen lowlands is a major nesting area for tundra swans. An estimated 5000 to 6000 adults summered in the area during 1976 (McLaren et al. 1977). This figure represents over 6% of the Canadian population. Some 13,000 white-fronted geese, about 10% of the Canadian population, also summer in the area (Allen and Hogg 1979). Other

observations include: 5000 to 6000 lesser snow geese, 10,000 to 15,000 oldsquaw, 30,000 to 35,000 king eider and about 500,000 shorebirds. Four nesting pairs of peregrine falcons were noted along the eastern escarpment and adjacent highlands (McLaren et al. 1976).

Most birds arrive in late May and depart by mid-to-late September although oldsquaw and king eiders may remain in the area until freeze-up.

SENSITIVITIES:

Wetland areas are susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost. Wildlife in the area are sensitive to disturbance.

Pollution of offshore waters would result in the degradation of shoreline habitats.

KNOWN CONFLICTS:

A proposed pipeline route traverses the Rasmussen lowlands. Related construction would include airstrips, helipads, compressor stations, and camp buildings. Borrow sites, communication towers, and access roads would also be needed.

STATUS:

RAMSAR site - a Wetland of International Importance (Anon. 1982).

REFERENCES:

Allen, D.L., and T.H. Hogg. 1979. Bird studies in the Keewatin District. ESCOM Rept. No. A1-27, Can. Wildl. Serv. for Dept. Ind. North. Aff., Ottawa. 129 pp.

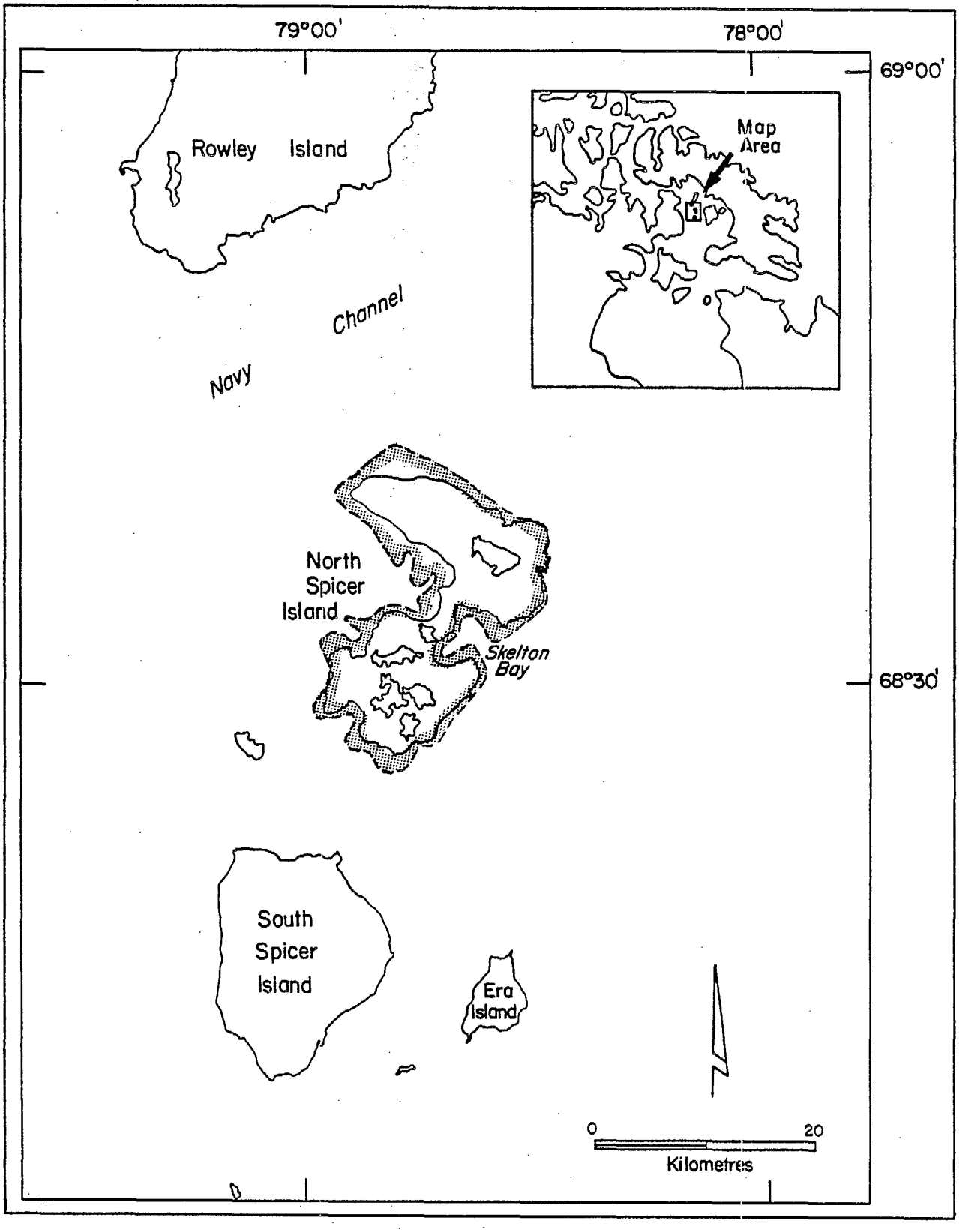
Anonymous. 1982. Canadian sites dedicated as Wetlands of International Importance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 89 pp.

McLaren, P.L., R.A. Davis, W.E. Renaud, and C. Holdsworth. 1976. Studies of the numbers and distribution of birds in the District of Keewatin, NWT, June-August, 1975. Unpubl. Rept., LGL Ltd. for Polar Gas Project, Toronto. 391 pp.

McLaren, P.L., M.A. McLaren, and W.G. Alliston. 1977. Bird populations in the Rasmussen Basin lowlands, NWT, June-September, 1976. Unpubl. Rept., LGL. Ltd. for Polar Gas Project, Toronto. 350 pp.

McLaren, P.L., and M.A. McLaren. 1982. Migration and summer distribution of lesser snow geese in interior Keewatin. Wils. Bull. 94:494-504.

North Spicer Island



NAME: NORTH SPICER ISLAND

NUMBER: 37

LOCATION: 68°33'N, 78°45'W

SIZE: 341 square kilometres

DESCRIPTION:

North Spicer Island is situated in northern Foxe Basin approximately mid-way between Prince Charles Island and Melville Peninsula. The island does not exceed 100 m elevation. As a result, much of the island is covered by standing water or wet, sedge meadows. Raised beaches occur on the east coast south of Skelton Bay.

BIOLOGICAL VALUES:

A colony of brant (subsp. hrota) was first recorded on this island in 1979 when approximately 400 birds were noted (Reed et al. 1980). Approximately 1250 adults were banded and a further 142 goslings were observed during a subsequent survey (Reed and Dupuis 1980). Brant occurred over all the island although they were more common along the coast. Further surveys are required to clarify the size and extent of this colony.

Sabine's gulls, oldsquaw, arctic loons, and red-throated loons were also noted on the island (A. Reed pers. comm.)

SENSITIVITIES:

Nesting and moulting brant are sensitive to disturbance.

KNOWN CONFLICTS:

None.

STATUS:

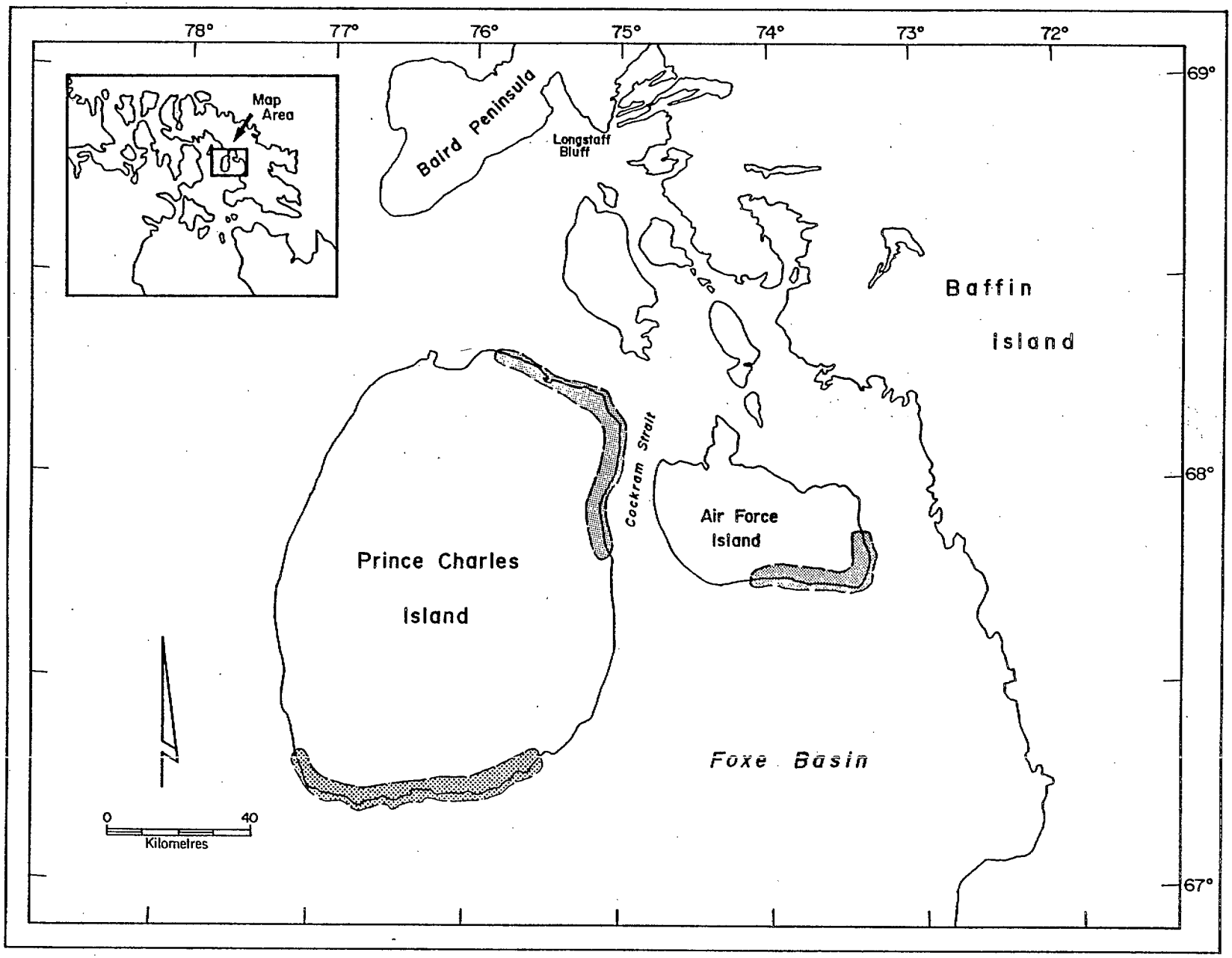
None.

REFERENCES:

Reed, A., P. Dupuis, K. Fischer, and J. Moser. 1980. An aerial survey of breeding geese and other wildlife in Foxe Basin and northern Baffin Island, Northwest Territories, July 1979. Prog. Note No. 114, Can. Wildl. Serv., Ottawa. 21 pp.

Reed, A. and P. Dupuis. 1980. A preliminary report on greater snow geese and Atlantic brant investigations near Foxe Basin and northern Baffin Island, NWT, August 1980. Unpubl. Rept., Can. Wildl. Serv., Ste. Foy. 18 pp. and appendices.

Foxe Basin Islands



NAME: FOXE BASIN ISLANDS

NUMBER: 38

LOCATION: 68°00'N, 75°05'W

SIZE: 1,167 square kilometres

DESCRIPTION:

Prince Charles and Air Force islands are located in east-central Foxe Basin. The three biologically important areas constituting the site (northern and southern Prince Charles Island and southern Air Force Island), have extensive mud flats with gently sloping, well vegetated shorelines. The inland area is of low relief and dotted with small lakes and ponds. The islands are vegetated predominantly by a sedge-grass complex (G. Cooch pers. comm.).

BIOLOGICAL VALUES:

Prince Charles and Air Force islands are important breeding sites of Atlantic brant and Sabine's gulls. The estimated breeding population of brant (subsp. hrota) for the two islands is approximately 900 pairs (Reed et al. 1980) which is approximately 2% of the Canadian breeding population. Larger numbers of moulting birds also use the coastal areas prior to fall migration (Reed et al. 1980). An aerial survey conducted along the south shore of the two islands in July, 1983 located approximately 2,500 brant and 1,000 Sabine's gulls (G. Cooch pers. comm.). Several hundred nesting lesser snow geese were recorded on Air Force Island and Prince Charles Island in 1975 (R. Kerbes pers. comm.).

Eleven colonies of Sabine's gulls with 407 birds and 13 Arctic tern colonies totalling 526 birds were observed by Reed et al. (1980). King eider, common eider, oldsquaw, and gulls also nest along the coast and on inland ponds.

Breeding birds arrive about mid-June and leave the area by mid-September.

SENSITIVITIES:

Nesting and moulting birds are sensitive to disturbance.

KNOWN CONFLICTS:

None.

STATUS:

None.

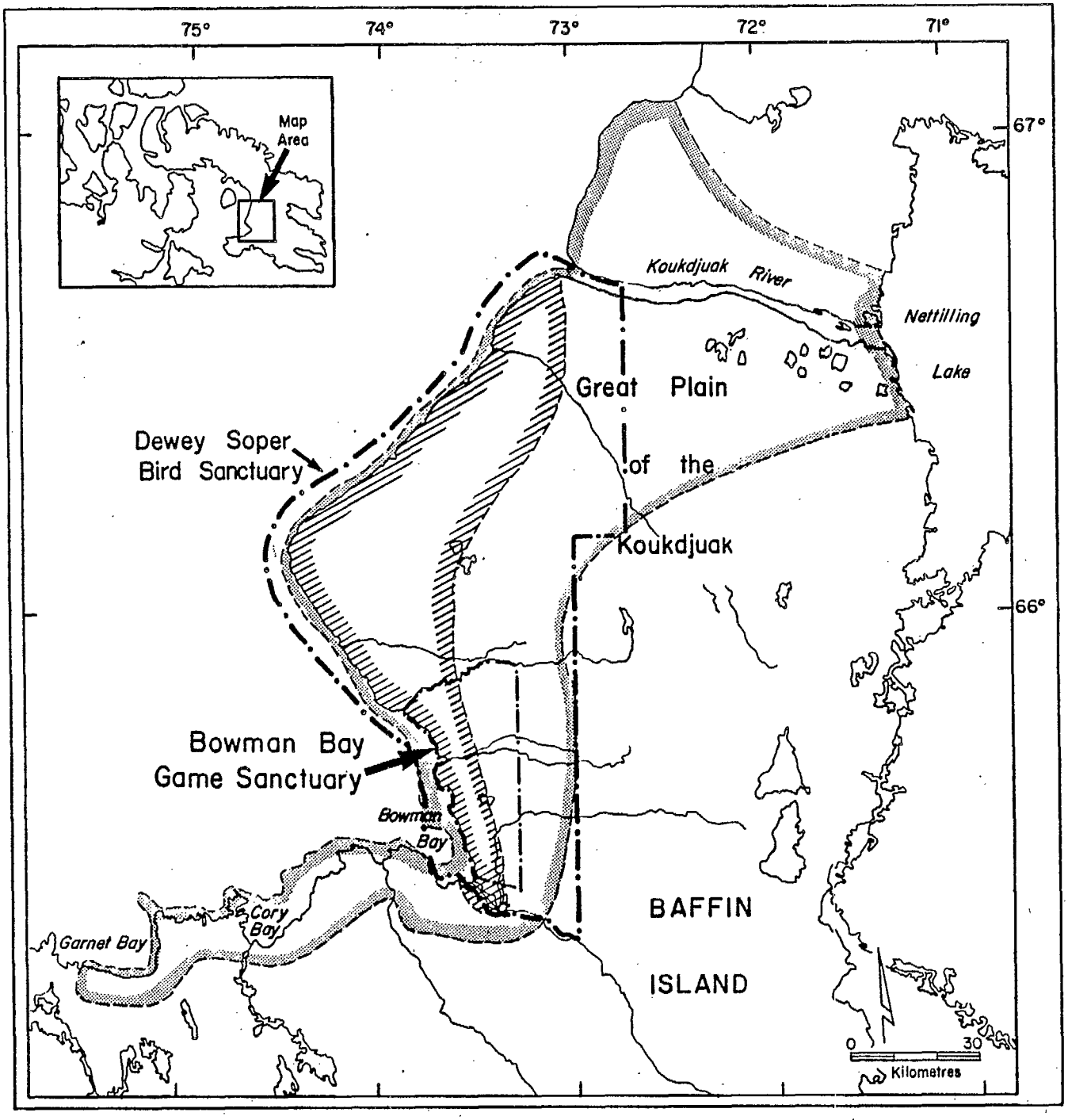
REFERENCES:

Bellrose, F.C. 1976. Ducks, geese, and swans of North America. Stackpole. Harrisburg, Pa. 543 pp.

Ellis, D.B., and J. Evans. 1966. Comments on the distribution and migration of birds in Foxe Basin, Northwest Territories. Can. Field-Nat. 74(2):59-70.

Reed, A., P. Dupuis, K. Fischer, and J. Moser. 1980. An aerial survey of breeding geese and other wildlife in Foxe Basin and northern Baffin Island, Northwest Territories, July, 1979. Prog. Note. No. 114, Can. Wildl. Serv., Ottawa. 21 pp.

Great Plain of the Koukdjuak



NAME: GREAT PLAIN OF THE KOUKDJUAK

NUMBER: 39

LOCATION: 66°10'N, 74°00'W

SIZE: 12,931 square kilometres

DESCRIPTION:

The Great Plain of the Koukdjuak is an extensive sedge lowland on Baffin Island, bordering the southeastern shores of Foxe Basin. Lack of relief on the plain and high tides in Foxe Basin combine to form a tidal zone which may extend up to 15 km inland. The wide marshy plain, which is dotted with shallow round lakes and circular swamps, is drained by innumerable small sluggish streams. The underlying bedrock consists of limestones and shales of Palaeozoic origin, with scattered granitic outcrops. The inland limit of the plain is marked by raised beach ridges which lie 25 to 80 km from the coast.

BIOLOGICAL VALUES:

The largest goose colony in the world is located in this area. In the summer over one million geese, mainly lesser snow geese, are dispersed across the plain between Bowman Bay and the Koukdjuak River. In 1973, 223,300 breeding pairs of lesser snow geese were recorded at this colony (Kerbes 1975). In 1979, 227,500 pairs were present (Reed et al. pers. comm.). The latter number represents approximately 33% of the Canadian lesser snow goose population. Flocks of non-breeding birds are generally found inland from the nesting areas which are located along the coast. Small numbers of breeders and non-breeders are also present in coastal regions adjacent to Cory and Garnet bays (Reed et al. 1980).

Geese arrive at the colony in the last week of May. After the hatch, adults and young disperse to inland feeding sites. The birds begin to leave the area by early-to-mid September.

Other waterfowl species in the area include Canada geese, Atlantic brant, oldsquaw, and eiders. Approximately 1,600 brant were recorded in the Cape Dominion area. This colony constituted 47% of the brant recorded during a reconnaissance survey of the Foxe Basin region (Reed et al. 1980). The area supports many other avian species, including large breeding populations of red phalaropes and Sabine's gulls.

A caribou migration route crosses the Koukdjuak River inland from the nesting area.

SENSITIVITIES:

Geese are sensitive to disturbance and the degradation of their lowland habitats.

KNOWN CONFLICTS:

None.

STATUS:

Part of the nesting and feeding area is included within the Dewey Soper Bird Sanctuary. The Bowman Bay Game Sanctuary is located within the Bird Sanctuary.

The sanctuary is a RAMSAR site - a Wetland of International Importance (Anon. 1982).

REFERENCES:

Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories - a background paper. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 3 Vols. 370 pp.

Anonymous. 1982. Canadian sites dedicated as Wetlands of International Importance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 89 pp.

Kerbes, R.H. 1967. Investigations of waterfowl populations - eastern Arctic, progress report 1966-67. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 68 pp.

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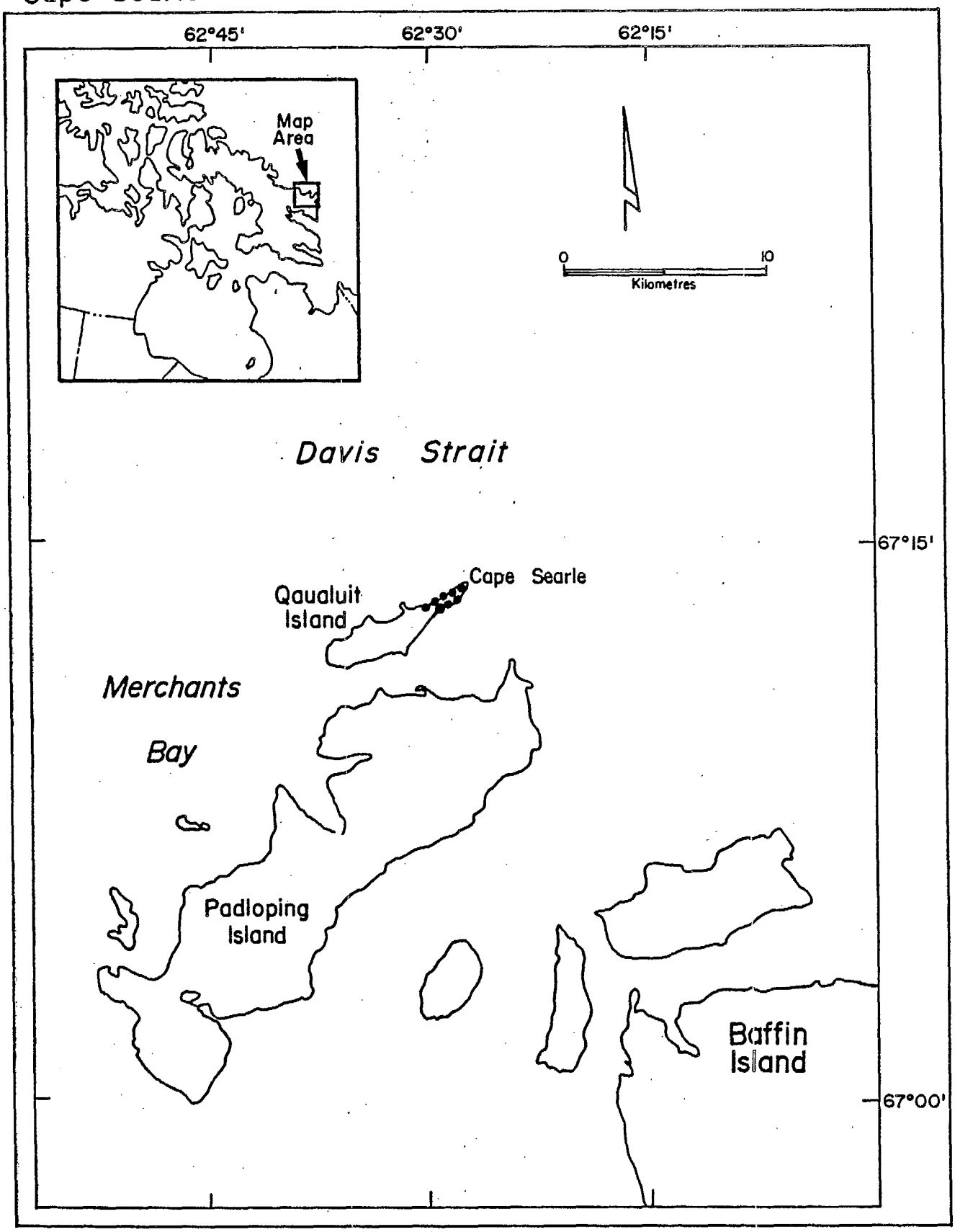
Kerbes, R.H. 1975. Lesser snow geese in the eastern Canadian Arctic. Rept. Series No. 35, Can. Wildl. Serv., Ottawa. 47 pp.

Reed, A., P. Dupuis, and G.E.J. Smith. (in prep.). Lesser snow geese on Southampton and Baffin islands, Northwest Territories, 1979. Unpubl. Rept., Can. Wildl. Serv., Ste. Foy. 19 pp.

Reed, A., P. Dupuis, K. Fischer, and J. Moser. 1980. An aerial survey of breeding geese and other wildlife in Foxe basin and northern Baffin Island, NWT, July 1979. Prog. Note No. 114., Can. Wildl. Serv., Ottawa. 21 pp.

Cape Searle


62°45'
62°30'
62°15'
Map Area
0
10
Kilometres
Davis Strait
67°15'
Cape Searle
Qaqaluit Island
Merchants Bay
Padloping Island
Baffin Island
67°00'

NAME: CAPE SEARLE

NUMBER: 40

LOCATION: 67°14'N, 62°28'W

SIZE: 2 square kilometres

DESCRIPTION:

Cape Searle is located on the northeastern tip of Qaualuit Island in Merchant's Bay, eastern Baffin Island. Much of the Cumberland Peninsula is composed of Precambrian metamorphic rock of the Davis Highlands (Bostock 1964). However, Qaualuit Island consists of a Tertiary-type basalt flow and Cape Searle itself is composed of cross-bedded agglomerates and tuffaceous material (Kidd 1953). Cape Searle consists of two huge towers which rise 430 m above the sea. Although the cliffs are rugged, with numerous crevasses and jagged pinnacles, the flatter summits are covered in luxuriant vegetation.

BIOLOGICAL VALUES:

The largest northern fulmar colony in Canada occupies the two rock towers. Over 100,000 pairs, comprising approximately 27% of the Canadian population, nest on the cliffs at all heights; the density is greatest near the top (Nettleship 1980). The grassy summits are also covered with nesting fulmars. The birds which arrive about mid-April and leave by early October, forage within an 80 km radius of the site (Wynne-Edwards 1952).

Glaucous gulls, black guillemots, harp seals, and walrus also frequent the area. Polar bear are occasionally seen in the area and use the seaward tips of peninsulas for maternity dens (Stirling et al. 1980).

SENSITIVITIES:

Nesting fulmars are sensitive to disturbance and pollution of their feeding areas.

KNOWN CONFLICTS:

Petroleum exploration and tanker traffic in Davis Strait could subject the area to disturbance and pollution.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Bostock, H.S. 1964. A provisional physiography map of Canada. Paper 64-35, Geol. Surv. Can., Ottawa. 24 pp.

Kidd, K. J. 1953. Geology. Pp. 240-243. In: P.D. Baird et al., Baffin Island Expedition, 1953: a preliminary field report. Arctic 6(4):227-251.

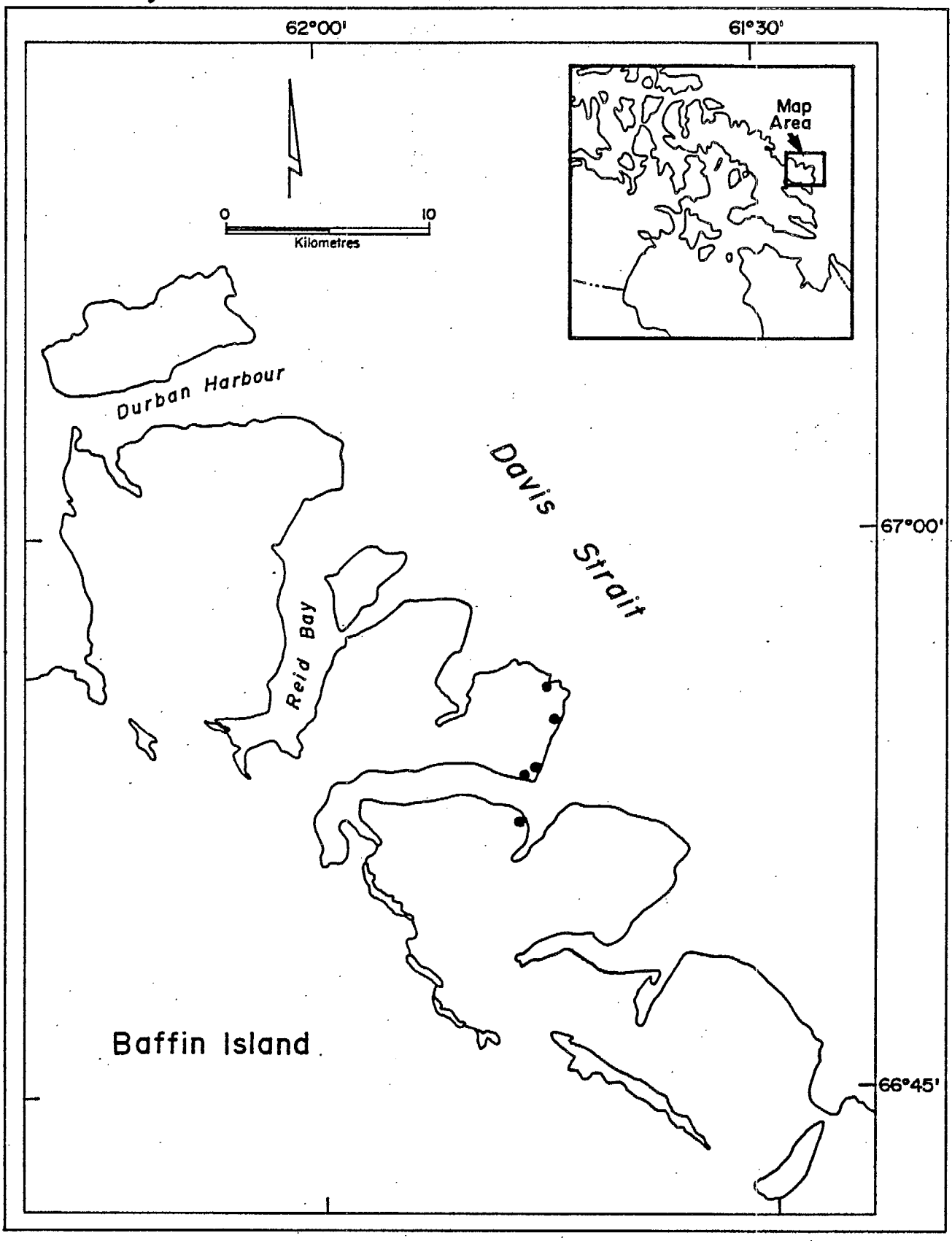
Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Stirling, I., W. Calvert, and D. Andriashek. 1980. Population ecology studies of the polar bear in the area of southeastern Baffin Island. Occ. Paper No. 44, Can. Wildl. Serv., Edmonton. 31 pp.

Wynne-Edwards, V.C. 1952. The fulmars of Cape Searle. Arctic 5(2):105-117.

Reid Bay


62°00'
61°30'
Map Area
0
10
Kilometres
Durban Harbour
Davis Strait
Reid Bay
67°00'
66°45'
Baffin Island

NAME: REID BAY

NUMBER: 41

LOCATION: 66°56'N, 61°46'W

SIZE: 5 square kilometres

DESCRIPTION:

The south shore of Reid Bay is part of a broad promontory which extends about 11 km southward to a large unnamed fiord, 37 km north of Cape Dyer. An indentation on the east coast of the promontory divides it into two steep headlands, with inland elevations reaching almost 915 m above sea level. The south headland is made up of a complex series of steep rock pinnacles and ridges bordered by a high talus slope and beach off which there are numerous rocks and islets. The area is bounded by a series of steep promontories which extend south to Cape Dyer.

BIOLOGICAL VALUES:

The cliffs south of Reid Bay support two colonies of thick-billed murres. Approximately 200,000 breeding pairs occupy the two northern colonies (Nettleship 1980). This is the second largest concentration of this species within NWT and comprises approximately 15% of the Canadian population. Murres are present from mid-May to early September.

About 10,000 breeding pairs of northern fulmars (approximately 3% of the Canadian population) occupy the three southern colonies in the area (Nettleship 1980). Fulmars are present at the site from early May until mid September.

A few black guillemots and glaucous gulls also nest in the area.

SENSITIVITIES:

Seabirds are sensitive to disturbance and the pollution of offshore waters. Murres are particularly vulnerable in the late summer when they undertake a flightless migration through Davis Strait to their wintering areas.

KNOWN CONFLICTS:

Hydrocarbon exploration in the Davis Strait, near Cape Dyer, has been proposed (Anon. 1978). The Davis Strait-Baffin Bay area is also part of a proposed tanker route. Both of these proposals which would result in increased tanker, ice-breaker, and aircraft traffic through the area, could result in disturbance and pollution.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

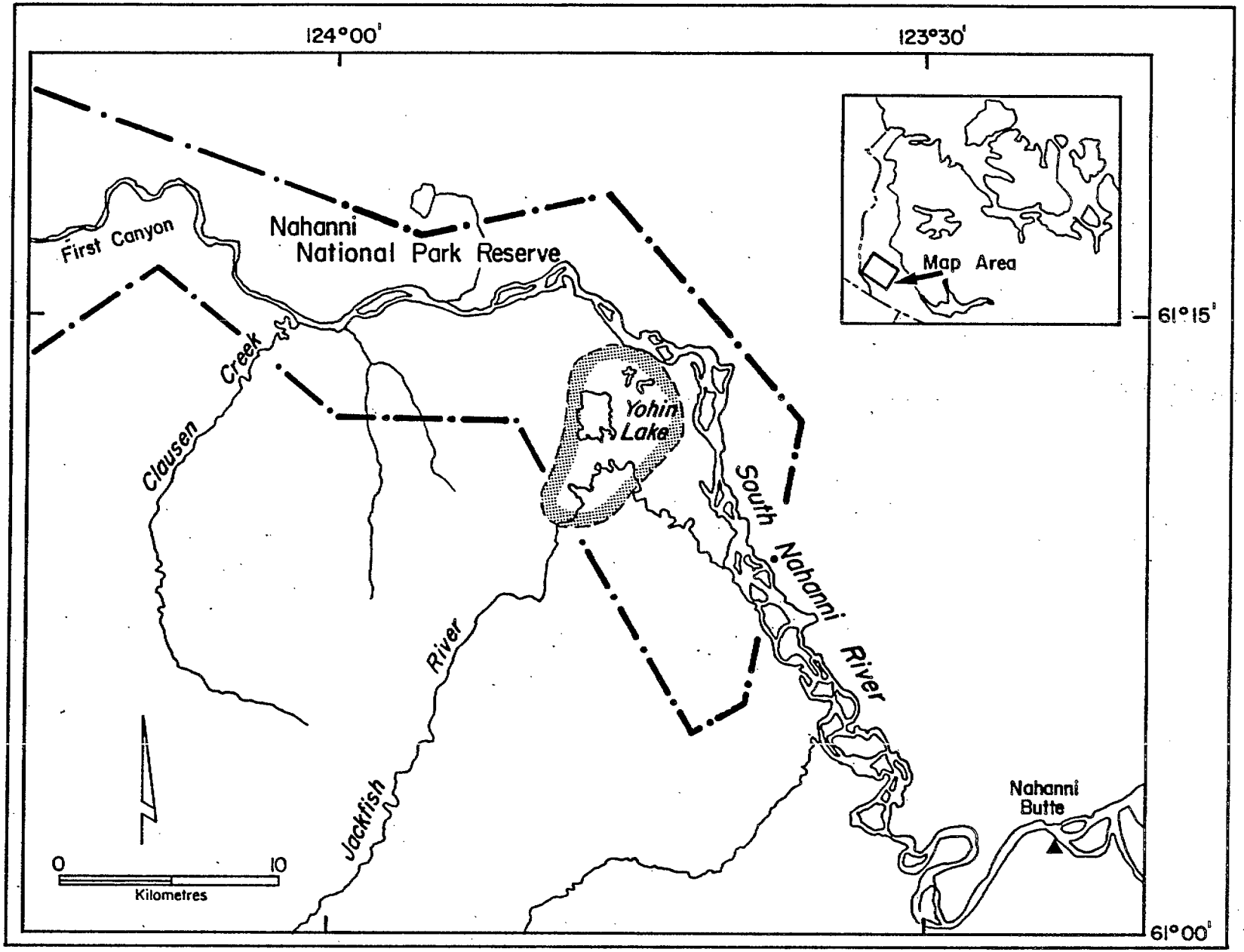
Anonymous. 1978. Environmental impact statement for exploratory drilling in Davis Strait region., Unpubl. Rept., Imperial Oil Ltd., Aquitaine Co. Canada Ltd., Canada Cites Service Ltd. 31 pp.

Nettleship, D.N. 1976. Seabird resources of eastern Canada: status, problems, and prospects. Studies of northern seabirds. Rept. No. 45, Can. Wildl. Serv., Ottawa. 46 pp.

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9., Can. Wildl. Serv., Ottawa. 330 pp.

South Nahanni River



NAME: SOUTH NAHANNI RIVER

NUMBER: 42

LOCATION: 61°12'N, 123°47'W

SIZE: 35 square kilometres

DESCRIPTION:

The South Nahanni River flows through the Mackenzie Mountains in the southwest corner of the Northwest Territories. Yohin Lake is situated 30 km northwest of the settlement of Nahanni Butte.

Much of the terrain surrounding the South Nahanni River is rugged mountains of sandstone, shale, and limestone which are deeply eroded by rivers. The lower part of the river flows in several channels through a wide, gravel-covered valley. The lower Cretaceous, shale and sandstone bedrock around Yohin Lake is covered by silt and gravel deposits (Monroe 1973).

Coniferous forests are the predominant vegetation; alpine tundra is common at the higher altitudes. A marshy lowland surrounds Yohin Lake.

BIOLOGICAL VALUES:

Five trumpeter swan cygnets were seen on Yohin Lake in 1977; (Anon. 1983) and in 1981 (A. Zellermeyer pers. comm.). In late June and early July 1977, a pair of swans were observed at two sites: in Deadmen Valley, at the confluence of the Flat and South Nahanni Rivers, and approximately 2 km above Virginia falls (Cairns et al. 1978). Six moulting adults have also been observed near the Silent Hills, approximately 25 km east of this site (Anon. 1980). Further studies are required to clarify the population status of trumpeter swans in this area.

Dall's sheep are found in some of the alpine tundra areas and moose and woodland caribou frequent lower elevations along the river. Grizzly and black bears also inhabit the area (Cairns et al. 1978).

SENSITIVITIES:

Breeding swans are vulnerable to disturbance and their lowland habitat is sensitive to terrain disturbance.

KNOWN CONFLICTS:

Mineral exploration and extraction in the area could be a source of disturbance and terrain degradation.

STATUS:

Most of this site occurs within Nahanni National Park Reserve.

REFERENCES:

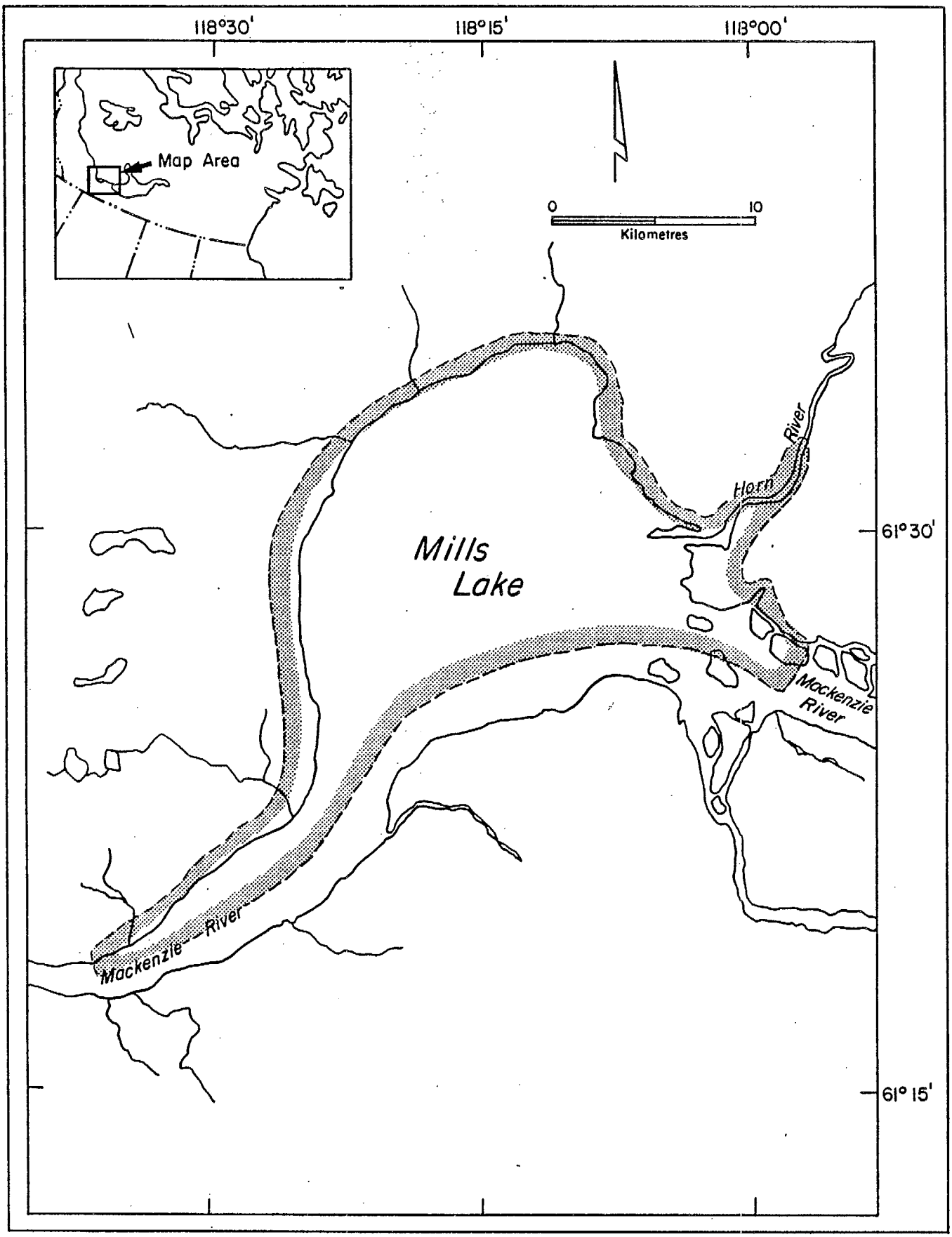
Anonymous. 1980. Environmental evaluation for Cadillac Explorations Limited, Prairie Creek Project, NWT. Ker, Priestman, and Assoc. Ltd., Victoria. 144 pp.

Anonymous 1983. Nahanni National Park resources; description and evaluation. Unpubl. Rept., Parks Canada, Winnipeg.

Cairns, A.L., J.D. Henry, and G.W. Scotter. 1978. Vegetation, wildlife, and recreation assessment of the Flat-South Nahanni rivers confluence area, Nahanni National Park. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 259 pp.

Monroe, R.L. 1973. Six terrain classification and sensitivity maps. Open file 131, Geol. Surv. Can., Ottawa.

Mills Lake


118°30'
118°15'
118°00'
Map Area
0
10
Kilometres
Horn River
Mills Lake
61°30'
Mackenzie River
Mackenzie River
61° 15'

NAME: MILLS LAKE

NUMBER: 43

LOCATION: 61°25'N, 118°15'W

SIZE: 393 square kilometres

DESCRIPTION:

Mills Lake is a large widening of the Mackenzie River at the north and west end of the Horn River delta. Upper Devonian shales and limestones underlie surficial deposits. Soils in this area are the result of poorly drained till and glaciolacustrine deposits. They are predominantly luvisols. Well-developed emergent and aquatic vegetation communities and floating sedge mats are a major feature of the lake. Sandbars and low-lying areas occur adjacent to the lake.

BIOLOGICAL VALUES:

Thousands of waterfowl stage at this lake, primarily during fall migration. The emergent sedge zone on the north shore, the marsh on the Horn River delta, and the area near Meridian Island are most frequently used as resting and feeding sites. Peak numbers per day between September 14 and 26, 1972 included: 9,860 white-fronted geese, 2,190 tundra swans, nearly 4,000 lesser snow geese, 1,390 Canada geese and approximately 27,000 ducks (Salter 1974). These numbers represent approximately 8% of the white-fronted geese, and 3% of the tundra swans in Canada. Most geese are present from early to late September; ducks may remain in the area until mid-October.

Fewer numbers of most species stage on the lake during spring migration.

SENSITIVITIES:

Staging waterfowl are sensitive to disturbance.

Pollution of the lake water or alteration of its levels could result in degradation of aquatic and shoreline habitat.

KNOWN CONFLICTS:

Increased haying or grazing of marsh communities may cause habitat destruction or alteration (Kemper et al. 1975). Dredging of the river channel for improved barge transportation could be a source of disturbance if conducted during migration periods. The proposed Slave River dam may alter water levels in the Mackenzie River.

STATUS:

Proposed IBP site (Beckel 1975).

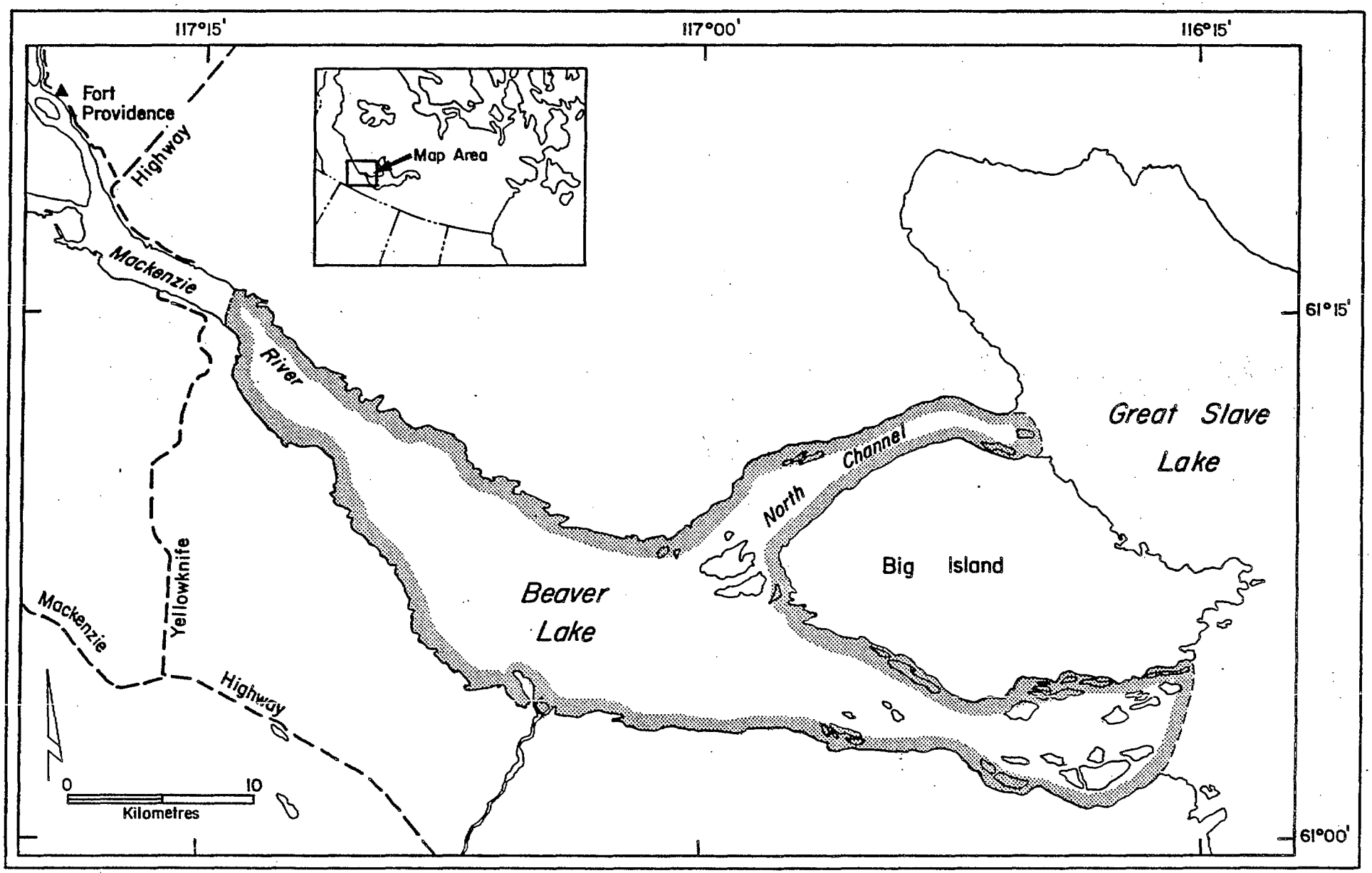
REFERENCES:

Beckel, D.K.B. (Ed.) 1975. IBP ecological sites in subarctic Canada. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 10., Univ. Lethbridge, Lethbridge. 163 pp.

Kemper, B., D. Poll, and G. Trottier. 1975. Investigations of potential waterfowl - agricultural conflicts in the Mills lake area, NWT. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 82 pp.

Salter, R. 1974. Autumn migration of birds through the central and upper Mackenzie Valley region, 1972. Chpt. II:1-83. In: W.W.H. Gunn and J.A. Livingstone (Eds.). Bird migration on the North Slope and in the Mackenzie Valley regions. Arctic Gas Biol. Rept. Series., Vol. 13.

Beaver Lake


117°15'
117°00'
116°15'
61°15'
61°00'
Fort Providence
Highway
Map Area
Mackenzie
River
Great Slave Lake
North Channel
Big Island
Beaver Lake
Yellowknife
Mackenzie
Highway
0
10
Kilometres

NAME: BEAVER LAKE

NUMBER: 44

LOCATION: 61°07'N, 117°08'W

SIZE: 461 square kilometres

DESCRIPTION:

Beaver Lake is a widening of the Mackenzie River at the outlet of Great Slave Lake. It is approximately 40 km upriver from the settlement of Fort Providence. The surrounding low-lying region is part of the Great Slave Plain and is underlain by Upper Devonian shales and limestone (Douglas 1959).

The north shores of both channels around Big Island are low with extensive sedge-grass marsh along alluvial flats. The south shores have a narrower margin of marsh before the transition to spruce-poplar forest. The islands at the outlet of the North Channel are low and marshy whereas those in the South Channel are higher and more forested.

BIOLOGICAL VALUES:

The channel islands and the North Channel are favoured resting sites for migrant tundra swans and ducks. In the spring of 1973, peak numbers of 1,175 swans and over 5,000 ducks were recorded on a May 17 survey (Salter et al. 1974). Over 10,000 ducks and 4,470 tundra swans, 6% of the Canadian population, were recorded on September 22, 1972 (Salter 1974). Up to 8,000 canvasback ducks have been observed in the North Channel (T. Barry pers. comm.).

Waterfowl pass through the area in May and again in September and October.

SENSITIVITIES:

Waterfowl are sensitive to disturbance and degradation of their aquatic habitats.

KNOWN CONFLICTS:

Dredging of the river channel for improved barge transportation could be a source of disturbance if conducted during migration. The proposed Slave River dam may alter water levels in the Mackenzie River.

STATUS:

None.

REFERENCES:

Douglas, R.W. 1959. Great Slave and Trout River map-areas, Northwest Territories. Paper 58-11, Geol. Surv. Can., Ottawa. 57 pp.

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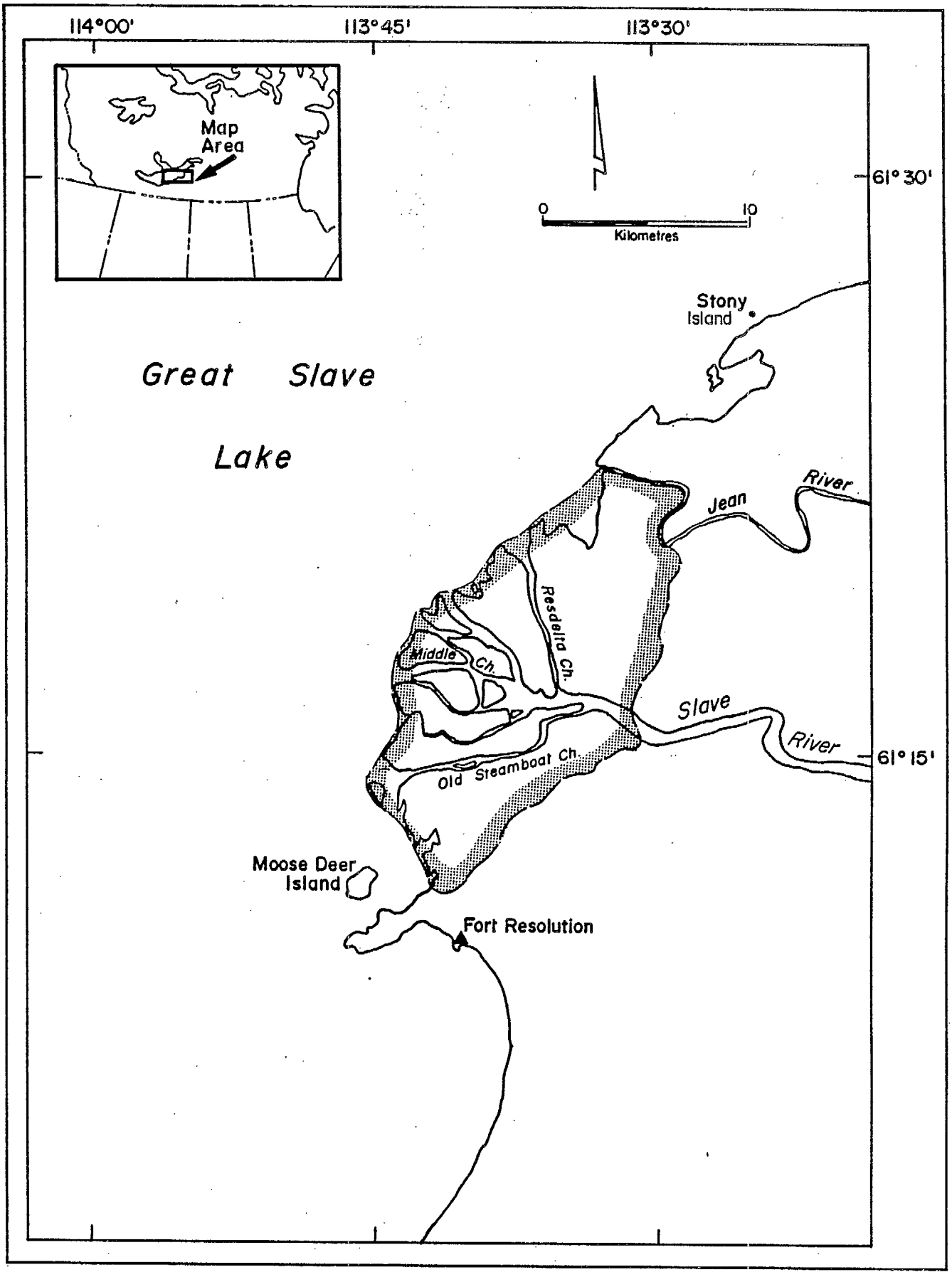
Salter, R.E., W.J. Richardson, and C. Holdsworth. 1974. Spring migration of birds through the Mackenzie Valley, NWT, April-May, 1973. Chpt. II:1-168 In: W.W.H. Gunn, W.J. Richardson, R.E. Schweinsburg, and T.D. Wright (Eds.). Ornithological studies in the Mackenzie Valley, 1973. Arctic Gas Biol. Rept. Series., Vol. 28.

Slave River Delta



NAME: SLAVE RIVER DELTA

NUMBER: 45

LOCATION: 61°15'N, 113°40'W

SIZE: 171 square kilometres

DESCRIPTION:

The Slave River delta is located on the south shore of Great Slave Lake, north of the community of Fort Resolution. The delta is characterized by extensive alluvial deposits and channels, bordered by high levees. Much of the vegetation in the outer delta is in the early stages of succession; Equisetum and Carex species are common.

Primary stages of plant succession are retained in many parts of the delta through natural flooding and sediment deposition. On less frequently flooded areas, Salix species predominate, while stands of balsam poplar and spruce are found on higher ground.

BIOLOGICAL VALUES:

The Slave River delta is within a major migration corridor of the tundra swan. In 1979, spring migration peaked on May 30, when approximately 1,300 swans were recorded (Thompson et al. 1979). In 1978, nearly 1,800 swans, approximately 2% of the national population, were recorded in this area on 23 September. Peak numbers of other birds using the delta included 3,700 lesser snow and Canada geese and approximately 3,400 ducks in the spring, with over 2,100 geese and approximately 4,000 ducks in the fall (Thompson et al. 1979).

An estimated 5,200 pairs of ducks breed on the delta. This estimate is considered to be conservative since all habitats were not censused (Thompson et al. 1979). Representative duck species include lesser scaup, mallard, American widgeon, bufflehead, and blue-winged teal. Preferred habitat for geese and swans are the outer deltaic areas and

silt bars of the inner channels. Ducks are distributed throughout a variety of habitats in the inner and outer delta.

Most waterfowl species are present from the second week of May to early June. In the fall, peak numbers occur from mid-August to the end of September.

Large flocks of shorebirds also use the delta from August to mid-September.

Mammal species utilizing the delta include moose, muskrat, and beaver.

SENSITIVITIES:

Waterfowl are susceptible to disturbance and habitat degradation through alteration of the water regime which characterizes the delta.

KNOWN CONFLICTS:

A proposed hydroelectric development scheme, which entails the construction of a dam on the Slave River (Anon. 1982), may eliminate or alter flooding and sediment deposition in the delta. This alteration could cause a significant change in existing plant species, which serve as primary food sources for migrating waterfowl (Thompson et al. 1979). Construction of transmission lines could interfere with the migration of waterfowl.

STATUS:

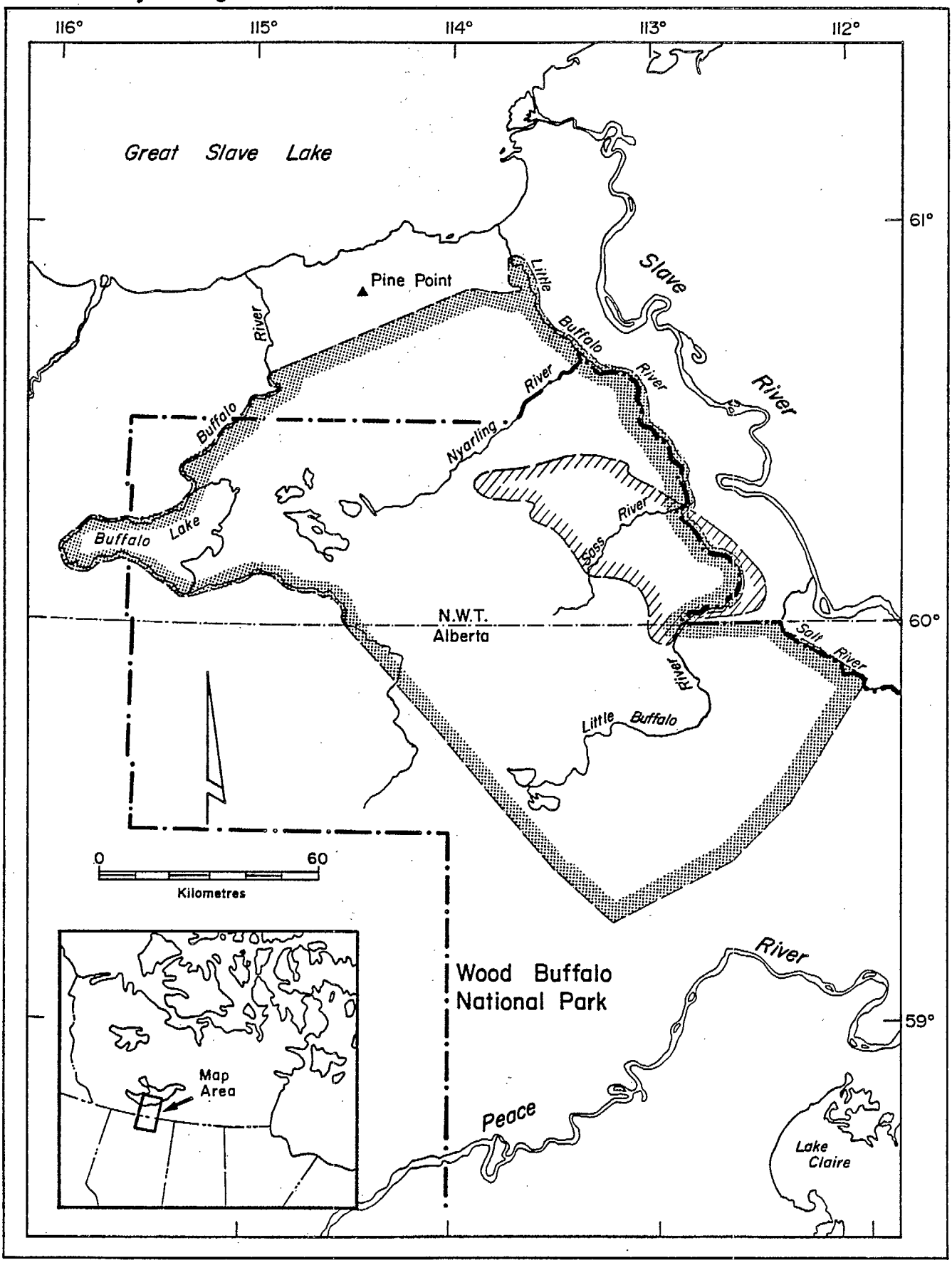
None.

REFERENCES:

Anonymous. 1982. Slave River hydro project feasibility study. Unpubl. Rept., McCourt Management Ltd. for Reid, Crowther, and Partners Ltd., Calgary. 241 pp.

Thompson, R.G., R.W. Quinlan, and K. Ambrock. 1979. Assessment of migratory bird resources in the Slave River delta. Final Rept. for Mackenzie River Basin Task Force by Can. Wildl. Serv., Edmonton. 91 pp.

Sass - Nyarling River



NAME: SASS-NYARLING RIVER

NUMBER: 46

LOCATION: 60°20'N, 113°15'W

SIZE: 18,060 square kilometres

DESCRIPTION:

The northeastern boundary of the site lies approximately 2.5 km south of the community of Pine Point.

The area is a complex of marshes, shallow ponds, streams, lakes, and bogs occurring near the northern extent of the Boreal Forest Region and west of the Canadian Shield. Grass-sedge meadows, black spruce-tamarack woods, and small areas of muskeg are common. A shallow overburden of till covers the limestone bedrock. Part of the site lies within the Salt River alkali flats. This area is sparsely vegetated and plants with saline affinities are found on deposits of salt left by outwash from brine springs. Sinkholes and other features of karst topography are common.

BIOLOGICAL VALUES:

This is the only known breeding locality of the endangered whooping crane. In 1983, 23 breeding pairs and a total of 70 birds occupied the area (E. Kuyt pers. comm.). Preferred nesting habitat is on shallow ponds and lakes where the dominant emergent vegetation is bulrush, sedge, and cattail (Kuyt 1981). Whooping cranes arrive at their breeding grounds about the last week of April and leave towards the end of September.

Waterfowl use lakes in the area as fall staging sites. Over 2,400 Canada geese and lesser numbers of tundra swans and white-fronted geese were observed on a partial survey of Buffalo Lake on September 16, 1972 (Salter 1974).

Peregrine falcons occur in the area.

Bison frequent most areas of the site. The salt flats are a preferred winter range with the upland prairies being utilized in the summer.

SENSITIVITIES:

Disruption or alteration of drainage patterns in the nesting area could cause the drying of shallow nesting ponds. Increased ground traffic and low level aircraft would also disturb the nesting birds. (Park regulations restrict ground access to nesting sites between April 15 and October 31).

KNOWN CONFLICTS:

A proposed hydroelectric dam across the Slave River near Fort Smith, is currently being proposed (Anon. 1982b).

Any increase in industrial activities could augment existing hazards. Potential threats include the development of transmission corridors (with power lines and transmission towers), increased traffic along the highway which runs through the nesting site, and lowered water levels in nesting ponds.

STATUS:

Most of this site lies within Wood Buffalo National Park.

Much of this site is also a RAMSAR site -- a Wetland of International Importance (Anon. 1982a).

Part of the site is also a proposed IBP site (Beckel 1975).

REFERENCES:

Anonymous. 1982a. Canadian sites dedicated as Wetlands of International Importance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 89 pp.

Anonymous. 1982b. Slave River hydro project feasibility study. Unpubl. Rept., McCourt Management Ltd. for Reid, Crowther, and Partners Ltd. Calgary. 241 pp.

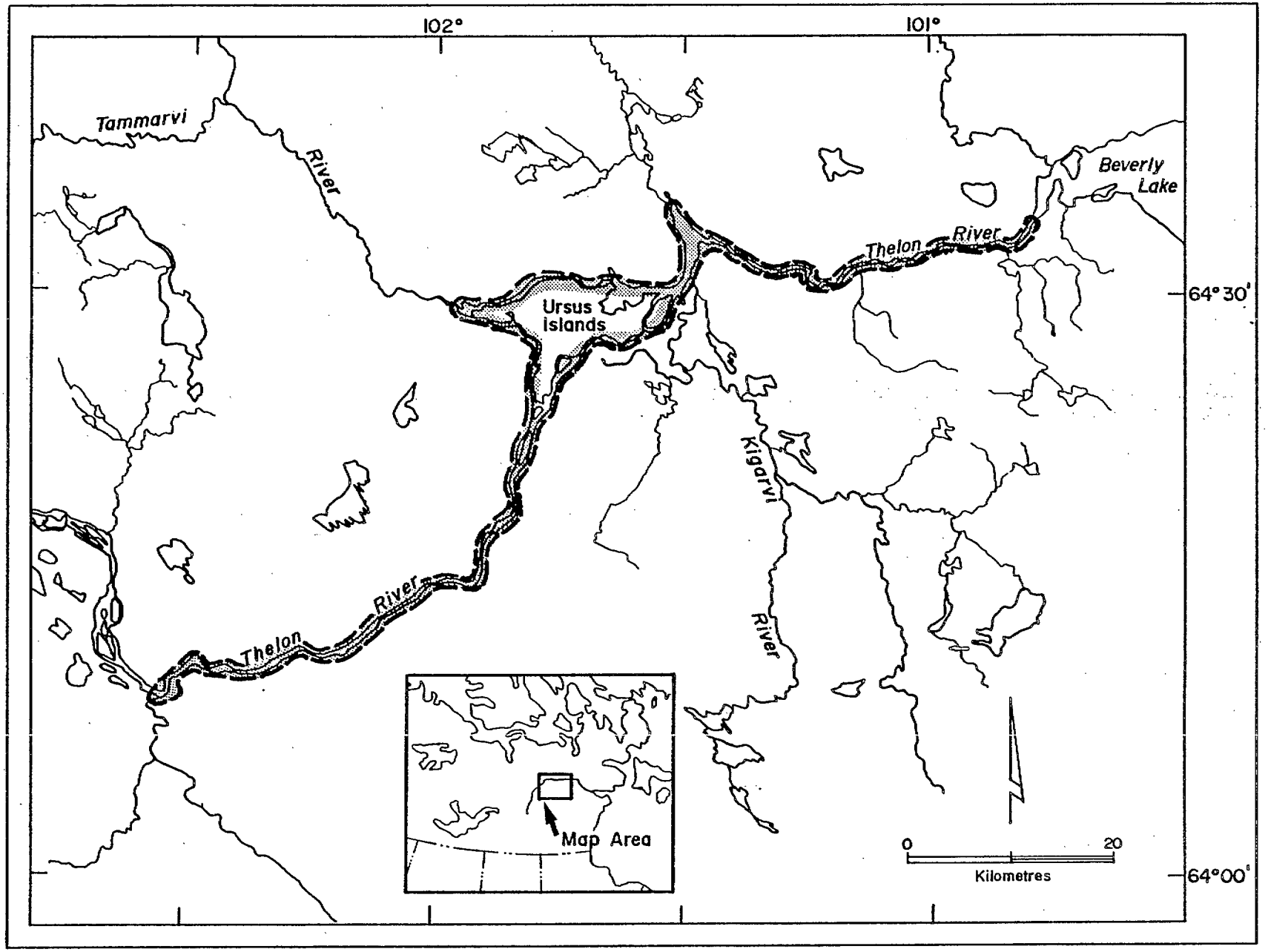
Beckel, D.K.B. (Ed.) 1975. IBP ecological sites in subarctic Canada. Unpubl. Rept., Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 10., Univ. Lethbridge, Lethbridge. 163 pp.

Kuyt, E. 1981. Population status, nest site fidelity, and breeding habitat of whooping cranes. Pp. 119-125 In: J.E. Lewis and H. Masatomi (Eds.). Crane research around the world. Sapporo.

Novakowski, N.S. 1978. Status report on wood bison (Bison bison athabasca) in Canada, 1978. Can. Wildl. Serv. and Comm. Stat. End. Wildl. Can., Ottawa. 22 pp.

Salter, R. 1974. Autumn migration of birds through the central and upper Mackenzie Valley region, 1972. Chpt. II:1-83. In: W.W.H. Gunn and J.A. Livingstone (Eds.). Bird migration on the North Slope and in the Mackenzie Valley regions. Arctic Gas Biol. Rept. Series., Vol. 13.

Middle Thelon River



NAME: MIDDLE THELON RIVER

NUMBER: 47

LOCATION: 64°30'N, 101°45'W

SIZE: 227 square kilometres

DESCRIPTION:

This area of the Thelon River stretches from Lookout Point, approximately 120 km downstream, to the western shore of Beverly Lake . The underlying rock formation is Proterozoic sandstone, much of which is obscured by low-relief Pleistocene deposits of glacial till. The area around Lookout Point is within a sand-silt formation. The Ursus Island area is largely sandstone and pebbly sandstone with some arkose and siltstone and some undifferentiated conglomerate (Bird 1951).

The vegetation belongs to the northern transition section of the boreal forest. From Lookout Point to Ursus Island the river banks are wooded with spruce, larch, and willows. The river banks between Ursus Island and Beverly Lake are high but not precipitous. Adjacent wet, sedge meadows and moss-sedge complexes provide suitable grazing areas for geese.

BIOLOGICAL VALUES:

Approximately 1500 non-breeding Canada geese (Pacific, Hi-Line Plains, Rocky Mountain) originating in the northern United States and southern Canada, use this area to moult (Kuyt 1966). Most of the geese can be ascribed to the maxima subspecies (Sterling and Dzubin 1967). Since Canada goose populations have expanded markedly over the last 15 years, further studies are required to determine the number of birds presently using the site.

Flocks of Canada geese generally appear in mid-June and departure occurs soon after moulting is completed in mid-August (Sterling and Dzubin 1967).

A few white-fronted geese and tundra swans breed in the area.

A number of river crossings, which are utilized by the Beverly caribou herd, occur within this area.

SENSITIVITIES:

Geese are extremely sensitive to disturbance during their moulting phase. Repeated disturbance has caused certain flocks to abandon their moulting areas (Sterling and Dzubin 1967).

KNOWN CONFLICTS

None.

STATUS:

This site occurs within the Thelon Game Sanctuary.

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Bird, J.B. 1951. The physiography of the middle and lower Thelon River Basin. Geo. Bull. 1:14-29.

Dzubin, A.X., R.T. Sterling, and E. Kuyt. 1978. Large Canada geese moulting in the Northwest Territories. Unpubl. Rept., Can. Wildl. Serv., Saskatoon. 62 pp.

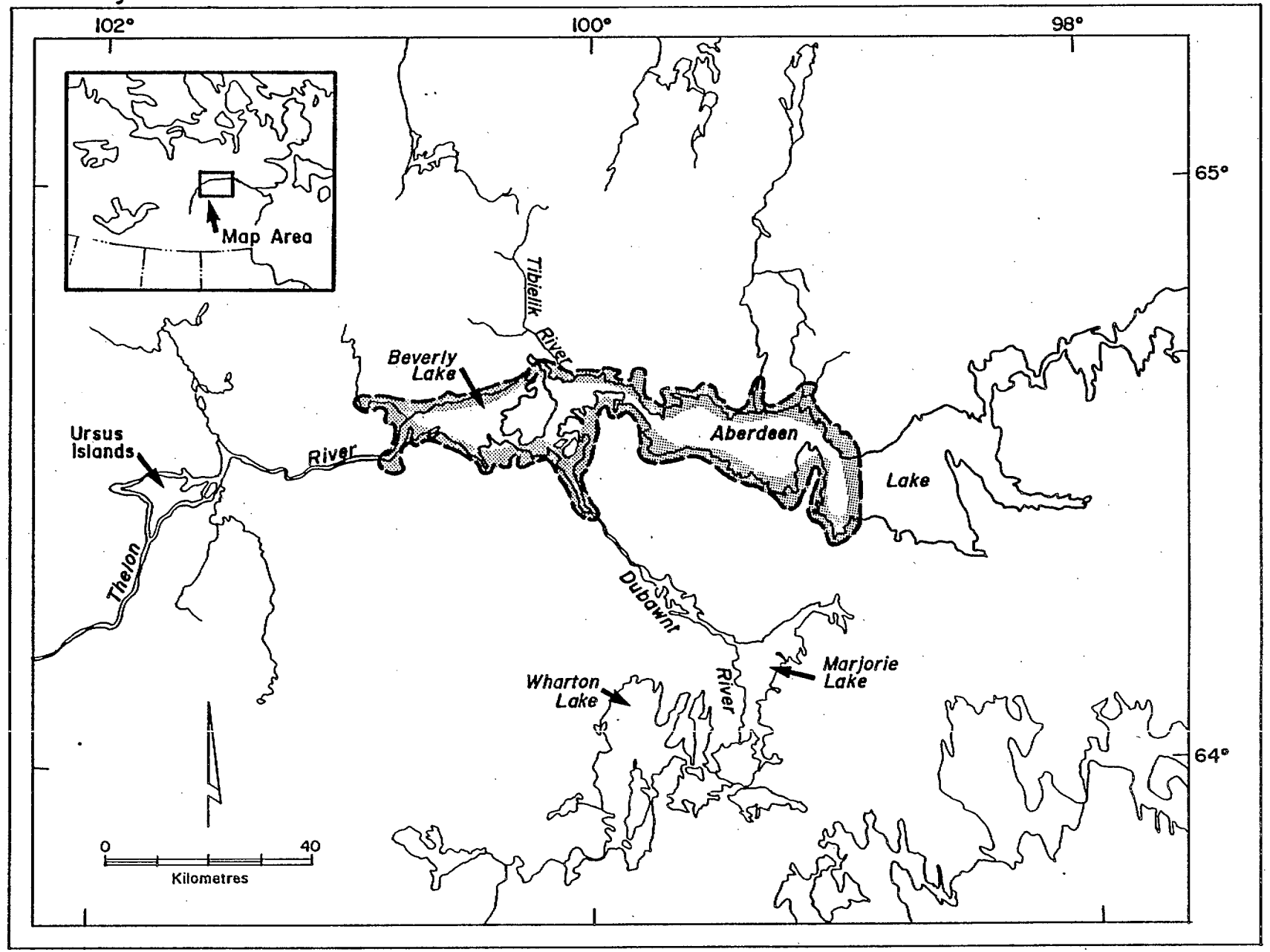
Krohn, W.B., and E.G. Bizeau. 1980. The Rocky Mountain population of the western Canada goose: its distribution, habitats, and management. Spec. Sc. Rept. No. 229, Fish and Wildl. Serv., Dept. Inter., Washington. 93 pp.

Kuyt, E. 1966. Further observations on large Canada geese moulting on the Thelon River, Northwest Territories. Can. Field-Nat. 80:63-69.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Sterling, T., and A. Dzubin 1967. Canada goose moult migrations to the Northwest Territories. Trans. N. Amer. Wildl. Conf. 32:355-373.

Beverly - Aberdeen Lake



NAME: BEVERLY-ABERDEEN LAKES

NUMBER: 48

LOCATION: 64°35'N, 100°00'W

SIZE: 726 square kilometres

DESCRIPTION:

The area covers the shoreline of Beverly Lake, the northern and southern shores of Aberdeen Lake to 99°10'W, and 20 km upstream along the Dubawnt River. The area is situated 150 km west of the settlement of Baker Lake.

Most of the Beverly Lake-Aberdeen Lake region is underlain by Dubawnt sandstone. The low and rolling area is covered with unbroken glacial till which has been sorted into expanses of sand and pebbles. Continuous and discontinuous eskers are common. A late glacial lake inundated much of the area; strandlines and wave-cut beaches are evident (Bird 1967). A massive esker delta occurs on the south side of Beverly Lake.

Drainage is poorly developed except where streams have cut into the sand and till. Wet, sedge-graminoid meadows with associated Eriophorum tussocks are common. Moss tundra, willow-birch-Ledum clumps, and hummocks are common near rivers and lakes. A few stunted spruce are found in gullies.

BIOLOGICAL VALUES:

This area contains the highest concentration (up to 10,000) of moulting large Canada geese (B. c. maxima and moffitti) of any known area in the Northwest Territories. This represents a critical concentration of the national population of large Canada geese. Approximately 20% of the population migrates to northern moulting areas (Sterling and Dzubin 1967). The Western Prairie and Manitoba Interlake management units are represented. Since Canada goose populations have expanded markedly over the last 15 years, further studies are required to determine the number of birds presently using the site.

Flocks of Canada geese generally arrive about mid-June and depart by mid-August.

White-fronted geese are known to breed in the area. In 1960, Kuyt (1962) reported 30 broods between Beverly and Aberdeen lakes.

The area also contains one of the few inland breeding colonies (numbering up to 100 pairs) of lesser snow geese.

Raptor nesting areas are found on the north shores of Beverly and Aberdeen lakes (Kuyt 1980).

Calving grounds for the Beverly caribou herd lie along the northern boundary of the area.

SENSITIVITIES:

Moulting birds are sensitive to disturbance (Sterling and Dzubin 1967).

KNOWN CONFLICTS:

Some mineral exploration occurs in the vicinity.

STATUS:

Beverly Lake is within the Thelon Game Sanctuary.

A proposed IBP site borders the north side of the area (Nettleship and Smith 1975).

REFERENCES:

Bird, J.B. 1967. The physiography of Arctic Canada with special reference to the area south of Parry Channel. John Hopkins Press, Baltimore. 336 pp.

Dzubin, A.X., R.T. Sterling, and E. Kuyt. 1978. Large Canada geese moulting in the Northwest Territories. Unpubl. Rept., Can. Wildl. Serv., Saskatoon. 62 pp.

Krohn, W.B., and E.G. Bizeau. 1980. The Rocky Mountain population of the western Canada goose: its distribution, habitats, and management. Spec. Sc. Rept. No. 229, Fish and Wildl. Serv., Dept. Inter., Washington. 93 pp.

Kuyt, E. 1962. White-fronted geese breeding in the Thelon Valley, NWT. Can. Field-Nat. 76(4):224.

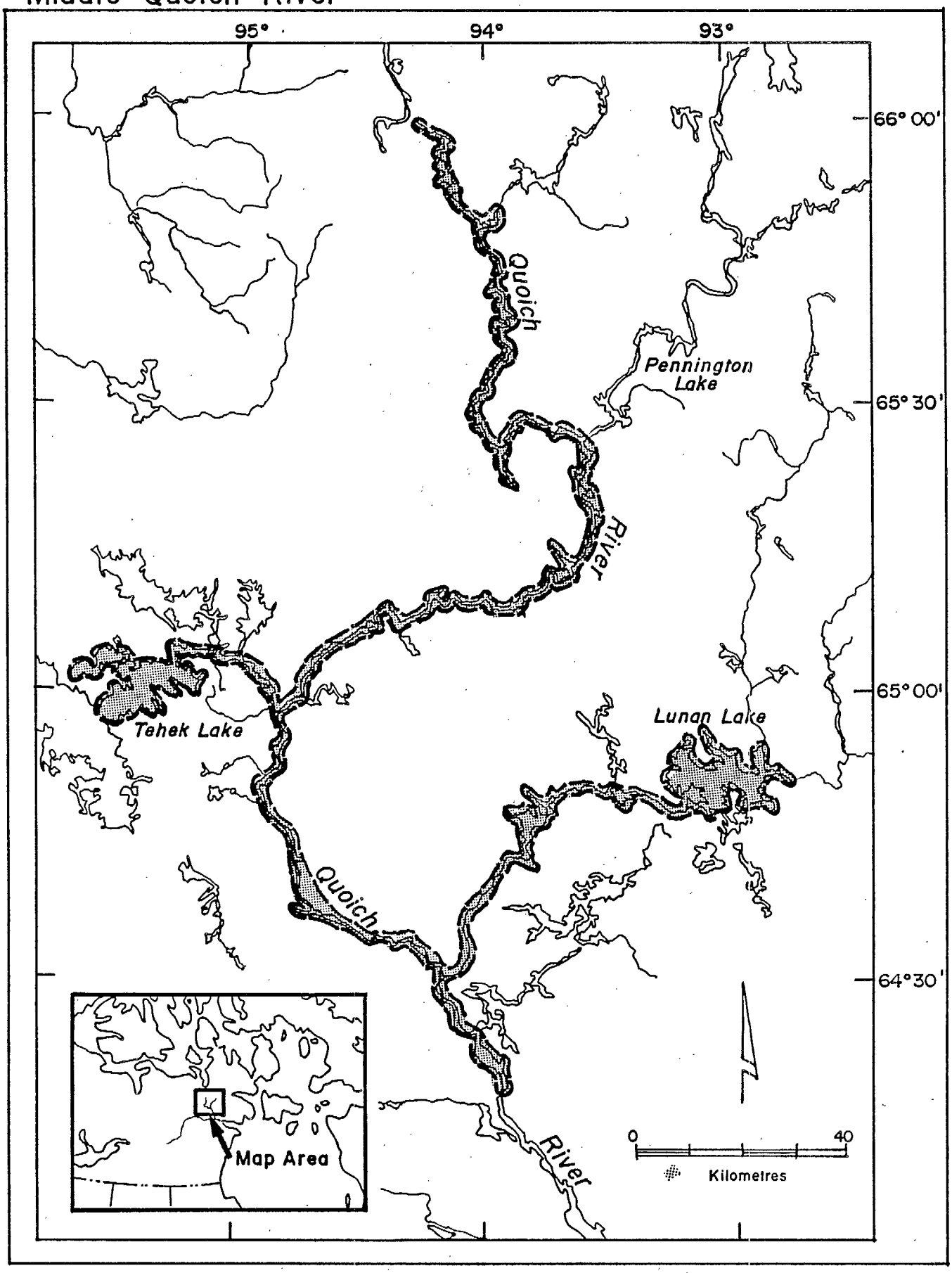
Kuyt, E. 1966. Further observations on large Canada geese moulting on the Thelon River, Northwest Territories. Can. Field-Nat. 80:63-69.

Kuyt, E. 1980. Distribution and breeding biology of raptors in the Thelon River area, Northwest Territories, 1957-1969. Can. Field-Nat. 94(2):121-130.

Nettleship, D.N., and P.A. Smith (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Sterling, T., and A. Dzubin. 1967. Canada goose moult migrations to the Northwest Territories. Trans. N. Amer. Wildl. Conf. 32:355-373.

Middle Quoich River



NAME: MIDDLE QUOICH RIVER

NUMBER: 49

LOCATION: 65°25'N, 93°35'W

SIZE: 1,333 square kilometres

DESCRIPTION:

This site, includes approximately 210 km of the Quoich River valley, from a point 40 km north of its junction with Chesterfield Inlet to 66°N latitude. The east end of Tehek Lake, Tehek River, Lunan Lake, and Lunan River are also included. The area occurs approximately 100 km east and northeast of the settlement of Baker Lake.

The Quoich River flows through a broad, gently rolling, open valley with many scattered lakes and ponds. Bedrock of Proterozoic origin, consisting mainly of granitic and allied rocks, occupies much of the area (Wright 1967). Eskers are common in the upper river basin. Stoney, sandy, glacial till and fluvial deposits which are common throughout the lower river valley are evidence of former marine transgression. Numerous small lakes and localized wet meadows and associated tussocks make the area attractive to moulting geese.

BIOLOGICAL VALUES:

This site is a summer moulting ground for several thousand large Canada geese - part of the Eastern Prairie population. A maximum of 3,400 birds were noted in July, 1966 (Sterling and Dzubin 1967). Various subflocks of the giant Canada goose may also moult in this area from late June to early August. A large number of Canada geese (3.5 birds per linear km) were found on 168 km of river in late August, 1975 (McLaren et al. 1977). Since Canada goose populations have expanded markedly over the last 15 years, further studies are required to determine the number of birds presently using the site.

Moulting geese feed on the sedge-graminoid meadows along the river banks and use the rivers and lakes as retreats during the flightless period (Sterling and Dzubin 1967).

Premoulting flocks generally arrive by mid-June and leave by late August (Sterling and Dzubin 1967).

The upper valley of the Quoich, including the Brown River Valley lying directly west of Wager Bay, is an important summering and wintering area for caribou (Calef and Heard 1979).

SENSITIVITIES:

Moulting geese are sensitive to disturbance.

KNOWN CONFLICTS:

None.

STATUS:

None.

REFERENCES:

Dzubin, A.X., R.T. Sterling, and E. Kuyt. 1978. Large Canada geese moulting in the Northwest Territories. Unpubl. Rept., Can. Wildl. Serv., Saskatoon. 62 pp.

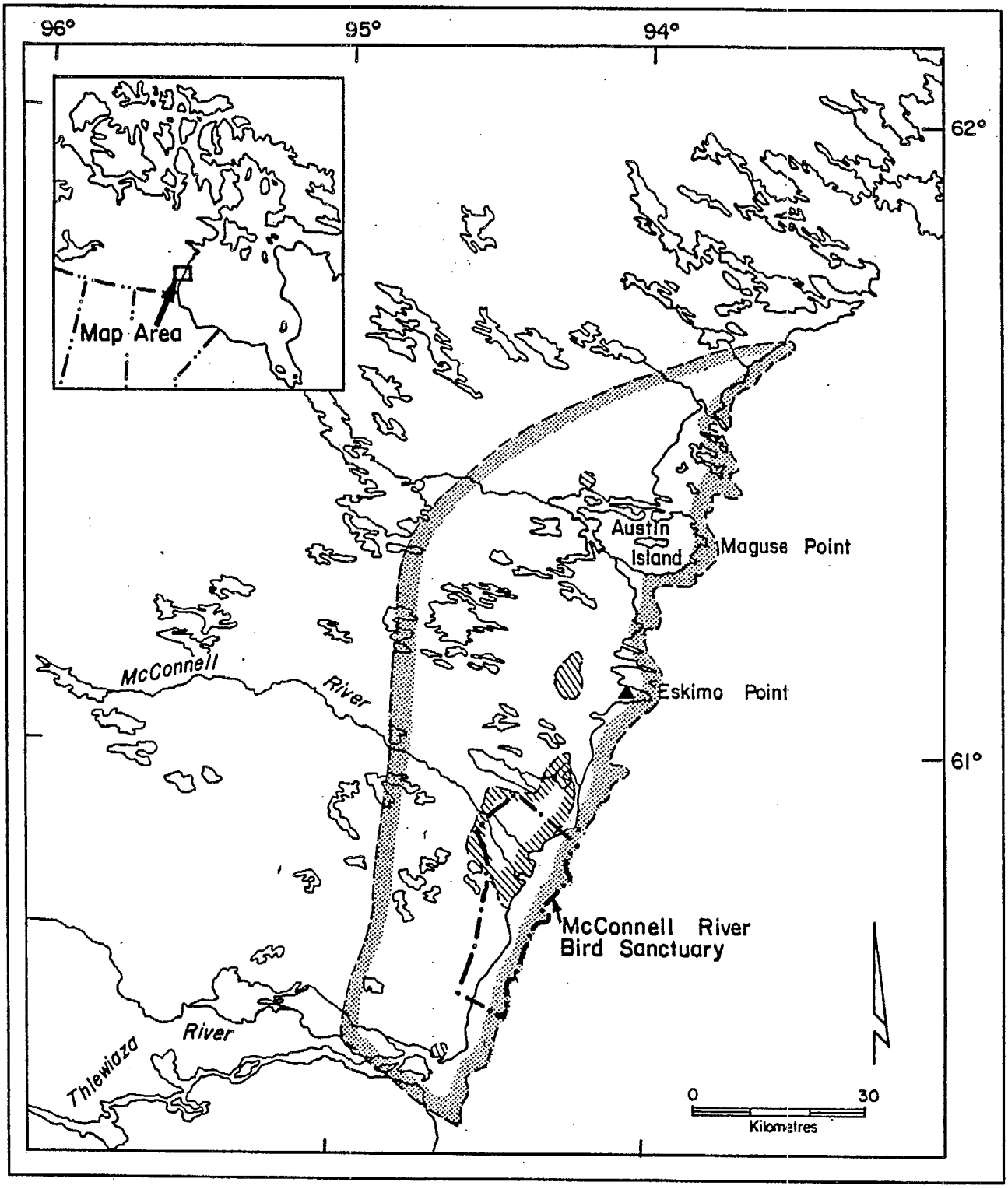
Calef, G.W., and D.C. Heard. 1979. The status of the three tundra winter caribou herds in northeastern mainland, Northwest Territories. Pp. 582-594. In: Proc. Second International Reindeer/Caribou Symposium, Roror, Norway.

McLaren, P.L., R.A. Davis, W.E. Renaud, and C. Holdsworth. 1976. Studies of the numbers and distribution of birds in the District of Keewatin, NWT, June-August, 1975. Unpubl. Rept., LGL Ltd. for Polar Gas Project, Toronto. 391 pp.

Sterling, T., and A. Dzubin. 1967. Canada goose moult migrations to the Northwest Territories. Trans. N. Amer. Wildl. Conf. 32:355-373.

Wright, G.M. 1967. Geology of the southeastern barren grounds, parts of the districts of Mackenzie and Keewatin, (Operations Keewatin, Baker, Thelon). Mem. 350, Geol. Surv. Can., Ottawa. 91 pp.

McConnell River



NAME: McCONNELL RIVER

NUMBER: 50

LOCATION: 60°50'N, 94°20'W

SIZE: 4,940 square kilometres

DESCRIPTION:

This site, located on the west coast of Hudson Bay, is underlain by Precambrian rock of the Canadian Shield. There are, however, very few rock outcrops near the coast, particularly south of Austin Island. The landscape has a low relief, rising to about 60 m in the western portion of the area. Extensive marsh flats occur along the coast, extending 3-8 km inland. Further inland, there are low hills and numerous lakes. A research station, established at the mouth of the McConnell River in 1964, has produced extensive information on the ecology of Canada and lesser snow geese.

BIOLOGICAL VALUES:

In 1973, the total nesting population of lesser snow geese in this area was approximately 195,000 pairs (Kerbes 1975). Many thousands of non-breeding geese were also observed. Nearly 1,300,000 geese were estimated to be present along the coastline after the hatch (Kerbes 1975). Between 1973 and 1980 however, the number of breeding snow geese decreased to 130,000 pairs but the total nesting area of the colonies expanded considerably (Kerbes 1982). Nevertheless, the latter figure represents approximately 19% of the Canadian lesser snow goose population. The coastal sedge lowlands provide nesting habitat for the snow geese, whereas the adjacent ponds, lakes, and inland areas are critical for feeding and moulting.

Geese reach the nesting areas by late May and move to inland feeding areas by the third week in August. Few birds remain in the area after the beginning of September.

The area is also utilized by nesting small Canada geese and sandhill cranes. At least 111 bird species have been recorded for the McConnell River area, including unusual sightings of prairie, boreal, and woodland species.

Barren ground caribou, of the Kaminuriak herd, winter along the Hudson Bay coast from the Manitoba border to Eskimo Point. Ringed seals, white whales, and polar bears are found in coastal areas and offshore waters.

SENSITIVITIES:

Geese are susceptible to disturbance and the degradation of their lowland terrestrial habitats.

KNOWN CONFLICTS:

None.

STATUS:

A portion of this area lies within the the McConnell River Bird Sanctuary.

The sanctuary is a RAMSAR site - a Wetland of International Importance (Anon. 1982).

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories - a background paper. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 3 Vols. 370 pp.

Anonymous. 1982. Canadian sites dedicated as Wetlands of International Importance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 89 pp.

Kerbes, R.H. 1975. Lesser snow geese in the eastern Canadian Arctic. Rept. Series No. 35, Can. Wildl. Serv., Ottawa. 47 pp.

Kerbes, R.H. 1979. Lesser snow goose population surveys, West Hudson Bay, 1977-1978. Unpubl. Rept., Can. Wildl. Serv., Saskatoon. 29 pp.

Kerbes, R.H. 1982. Lesser snow geese and their habitat on west Hudson Bay. Nat. Can. 109:905-911.

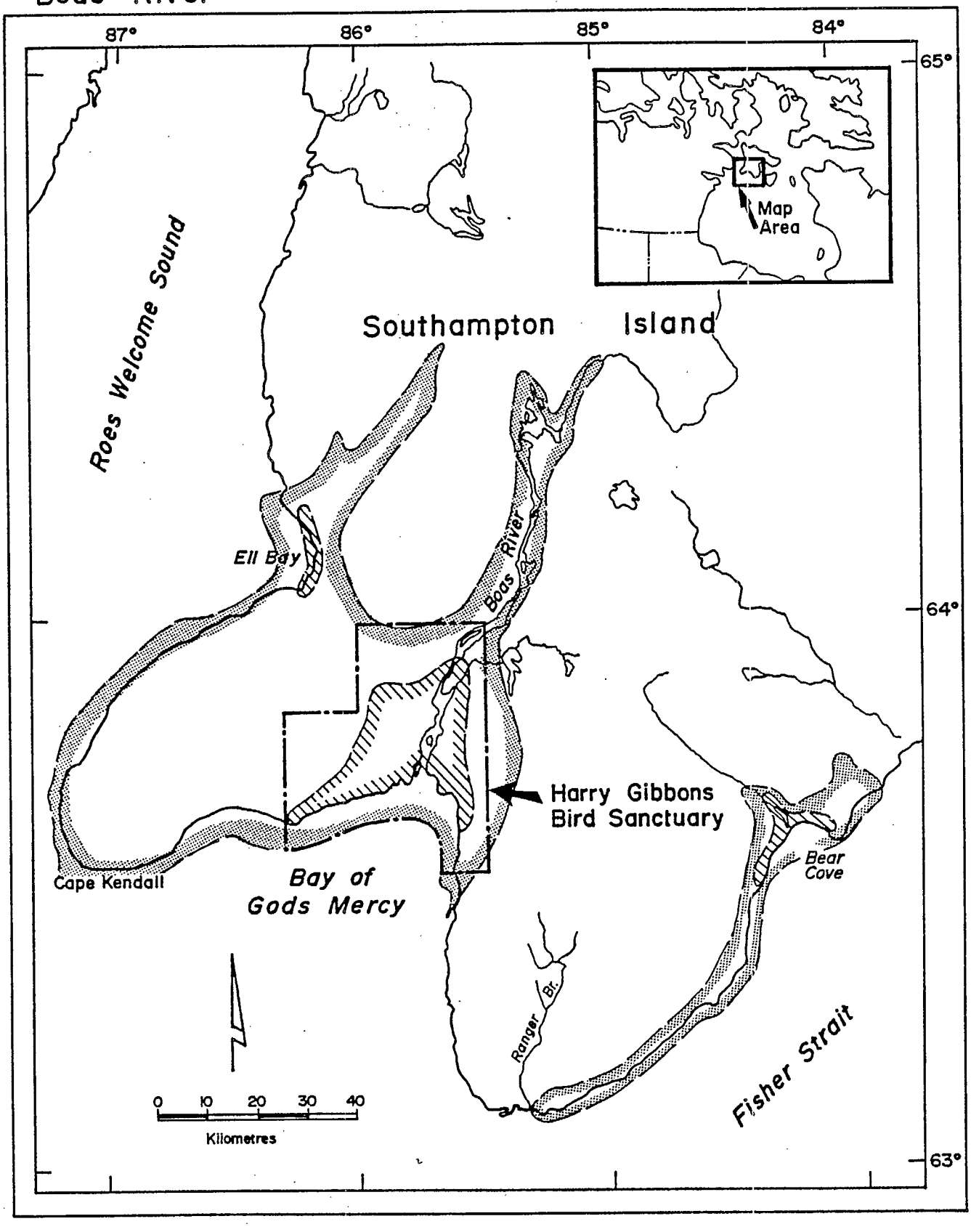
McLaren, P.L., R.A. Davis, W.E. Renaud, and C. Holdsworth. 1976. Studies of the numbers and distribution of birds in the District of Keewatin, NWT, June-August, 1975. Unpubl. Rept., LGL Ltd. for Polar Gas Project, Toronto. 391 pp.

McLaren, P.L., M.A. McLaren, and L.A. Patterson. 1977. Numbers and distribution of birds during migration in the District of Keewatin, northern Manitoba, and northwestern Ontario, 1976. Unpubl. Rept., LGL Ltd. for Polar Gas Project, Toronto. 284 pp.

McLaren, P.L., and M.A. McLaren. 1982. Migration and summer distribution of lesser snow geese in interior Keewatin. Wils. Bull. 94:494-504.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Boas River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Map Area
Roes Welcome Sound
Southampton Island
Ell Bay
Boas River
Harry Gibbons Bird Sanctuary
Cape Kendall
Bay of Gods Mercy
Bear Cove
Ranger Br.
Fisher Strait
0 10 20 30 40
Kilometres

NAME: BOAS RIVER

NUMBER: 51

LOCATION: 63°45'N, 85°40'W

SIZE: 5,402 square kilometres

DESCRIPTION:

Boas River is located on southwestern Southampton Island at the northern extremity of Hudson Bay. The area is underlain by Palaeozoic limestone and is covered with glacial drift and beach deposits. There is little relief; much of the area lies below 60 m elevation. The Boas River flows southward through the area, across an extensive sedge lowland and empties into the Bay of Gods Mercy. Numerous lakes are scattered throughout the lowlands. Extensive tidal flats are found along most of the coastline.

A recurring polynya occurs near Cape Kendall in Roes Welcome Sound (Stirling and Cleator 1981).

BIOLOGICAL VALUES:

Approximately 14% of the lesser snow geese in Canada occur in the Boas River-Ell Bay area (Reed et al. pers. comm.). The largest colony is situated around the Boas River delta. Smaller concentrations are located at Ell Bay, Bear Cove, and along 20 km of coastline west of the Boas River colony. There has been an increase in numbers of geese nesting in these colonies; from 69,400 pairs in 1973, to 95,200 pairs in 1979 (Kerbes 1975, Reed et al. pers. comm.). Feeding habitat for geese extends inland from the nesting area to include adjacent marsh and sedge lowlands.

Snow geese arrive in late May or early June. Non-breeding snow geese leave the area in mid-August, followed by the breeding birds in early September.

The Boas River area also supports nesting populations of Atlantic brant, Canada geese, and tundra swans. Thirty or more avian species are reported for this area of Southampton Island (Nettleship and Smith 1975).

The Roes Welcome Sound polynya serves as a wintering area for white whales, walruses, and harbour seals; polar bears, bearded seals, and ringed seals are permanent residents in the area. Bowhead whales and narwhals use the polynya as a summer feeding area (Stirling and Cleator 1981).

Arctic fox and barren-ground caribou, which were re-introduced to Southampton Island in 1967 (Parker 1975), occur throughout the site.

SENSITIVITIES:

The lowlands are susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost. Geese and other wildlife are sensitive to disturbance.

KNOWN CONFLICTS:

None.

STATUS:

Part of the site occurs within the Harry Gibbons Bird Sanctuary.

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Cooch, F.G. 1968. Birds. Pp. 443-446. In: C.S. Beals (Ed.). Science, history, and Hudson Bay. Vol. 1., Dept. Mines and Resources, Ottawa.

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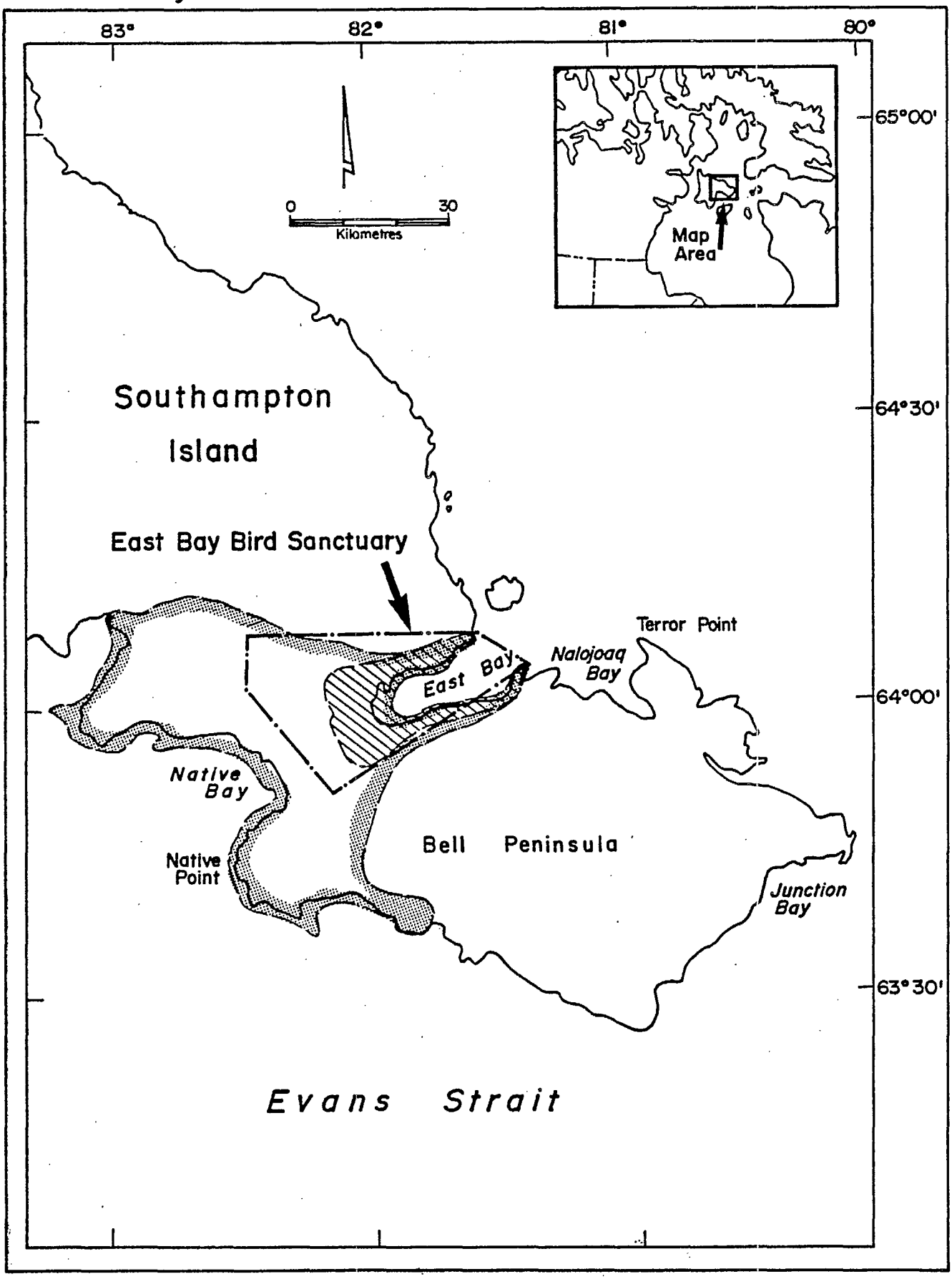
Parker, G.R. 1975. An investigation of caribou range on Southampton Island, NWT. Rept. Series No. 33, Can. Wildl. Serv., Ottawa. 82 pp.

Parker, G.R., and R.K. Ross. 1973. Notes on the birds of Southampton Island, Northwest Territories. Arctic 26(2):123-129.

Stirling, I., and H. Cleator.(Eds.) 1981. Polynyas in the Canadian Arctic. Occ. Paper No. 45, Can. Wildl. Serv., Edmonton. 70 pp.

East Bay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Kilometres
Map Area
Southampton Island
East Bay Bird Sanctuary
Terror Point
Nalojoaq Bay
East Bay
Native Bay
Native Point
Bell Peninsula
Junction Bay
Evans Strait

NAME: EAST BAY

NUMBER: 52

LOCATION: 64°00'N, 82°30'W

SIZE: 2,506 square kilometres

DESCRIPTION:

East Bay is a an inlet, 50 km long, which lies on the southeast coast of Southampton Island. The bay is approximately 50 km east of the settlement of Coral Harbour.

Flat sedge meadows, separated by raised beaches, surround East Bay. As the land rises toward Native Bay, the meadow is broken by outcrops of disintegrated Ordovician and Silurian limestone. Bare Precambrian rock occurs to the north and south of the area.

BIOLOGICAL VALUES:

In 1979, the East Bay plain supported a nesting population of 21,300 pairs of lesser snow geese, representing over 3% of the Canadian breeding population (Reed et al. pers. comm.). Also, 1,000 scattered nests of lesser snow geese have been observed in the lowlands between the southwestern boundary of the East Bay colony and the eastern shore of Native Bay (Kerbes 1975).

The prime nesting habitat is situated along the shores of East Bay, within 500 m of the high tide line. The sedge lowlands near Native Bay provide important habitat for feeding and brood rearing.

Thirty five breeding pairs of Canada geese, 316 pairs of nesting common eiders, and 450 nests of Atlantic brant have been observed at this site (Abraham and Anknek 1980, Reed et al. 1980).

Atlantic brant also nest in southeast East Bay. Four hundred and fifty nests were located and 1000 birds were banded in 1979 (Reed et al. 1980).

A hauling-out area for walrus occurs at Terror Point, east of East Bay. This is the most northerly point used by the Coats Island group of walrus. An estimated 500 white whales also use East Bay during the summer (Allison 1977).

Polar bears are known to migrate from Native Bay to East Bay in summer. The northeast side of Southampton Island is a denning area for polar bears.

SENSITIVITIES:

Nesting geese are sensitive to disturbance. The lowlands are susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost.

KNOWN CONFLICTS:

None.

STATUS:

Part of the area lies within the East Bay Bird Sanctuary.

REFERENCES:

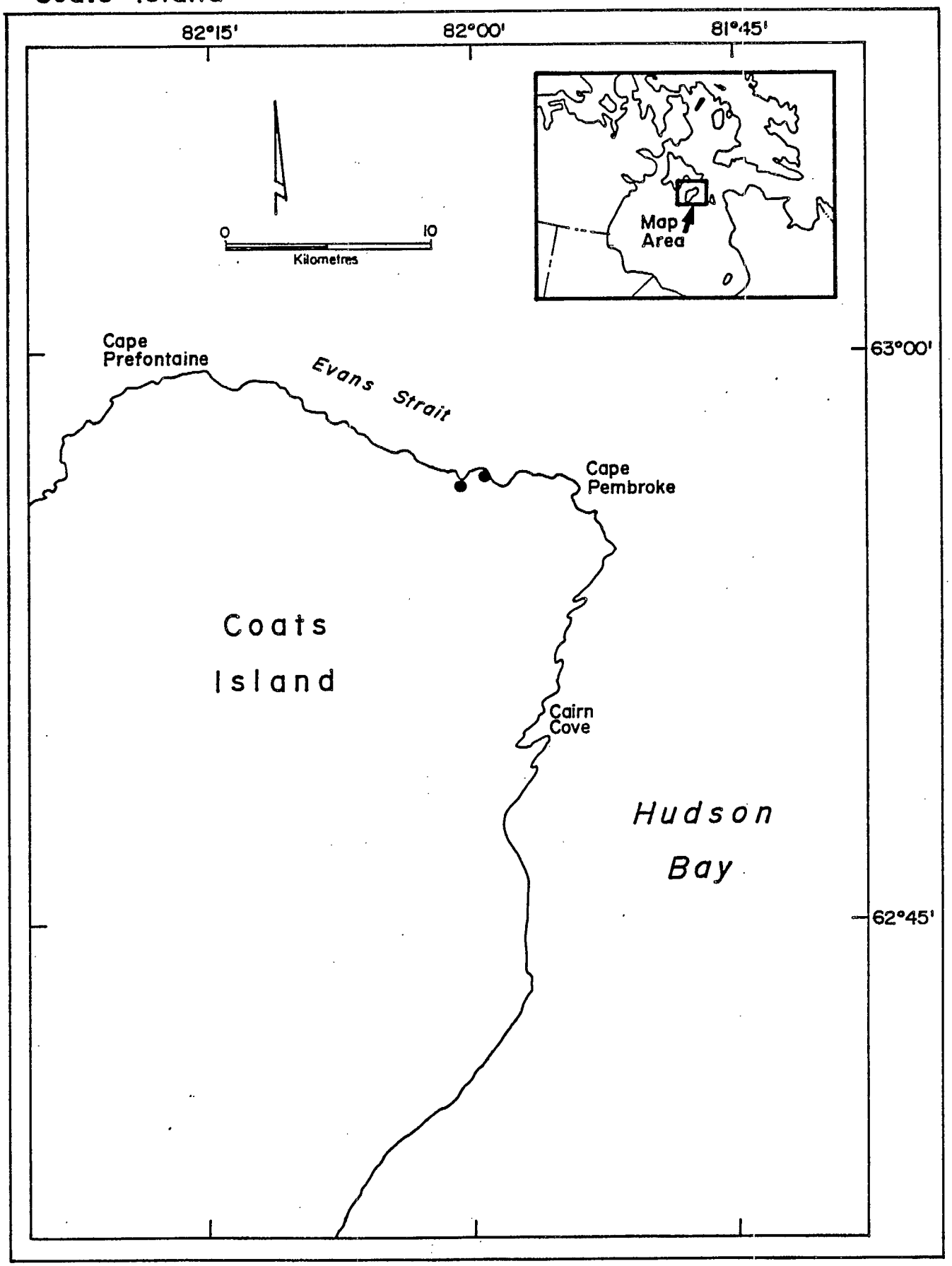
Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories - a background paper. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 3 Vols. 370 pp.

Abraham, K.F., and C.D. Anknek. 1980. Brant research on Southampton Island, NWT: a report of research completed during the summer of 1980. Unpubl. Rept., Univ. Western Ont., London. 24 pp.

Kerbes, R.H. 1975. Lesser snow geese in the eastern Canadian Arctic. Rept. Series No. 35, Can. Wildl. Serv., Ottawa. 47 pp.

Reed, A., P. Dupuis, K. Fischer, and J. Moser. 1980. An aerial survey of breeding geese and other wildlife in Foxe Basin and northern Baffin Island, Northwest Territories, July, 1979. Prog. Note No. 114, Can. Wildl. Serv., Ottawa. 21 pp.

Coats Island



NAME: COATS ISLAND

NUMBER: 53

LOCATION: 62°57'N, 82°00'W

SIZE: 3 square kilometres

DESCRIPTION:

Coats Island is located in northern Hudson Bay, approximately 75 km east of Southampton Island and 110 km west of Mansel Island. The island is predominantly Ordovician and Silurian limestone with a low-lying flat topography covered by large areas of tundra ponds and raised beaches. However, a small, elevated outcrop of Precambrian gneiss occurs at Cape Pembroke, on the northeastern tip, where cliffs rise 215 m above sea level (Heywood and Sanford 1976).

Historical sites of former Inuit residents of northern Coats Island occur in the vicinity of Cape Pembroke.

BIOLOGICAL VALUES:

Two thick-billed murre colonies are located on steep rock cliffs 5 km west of Cape Pembroke. The cliffs are occupied by an estimated 25,000 breeding pairs (A. Gaston pers. comm.) which is approximately 2% of the Canadian population. Murres reach their nesting cliffs in May and depart, with their fledglings, on a swimming migration by early September.

Peregrine falcons, glaucous gulls, and herring gulls also nest on these cliffs. Atlantic brant, Canada geese, tundra swans, and lesser snow geese breed on Coats island (R. Kerbes pers. comm.).

Polar bears frequent Coats Island year round, denning in the vicinity of Cape Pembroke. Ringed, harp, and bearded seals are present in offshore waters during the summer. In the fall, an estimated 3,000 walrus migrate to hauling-out areas along the coast around Cape Pembroke.

SENSITIVITIES:

Seabirds are sensitive to disturbance at their breeding cliffs and pollution of their marine foraging areas.

KNOWN CONFLICTS:

None.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

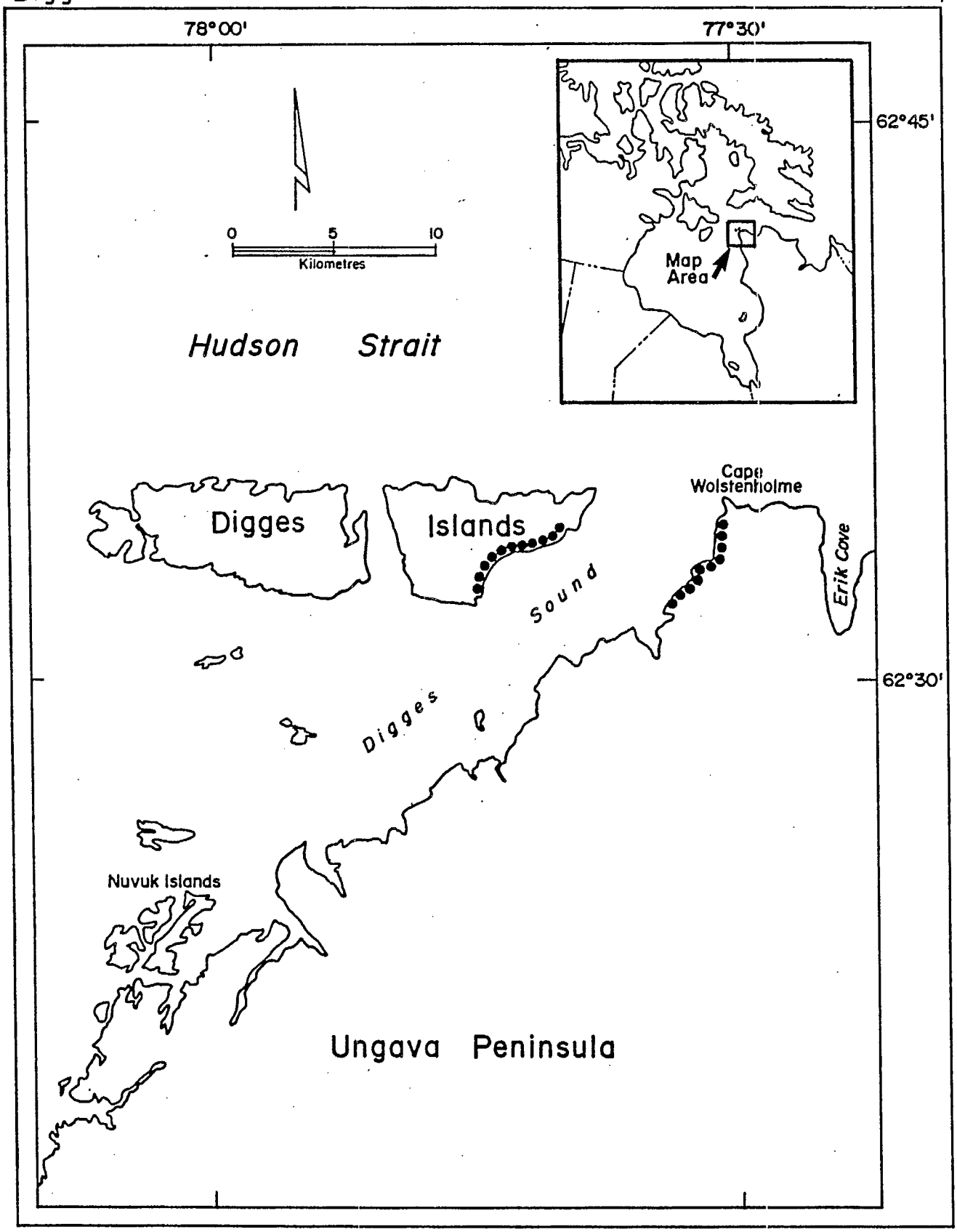
REFERENCES:

Heywood, W.W., and B.V. Sanford. 1976. Geology of Southampton, Coats, and Mansel islands, District of Keewatin, NWT. Memoir 382, Geol. Surv. Can., Ottawa. 35 pp.

Nettleship, D.N., and P.A. Smith (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Tuck, L.M. 1960. The murres: their distribution, populations, and biology. A study of the genus Uria. Monogr. Series No. 1., Can. Wildl. Serv., Ottawa. 260 pp.

Digges Sound



NAME: DIGGES SOUND

NUMBER: 54

LOCATION: 62°33'N, 77°35'W

SIZE: 12 square kilometres

DESCRIPTION:

Digges Sound is located at the northeastern corner of Hudson Bay where it meets Hudson Strait. It is enclosed by the Digges Islands to the north and the mainland of Ungava Peninsula to the south. East Digges Island has cliffs along its southern coast that are over 200 m high, whereas the cliffs on the mainland, 4 km south of Cape Wolstenholme, reach heights of over 300 m above sea level. The rock is a granitic schist which fractures, forming stacks and ledges.

BIOLOGICAL VALUES:

Over 180,000 pairs of thick-billed murres breed in a colony which extends for 4 km along the southeast shore of East Digges Island. A second colony, comprising 107,000 pairs (A. Gaston pers. comm.), extends from Cape Wolstenholme, Quebec, southwest for 8 km. The cliffs along Digges Sound support 22% of the Canadian population of thick-billed murres - one of the largest colonies of this species in Canada (Nettleship 1980).

The murres reach the cliffs in late April or early May and depart with their fledglings in late August. Foraging, particularly for Arctic cod, occurs over most of the water as far as 100 kilometres away from the colonies.

Up to 500 pairs of black guillemots also breed on islands in Digges Sound. Razorbills have been sighted in the area but no evidence of nesting has been found (Gaston 1979). A small colony of approximately 40 pairs of Atlantic puffins were found on an island to the south of West Digges Island (Gaston and Mallone 1980). This is the only confirmed colony of this species in the NWT. Approximately 350 pairs of Kumlien's gulls have also been noted in the area (A. Gaston pers. comm.).

Polar bears, seals, walrus, and white whales also inhabit the surrounding area.

SENSITIVITIES:

Colonial nesting seabirds are sensitive to disturbance and pollution of their marine foraging areas.

KNOWN CONFLICTS:

Increased marine traffic through Hudson Strait could threaten migrating murres.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Gaston, A.J. 1979. Preliminary report on seabird studies carried out at Digges Sound, 19-28 August, 1979. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 27 pp.

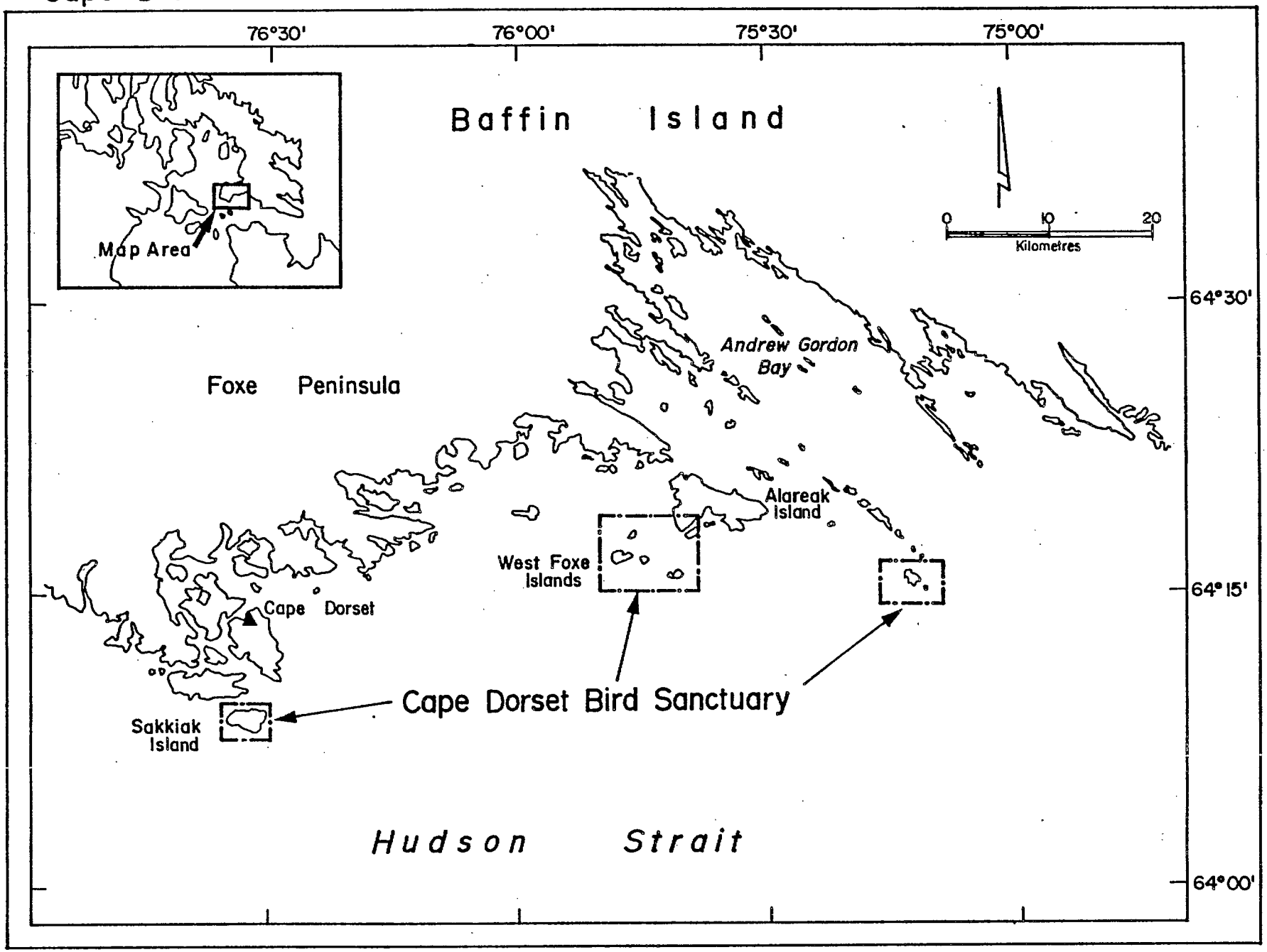
Gaston, A.J. 1980. Seabird investigations in Hudson Strait - report on activities in 1980. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 36 pp.

Gaston, A.J., and M. Mallone. 1980. Range extension of Atlantic puffin and razorbill in Hudson Strait. Can. Field-Nat. 94(3):328-329.

Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and P.A. Smith (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Cape Dorset


76°30'
76°00'
75°30'
75°00'
Baffin Island
Map Area
0
10
20
Kilometres
64°30'
Andrew Gordon Bay
Foxe Peninsula
Alareak Island
West Foxe Islands
Cape Dorset
64°15'
Cape Dorset Bird Sanctuary
Sakkiak Island
Hudson Strait
64°00'

NAME: CAPE DORSET

NUMBER: 55

LOCATION: 64°15'N, 76°00'W

SIZE: 259 square kilometres

DESCRIPTION:

Three islands; Sakkiak Island, West Foxe Islands and South Andrew Gordon Bay; make up this site. They are located on the southern tip of Foxe Peninsula, Baffin Island, adjacent to the settlement of Cape Dorset. The rocky islands have variable topography. Vegetation is concentrated around a few lowland ponds.

Cape Dorset Bird Sanctuary was originally established, in 1957, to encourage the development of an eider down collecting industry among the local people. The sanctuary was established with the support of the local Inuit who, at that time, respected its protective status.

BIOLOGICAL VALUES:

Approximately 5,000 common eiders bred in the area during the early 1950's although they were heavily exploited for eggs, meat, and down. At that time, it was suspected that local use of the eiders was maintaining the population at about 20% of the carrying capacity of the habitat (Cooch 1965).

In recent years this area has undergone heavy hunting pressure from the local residents. On one island where 750 nests were recorded in 1956, there were fewer than 50 in 1976 (G. Cooch pers. comm.). However, in 1976, the population of eiders on islands where local people do not hunt appeared to be expanding.

SENSITIVITIES:

Eiders are sensitive to disturbance and pollution of offshore waters.

KNOWN CONFLICTS:

Egging and hunting is thought to have caused the decrease in the breeding population of common eiders within the sanctuary (Cooch 1976).

STATUS:

Migratory Bird Sanctuary.

REFERENCES:

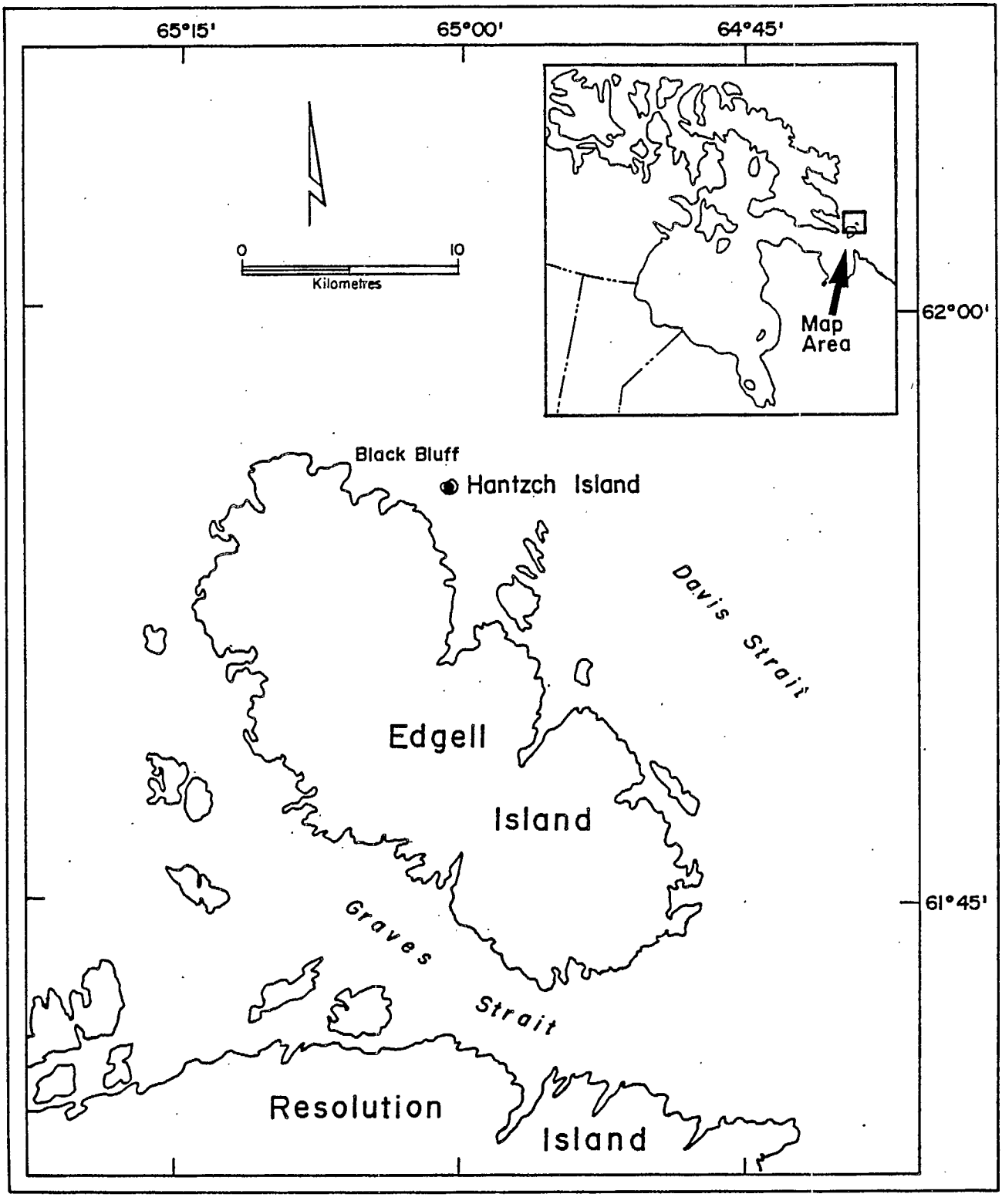
Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories - a background paper. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 3 Vols. 370 pp.

Cooch, F.G. 1965. The breeding biology and management of the northern eider (Somateria molissima borealis) in the Cape Dorset area, Northwest Territories. Wildl. Mgmt. Bull., Series 2, No. 10, Can. Wildl. Serv., Ottawa. 68 pp.

Cooch, F.G. 1976. Two cultures - two settlements - Cape Dorset, 1956-1976. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 12 pp.

MacPherson, A.H., and I.A. MacLaren. 1959. Notes on the birds of Southern Foxe Peninsula, Baffin Island, NWT. Can. Field-Nat. 73(2):63-81.

Hantzsch Island



NAME: HANTZSCH ISLAND

NUMBER: 56

LOCATION: 61°56'N, 65°01'W

SIZE: 1 square kilometre

DESCRIPTION:

Hantzsch Island is the unofficial name for the small island one kilometre off the northeastern shore of Edgell Island, at the southeastern-most tip of Baffin Island. It is a dome-shaped island, less than one kilometre in diameter, with a maximum elevation of 150 m. The rugged coastline of steep cliffs is of Precambrian granitic gneiss with grassy slopes and summits (Douglas 1970).

A polynya occurs in Frobisher Bay just north of Hantzsch Island (Stirling and Cleator 1981).

BIOLOGICAL VALUES:

An estimated 50,000 breeding pairs of thick-billed murres, representing approximately 4% of the Canadian population, breed on the cliffs of this island. Five thousand pairs of black-legged kittiwakes (Gaston 1983) representing over 2% of the Canadian population also occur here. Small numbers of gulls, black guillemots, and possibly northern fulmars also nest on the island (Gaston 1983).

The seabirds occupy the area from early May to late August or September.

The polynya in Frobisher Bay attracts bearded, ringed, and harp seals; walruses; and white whales (Stirling and Cleator 1981). Polar bears also inhabit the area and use the seaward tip of Meta Incognita Peninsula as a maternity denning area (Stirling et al. 1980).

SENSITIVITIES:

Seabirds are sensitive to disturbance and pollution of their marine foraging areas.

KNOWN CONFLICTS:

Shipping and air traffic through Frobisher Bay and Hudson Strait, and hydrocarbon exploration in Davis Strait could cause disturbance and marine pollution.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

Douglas, R.J.W. (Ed.) 1970. Geology and economic minerals of Canada. Econ. Geol. Rept. No.1, Geol. Surv. Can., Ottawa. 838 pp.

Gaston, A.J. 1983. Seabird studies on Hantzsch Island, S.E. Baffin Island, NWT. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 42 pp.

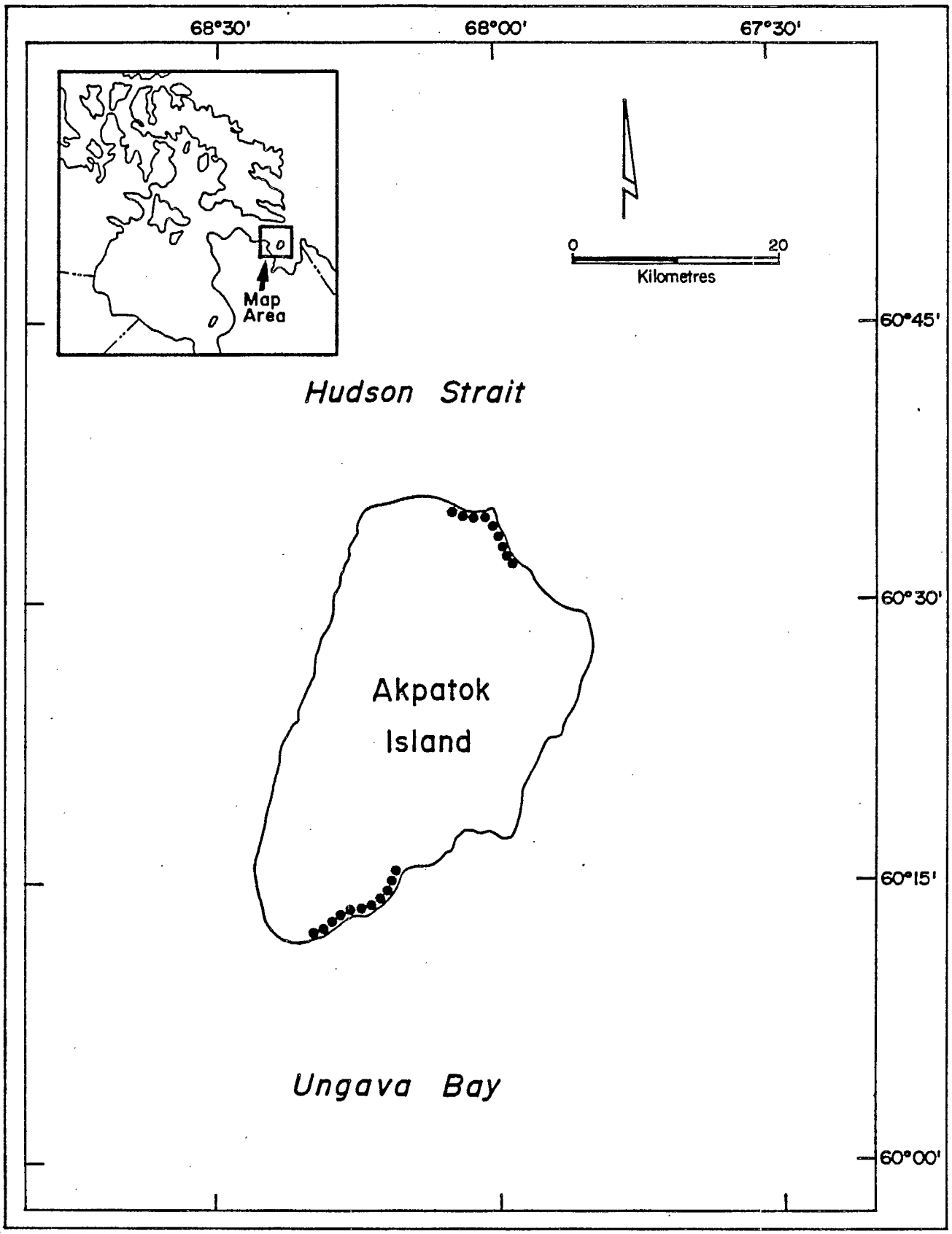
Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Stirling, I., W. Calvert, and D. Andriashek. 1980. Population ecology studies of the polar bear in the area of southeastern Baffin Island. Occ. Paper No. 44, Can. Wildl. Serv., Edmonton. 31 pp.

Stirling, I., and H. Cleator. (Eds.) 1981. Polynyas in the Canadian Arctic. Occ. Paper No. 45, Can. Wildl. Serv., Edmonton. 70 pp.

Akpatok Island



NAME: AKPATOK ISLAND

NUMBER: 57

LOCATION: 60°25'N, 68°08'W

SIZE: 32 square kilometres

DESCRIPTION:

Akpatok Island is located in northwestern Ungava Bay, about 65 km offshore from the mainland of Quebec. This flat-topped island is surrounded by steep cliffs which rise over 245 m above the sea. It is composed mainly of Ordovician limestone and vegetated by sparse upland tundra.

BIOLOGICAL VALUES:

Two large colonies of thick-billed murres are located on the north and southeast coasts of the island. The colonies occur on horizontal ledges that begin on the cliff faces approximately 30 m above sea level. The northern colony has an estimated 200,000 breeding pairs and extends for 14 km along the cliff face (Nettleship 1980).

The southern colony extends for 15 km and harbours approximately 100,000 pairs of murres (Nettleship 1980). These two colonies constitute one of the largest thick-billed murre concentrations in Canada - approximately 23% of the Canadian population. Thick-billed murres arrive at their nesting cliffs in early May and set out to sea, with their fledglings, at the end of August.

Approximately 300-500 pairs of black guillemots nest along most of the island's coast. Several pairs of peregrine falcons and gyrfalcons probably breed on the island (A. Gaston pers. comm.).

Marine mammals, especially walrus and seals, inhabit the surrounding waters during the summer. The island is an important summer retreat and possible maternity denning area for polar bears in the Ungava, Labrador, and Hudson Strait area (Smith et al. 1975).

SENSITIVITIES:

Murres are sensitive to disturbance and pollution of marine foraging areas.

KNOWN CONFLICTS:

Increased ship traffic which would result from proposed mining activities on the Melville Peninsula could have an impact on murres migrating through Hudson Strait.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

REFERENCES:

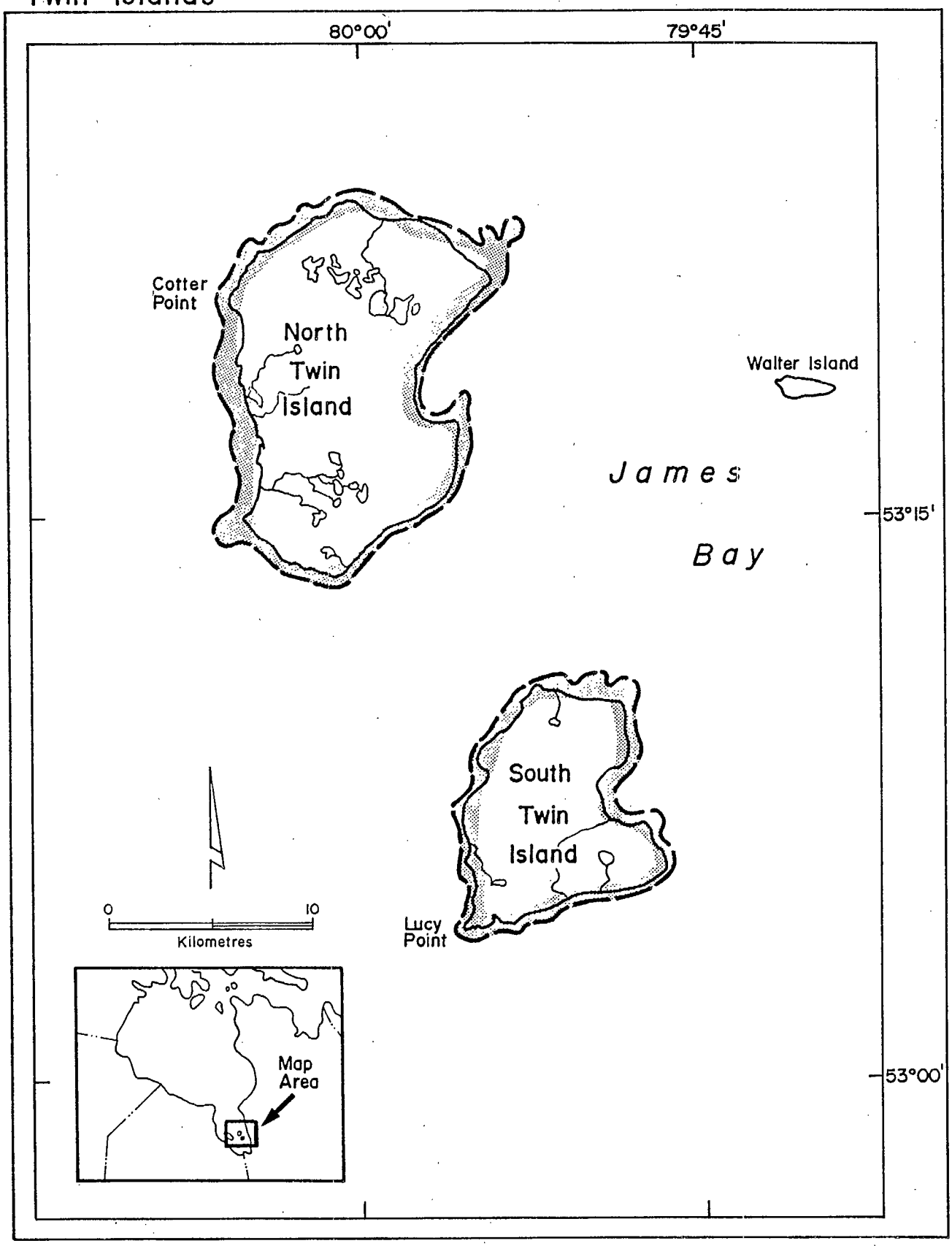
Nettleship, D.N. 1980. A guide to the major seabird colonies of eastern Canada: identity, distribution, and abundance. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 133 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9., Can. Wildl. Serv., Ottawa. 330 pp.

Smith, P.A., I. Stirling, C. Jonkel, and I. Juniper. 1975. Notes on the present status of the polar bear (Ursus maritimus) in Ungava Bay and northern Labrador. Prog. Note No. 53, Can. Wildl. Serv., Ottawa. 8 pp.

Tuck, L.M. 1960. The murres: their distribution, populations, and biology. A study of the genus Uria. Monogr. Series No. 1, Can. Wildl. Serv., Ottawa. 260 pp.

Twin Islands



NAME: TWIN ISLANDS

NUMBER: 58

LOCATION: 53°10'N, 79°55'W

SIZE: 301 square kilometres

DESCRIPTION:

The Twin Islands are situated in central James Bay approximately 60 km offshore from mainland Quebec.

North Twin Island, which is approximately 150 square kilometres in area, is composed chiefly of unconsolidated sand and gravel which reaches a maximum elevation of 60 m above sea level. Approximately one quarter of the island is covered by lakes. Sand dunes occur along half of the coastline and wide tidal flats border most of the island.

Marshland is scattered throughout the island. Tussock tundra is also common, especially in western areas of the island. Small stands of white spruce, dwarf birch, and willows also occur.

South Twin Island, which occurs approximately 11 km southeast of North Twin Island, is approximately half the size of its northern counterpart. This island has similar topography but there are fewer trees and more mossy tundra (Manning 1981).

BIOLOGICAL VALUES:

In 1973, approximately 2,500 Canada geese were observed and 1,500 birds nested on North Twin Island. Similar densities of birds were noted on South Twin Island (Manning 1981). Baldwin (cited in Manning 1981) estimated the total population of both islands to be over 5,000 birds. This number represents approximately 4% of the present Tennessee Valley population of Canada geese.

The geese arrive by early May and depart from the area by the end of September.

In addition to a large number of willow ptarmigan, a variety of ducks and shorebirds breed on the islands (Manning 1981).

The Twin Islands is the most heavily-utilized area, by polar bears, in James Bay. The islands are used as a summer retreat and a maternity denning area (Jonkel et al. 1976).

SENSITIVITIES:

Low-lying areas are susceptible to terrain disruption.

Geese are sensitive to disturbance.

KNOWN CONFLICTS:

None.

STATUS:

Proposed IBP site (Nettleship and Smith 1975).

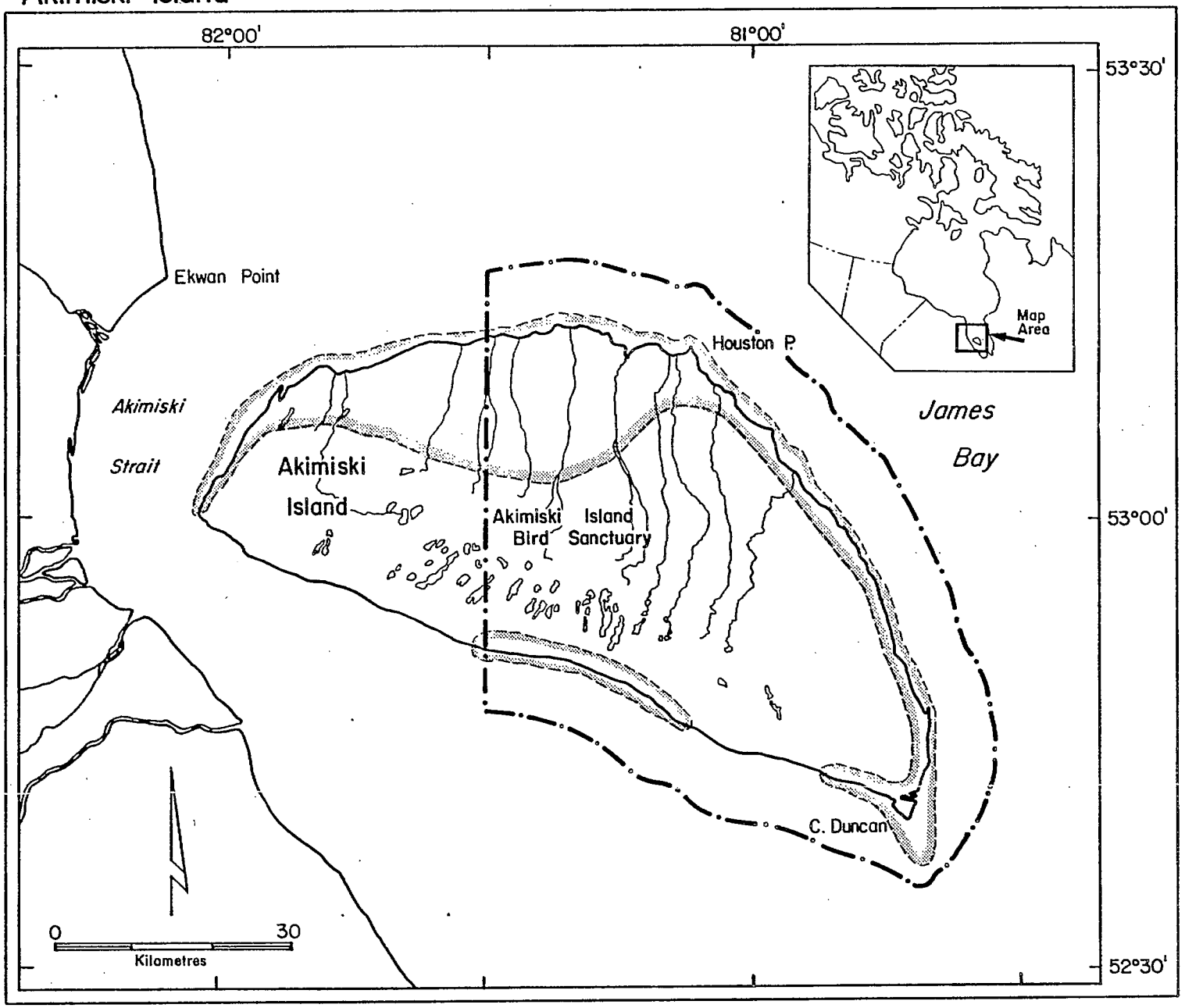
REFERENCES:

Manning, T.H. 1981. Birds of the Twin Islands, James Bay, NWT, Canada. Syllogeus No. 3, Nat. Mus. Can., Ottawa. 50 pp.

Nettleship, D.N., and P.A. Smith. (Eds.) 1975. Ecological sites in northern Canada. Can. Comm. Inter. Biol. Prog., Conserv. Terr. Panel 9, Can. Wildl. Serv., Ottawa. 330 pp.

Jonkel, C., P. Smith, I. Stirling, and G. Kolenosky. 1976. The present status of the polar bear in the James Bay and Belcher Islands area. Occ. Paper No. 26, Can. Wildl. Serv., Ottawa. 42 pp.

Akimiski Island



NAME: AKIMISKI ISLAND

NUMBER: 59

LOCATION: 53°10'N, 81°20'W

SIZE: 1,223 square kilometres

DESCRIPTION:

Akimiski Island is situated in mid-western James Bay opposite the mouth of the Attawapiskat River. It is underlain by Silurian limestone and dolomite (Sandford et al. 1968) and has a very low relief. The southern shore rises steeply from the water then gradually slopes downward to the mud flats along the northern shore.

The northern coast is bordered by sedge marshlands with a willow fringe further inland. To the west, willows merge into a tamarack fen with permafrost hummocks while in the east, beach ridges and black spruce occur. In southern areas, the island is covered by lichen heath, deep peat, and muskeg ponds (H. Lumsden pers. comm.).

BIOLOGICAL VALUES:

Up to 250,000 lesser snow geese stage along the north shore during the spring and, in 1976, at least 2,000 lesser snow geese nested at the edge of the willow fringe (Allison 1977). Numbers of nesting snow geese have since declined to approximately 1,000 (H. Lumsden pers. comm.).

Large Canada geese, from the Tennessee Valley population, nest among the permafrost hummocks in the tamarack fen and stage on the island coasts. Brant feed in the eel-grass beds along the northwest coast and at Cape Duncan while moulting and staging. Ducks and shorebirds also nest and feed along sections of the shoreline (Allison 1977).

Northern Akimiski Island is a summer sanctuary and maternity denning area for polar bears (Jonkel et al. 1976).

SENSITIVITIES:

Low-lying areas of the island are sensitive to terrain disturbance.

KNOWN CONFLICTS:

None.

STATUS:

The eastern part of the island is a Migratory Bird Sanctuary.

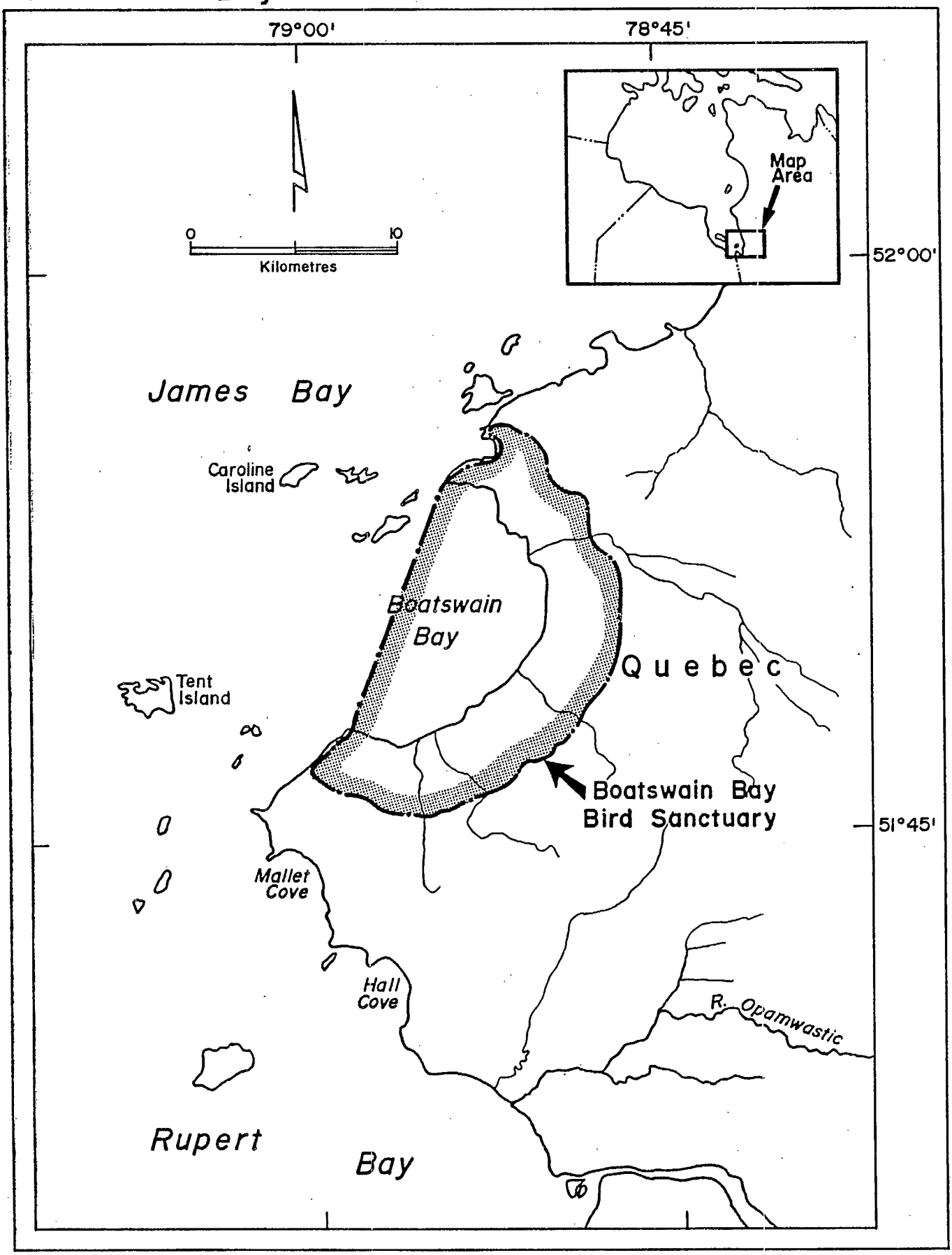
REFERENCES:

Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories - a background paper. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 3 Vol. 370 pp.

Jonkel, C., P. Smith, I. Stirling, and G. Kolenosky. 1976. The present status of the polar bear in the James Bay and Belcher Islands area. Occ. Paper No. 26, Can. Wildl. Serv., Ottawa. 41 pp.

Sanford, B.V., A.W. Norris, and H.H. Bostock. 1968. Geology of the Hudson Bay lowlands (Operation Winisk). Paper 67-60, Geol. Surv. Can., Ottawa. 118 pp.

Boatswain Bay



NAME: BOATSWAIN BAY

NUMBER: 60

LOCATION: 51°50'N, 78°52'W

SIZE: 167 square kilometres

DESCRIPTION:

Boatswain Bay lies in the southeast corner of James Bay, approximately 40 km north of Fort Rupert, Quebec. The site includes all waters and lands in Boatswain Bay and all land 3 km inland from the high tide mark.

All offshore islands and reefs which remain exposed at normal high tide are considered to occur within the NWT.

The topography is generally of low relief. The land slowly rises from coastal mud flats, bordered by bulrush marsh, through a sedge-grass lowland complex to willow and spruce further inland. On the south side of Boatswain Bay the marsh is relatively narrow, increasing in width to approximately 1.6 km on the north side (Smith 1944).

BIOLOGICAL VALUES:

Boatswain Bay is an important staging site for Canada geese (Allison 1977) and lesser snow geese (Bellrose 1976). Fourteen thousand Canada geese and 3,000 lesser snow geese staged in and around Boatswain Bay in the spring of 1972 (Curtis and Allen 1976). Curtis and Allen (1976) also recorded 535 migrating brant in the spring and a further 2,474 birds in the fall. Dabbling ducks, particularly the black duck, stage and nest in the surrounding area. Fall migrating Canada and lesser snow geese make intensive use of the coastal areas (Curtis and Allen 1976).

SENSITIVITIES:

The marine waters and surrounding lowlands are vulnerable to oil spills or other forms of pollution.

KNOWN CONFLICTS:

None.

STATUS:

This site is a Migratory Bird Sanctuary.

All coastal waters of James Bay are part of the James Bay Preserve.

REFERENCES:

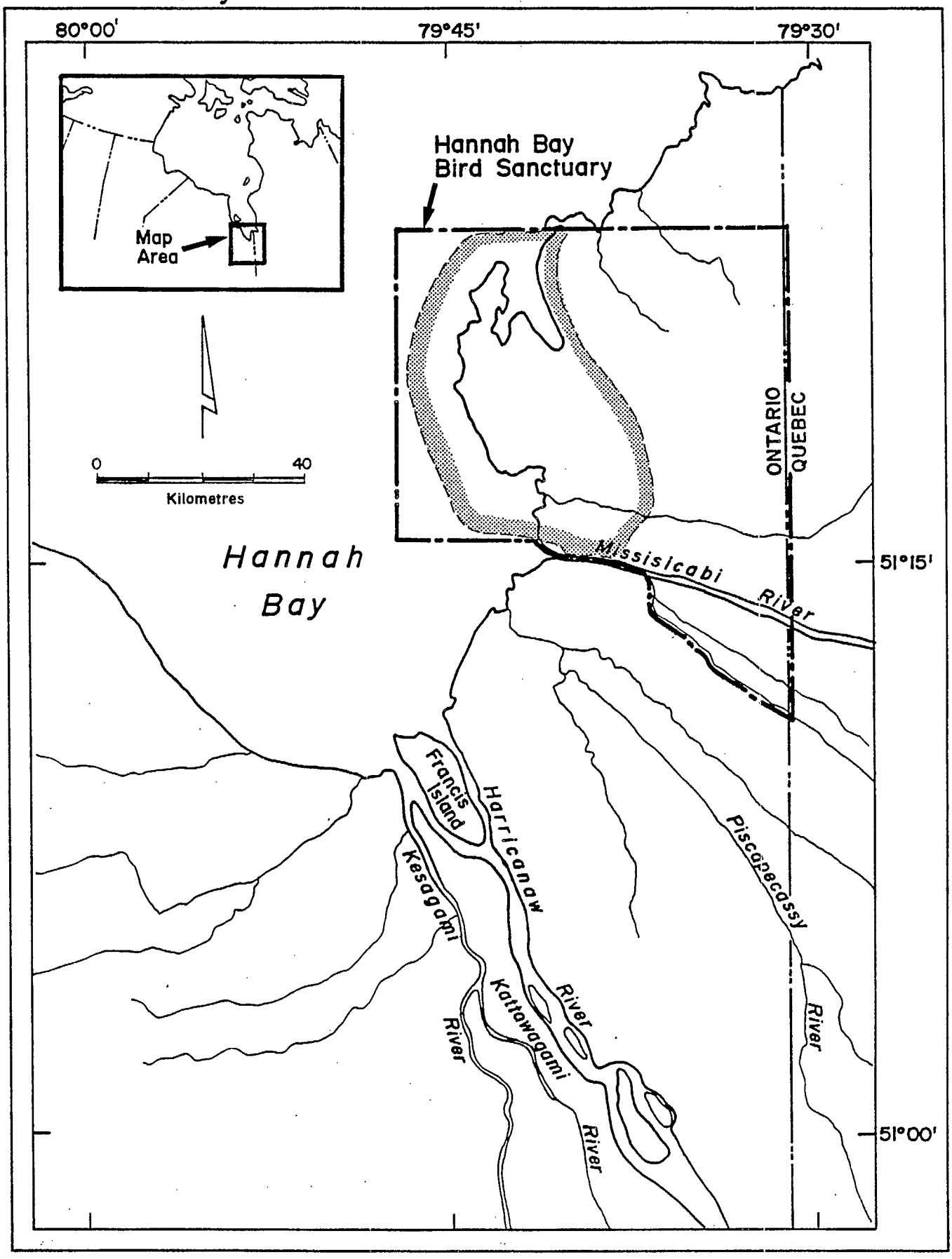
Allison, L. 1977. Migratory bird sanctuaries in the Northwest Territories - a background paper. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 3 Vol. 370 pp.

Bellrose, F.C. 1976. Ducks, geese, and swans of North America. Stackpole, Harrisburg, Pa. 543 pp.

Curtis, S., and D.L. Allen. 1976. The waterfowl ecology of the Quebec coast of James Bay. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 72 pp.

Smith, R.H. 1944. An investigation of the waterfowl resources of the south and east coasts of James Bay, 1944. Unpubl. Rept., CWSC 334, Can. Wildl. Serv., Ottawa. 61 pp.

Hannah Bay


80°00'
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Hannah Bay
Bird Sanctuary
Map
Area
0
40
Kilometres
ONTARIO
QUEBEC
Hannah
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Francis
Island
Harricanaw
River
Kesagami
River
Kattawagami
River
Piscanecassy
River
51°00'

NAME: HANNAH BAY

NUMBER: 61

LOCATION: 51°15'N, 79°45'W

SIZE: 181 square kilometres

DESCRIPTION:

Hannah Bay lies in the extreme southern end of James Bay on the Ontario-Quebec border. Two large rivers, the Harricanaw and the Massisicabi, drain into Hannah Bay. All offshore islands and reefs which remain exposed at normal high tide are considered to occur within the NWT.

Hannah Bay is one of the widest expanses of marsh along the James Bay coast (Allison 1977). The coastal marsh averages approximately 1.5 km in width whereas the adjacent tidal flats are approximately 15 km wide. The flats are generally hard packed silts and clays and the water in the bay is turbid and brackish. The marsh-edge vegetation of rush species merges into sedge marshes with numerous ponds. The west side of the bay is paralleled by three beach ridges which divide the marsh into sections with progressively more sphagnum as one moves inland (Smith 1944).

BIOLOGICAL VALUES:

Extensive mud flats and sedge marsh attract large numbers of migrating lesser snow geese, Canada geese, and shorebirds. In spring, numerous ponds of melt water form in the marsh along the willow fringe. These ponds are heavily used by lesser snow geese and dabbling ducks when they first arrive in late April and early May (Curtis and Allen 1976). The mouth of the Harricanaw and Massisicabi rivers are important to Atlantic brant in late May and early June (Allison 1977).

Lesser snow geese are the most numerous species staging in Hannah Bay. In fall 1973, 1,884 large Canada geese and 28,560 lesser snow geese were noted (Curtis 1973). Lumsden (1971) recorded 64,538 lesser snow geese from 15-18 October, 1971.

SENSITIVITIES:

The area is sensitive to pollution or a change in the water table which could degrade or destroy the marsh habitat.

KNOWN CONFLICTS:

None.

STATUS:

Part of the area lies within the Hannah Bay Bird Sanctuary.

REFERENCES:

Allison, L. 1977. Migratory Bird Sanctuaries in the Northwest Territories - a background paper. Unpubl. Rept., Can. Wildl. Serv., Edmonton. 3 Vols. 370 pp.

Curtis, S.G. 1973. The movement of geese through James Bay, spring 1972. Unpubl. Rept., James Bay Report Series No. 10, Can. Wildl. Serv., Ottawa. 29 pp.

Curtis, S., and D.L. Allen. 1976. The waterfowl ecology of the Quebec coast of James Bay. Unpubl. Rept., Can. Wildl. Serv., Ottawa. 72 pp.

Lumsden, H. 1971. Goose surveys on James Bay, 1971. Unpubl. Rept., Ontario Dept. of Lands and Forests. 20 pp.

Smith, R.H. 1944. An investigation of the waterfowl resources of the south and east coasts of James Bay, 1944. Unpubl. Rept., CWSC 334, Can. Wildl. Serv., Ottawa. 61 pp.

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Key migratory bird terrestrial habitat sites in the Northwest Territories