6.0 Key migratory bird terrestrial habitat sites in Nunavut

Figure 2 Map of site locations in Nunavut



Map legend: Site locations in Nunavut

NU Site 1 – Inglefield Mountains NU Site 2 - Sydkap Ice Field NU Site 3 – North Kent Island NU Site 4 - Seymour Island NU Site 5 – Cheyne Islands NU Site 6 – Polar Bear Pass NU Site 7 - Baillie-Hamilton Island NU Site 8 - Cape Vera NU Site 9 – Skruis Point NU Site 10 – Nirjutiqavvik (Coburg Island) NU Site 11 - Eastern Devon Island NU Site 12 – Hobhouse Inlet NU Site 13 - Cape Liddon NU Site 14 - Browne Island NU Site 15 - Prince Leopold Island NU Site 16 – Batty Bay NU Site 17 - Creswell Bay NU Site 18 - Northwestern Brodeur Peninsula NU Site 19 – Baillarge Bay NU Site 20 – Berlinguet Inlet NU Site 21 – Cape Hay NU Site 22 – South Bylot Island NU Site 23 – Cape Graham Moore NU Site 24 - Buchan Gulf NU Site 25 - Scott Inlet NU Site 26 – Abbajalik and Ijutuk Islands NU Site 27 – Qaqulluit (Cape Searle) NU Site 28 – Akpait (Reid Bay) NU Site 29 - Western Cumberland Sound Archipelago NU Site 30 – Great Plain of the Koukdjuak

NU Site 31 - Foxe Basin Islands NU Site 32 - North Spicer Island NU Site 33 - Turton Island NU Site 34 - Rasmussen Lowlands NU Site 35 – Jenny Lind Island NU Site 36 - Southwestern Victoria Island NU Site 37 - Queen Maud Gulf NU Site 38 – Middle Back River NU Site 39 – Lower Back River NU Site 40 - Thelon River NU Site 41 – Middle Quoich River NU Site 42 - McConnell River NU Site 43 - Boas River NU Site 44 – East Bay NU Site 45 - Coats Island NU Site 46 - Fraser Island NU Site 47 – Digges Sound NU Site 48 – Markham Bay NU Site 49 - Hantzsch Island NU Site 50 – Akpatok Island NU Site 51 – Ungava Bay Archipelagoes NU Site 52 – Koktac River Archipelago NU Site 53 - Sleeper Islands NU Site 54 – North Belcher Islands NU Site 55 – Salikuit Islands NU Site 56 - Twin Islands NU Site 57 – Northeast James Bay NU Site 58 – Akimiski Island NU Site 59 – Boatswain Bay

NU Site 60 – Hannah Bay

Location: 77°20'N, 79°15'W

Size: 14 km²

Description: The Inglefield Mountains are located north and south of Makinson Inlet on southeastern Ellesmere Island, 130 km east of Grise Fiord. Much of the area is covered by upland ice fields and has a maximum elevation of 1500 m. Rock outcrops (nunataks) are found among the ice fields, and rock cliffs border the coastal areas. Most of this area is underlain by metamorphic and granitic rocks of the Canadian Shield (Frisch and Morgan 1979; de Kemp 1999).

The nearshore marine region is ice covered much of the year, but the North Water Polynya is located off the east coast of Ellesmere Island and provides open water through most of the winter (Smith and Rigby 1981).

Biological value: The nunataks of this area supported 730–830 adult Ivory Gulls in the 1980s, up to 35% of the national breeding population (Thomas and MacDonald 1987). The colonies known at that time ranged in size from 12 to 300 birds. All colonies were located inland among the highest reaches of the nunataks and are usually associated with granitic gneiss and migmatic, undifferentiated plutonic, and volcanic rocks (Thomas and MacDonald 1987). Surveys of these colonies in 2002–2005 discovered some new, small colonies in the region (generally <6 birds), but documented a dramatic overall decline in colony occupation, with fewer than 200 birds at 13 sites (some sites contained more than one colony) in any of these years; the largest colony supported 120 adults (Gilchrist and Mallory 2005).

The Ivory Gull is a rare bird in Canada (Alvo and MacDonald 1996). In July 2005, the Birds Subcommittee of COSEWIC reviewed the most recent data and agreed that the designation of the Ivory Gull should be upgraded from Special Concern to Endangered.

Sensitivities: Ivory Gull colonies may be susceptible to disturbance during the breeding season. Aircraft or human interferences could seriously jeopardize their breeding success. Pollution in the waters off eastern Ellesmere Island in the North Water Polynya, where the birds likely feed, could have serious negative impacts.

Potential conflicts: Hydrocarbon exploration has been proposed for western Baffin Bay (DIAND 1982). If conducted, exploratory drilling could subject feeding areas used by the Ivory Gulls to disturbance and pollution.

Status: None.



NU Site 2 – Sydkap Ice Field

Location: 76°23'N, 85°06'W

Size: 1 km²

Description: This site, located on southern Ellesmere Island approximately 50 km west of Grise Fiord, is at the southern edge of the Sydkap ice field. All of the surrounding area is ice cap, except for a narrow tongue of exposed land that starts at the site and extends to the south (Thomas and MacDonald 1987). The site lies in a band of Cambrian and Ordovician sandstone, limestone, and dolomite (de Kemp 1999). The shore of South Cape Fiord is 5 km to the northeast.

Landfast ice along this coast may persist well into July (M.L. Mallory, pers. obs.), and the open water may be distant in many years, available between August and October.

Biological value: About 300 Ivory Gulls have bred on the small, limestone plateau that comprises this site (Thomas and MacDonald 1987). This represented nearly 12% of the known Canadian breeding population at that time. However, surveys in 2002 and 2003 have yielded no observations of gulls and no evidence of recent nesting (Gilchrist and Mallory 2005). Ivory Gulls may occupy certain colonies intermittently (Volkov and de Korte 1996), particularly those on flat plateaus. Ivory Gull numbers have declined in Canada since the 1980s, and further surveys are required to determine whether this colony has been completely extirpated or whether occupation is variable, perhaps at lower numbers than in the past.

The Ivory Gull is a rare bird in Canada (Alvo and MacDonald 1996). In July 2005, the Birds Subcommittee of COSEWIC reviewed the most recent data and agreed that the designation of the Ivory Gull should be upgraded from Special Concern to Endangered.

Sensitivities: Ivory Gull colonies may be susceptible to disturbance during the breeding season. Aircraft or human interferences could seriously jeopardize their breeding success. Pollution in the polynyas around southern Ellesmere Island, where the birds likely feed, could have serious negative impacts.

Potential conflicts: None.

Status: None.



Location: 76°30'N, 89°40'W

Size: 25 km²

Description: This site includes North Kent Island and Calf Island. North Kent Island lies between the Colin Archer Peninsula on northwest Devon Island and the Simmons Peninsula on southwest Ellesmere Island. This island is flat-topped with a small ice cap, with cliffs surrounding the island (except in the north) and rising steeply to 600 m above sea level. Calf Island is a much smaller flat-topped island surrounded by cliffs and located 5 km southeast of North Kent Island. Both islands are made up of Paleozoic sandstone, limestone, and dolomite (de Kemp 1999).

The strong currents moving from Norwegian Bay to Jones Sound create the nearby Hell Gate – Cardigan Strait polynya, providing open water year-round (Smith and Rigby 1981). The marine area is described in Mallory and Fontaine (2004).

Biological value: Surveys have yielded substantially different estimates of local Black Guillemot populations in the area. Nettleship (1974, 1980) provided provisional estimates of approximately 8000 pairs distributed across North Kent and Calf islands. However, a survey in the early 1980s indicated roughly 1100 birds across these same sites (Alexander et al. 1991). In 2003, only 39 guillemots were observed at Calf Island (M.L. Mallory, unpubl. data). Hence, estimated populations of guillemots in this area represent between 0.5 and 8% of the Canadian population; clearly, refinement of population assessment methods is required. Black Guillemots are most abundant in the area between May and September, and some overwinter at the Hell Gate - Cardigan Strait polynya (Renaud and Bradstreet 1980). Sverdrup (1904) observed "myriads" of these birds in March.

Approximately 160 pairs of northern Common Eiders (*S. m. borealis*) were thought to nest on Calf Island in the early 1980s (Prach et al. 1986); 225 birds were observed in 2003 (M.L. Mallory, unpubl. data). Glaucous Gulls, Thayer's Gulls, and Arctic Terns also nest at these sites.

The area, particularly the polynya, supports many other marine species, including ringed seal, bearded seal, narwhal, beluga, polar bear, and walrus (Stirling and Cleator 1981; Riewe 1992).

Sensitivities: Seabirds are heavily dependent upon ice edge habitats for feeding and resting. Accordingly, they are sensitive to disturbance or pollution of these sites.

Potential conflicts: None.

Status: North Kent Island and Calf Island are an International Biological Programme Site (Site 2-10; Nettleship 1980), an Important Bird Area in Canada (NU053; IBA Canada 2004), and a Key Marine Habitat Site in Nunavut (Site 3; Mallory and Fontaine 2004).



Location: 76°48'N, 101°16'W

Size: 54 km²

Description: Seymour Island is located approximately 30 km north of Bathurst Island, in the Berkeley group of islands. It is less than 3 km long and rises only 28 m above sea level. Raised beaches occur over much of the island, and several freshwater ponds are present. The sparse vegetation cover consists primarily of mosses and lichens.

Polynyas form in nearby Penny Strait (Smith and Rigby 1981), providing open water access to wildlife breeding at Seymour Island. However, the island remains ice locked for much of the year; in mid-July 2002 and 2003, ice was solid from Helena Island to Seymour Island and beyond, with no leads formed within view (M.L. Mallory, pers. obs.).

Biological value: Seymour Island is Canada's largest known breeding colony of Ivory Gulls, which are rare birds in Canada (Alvo and MacDonald 1996). This site has supported more than 300 adult Ivory Gulls, with typically 100-125 pairs each year (Haney and MacDonald 1995), about 10% of the known Canadian population. However, recent surveys have suggested that Ivory Gull numbers on the island may be lower than in earlier years (Mallory and Gilchrist 2003). The Sevmour Island birds may represent 40% of the surviving Canadian population of this rare species (Gilchrist and Mallory 2005). Ivory Gulls occupy this site from the end of May to September (Thomas and MacDonald 1987). In July 2005, the Birds Subcommittee of COSEWIC reviewed the most recent data and agreed that the designation of the Ivory Gull should be upgraded from Special Concern to Endangered.

Sensitivities: Seabirds are sensitive to disturbance at their colonies and to the pollution of offshore waters.

Potential conflicts: The Sverdrup Basin has been explored for hydrocarbons and maintains potential as a future area of drilling. Oil spills associated with drilling or disturbance associated with exploration (ships or aircraft) could endanger seabirds and pollute their feeding areas.

Status: This key site is within the Seymour Island Migratory Bird Sanctuary that was established in 1975 and includes waters 3.2 km out from the high water line. Seymour Island is an International Biological Programme Site (Site 1-7; Nettleship 1980), an Important Bird Area in Canada (NU045; IBA Canada 2004), and a Key Marine Habitat Site in Nunavut (Site 2; Mallory and Fontaine 2004).



Location: 76°18'N, 97°30'W

Size: 7 km²

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. None of the islands exceeds 3 m above sea level.

Middle Cheyne Island is covered in vegetation (mostly mosses) and supports several small freshwater ponds, while North Cheyne Island is nearly devoid of vegetation, and South Cheyne Island has well-developed mosses around the central freshwater pond.

Several small polynyas develop in May or June along the eastern side of Penny Strait (Smith and Rigby 1981). The marine region of Penny Strait and Queens Channel is described in Mallory and Fontaine (2004).

Biological value: The Cheyne Islands supported the largest known nesting population of Ross's Gull in the Canadian Arctic. Ross's Gull is listed as threatened by COSEWIC. In 1976, three pairs nested on the islands, and in 1978, six pairs were noted among approximately 20 birds that were present (Macey 1981). The latter count represents approximately 60% of the Canadian population (although very few nests have been found in Canada). However, no birds were observed in July 2002 or 2003 (Mallory and Gilchrist 2003), suggesting that annual use of the site varies, perhaps in relation to annual ice conditions. In 2005, five pairs of Ross's Gull were found nesting on an island about 80 km south of the Cheyne Islands, indicating that the species still nests in this area (M.L. Mallory, unpubl. data). Approximately 900 Arctic Terns were also observed on the three islands (Mallory and Gilchrist 2003).

Northern Common Eiders (*S. m. borealis*) nest on the Cheyne Islands; 164 nests were found in 2002, with lower numbers in 2003 during a heavier ice year (Mallory and Gilchrist 2003).

Queens Channel is also an important region for walrus, bearded seal, ringed seal, and polar bear. All of these species may overwinter near the polynyas (Riewe 1992).

Sensitivities: Concentrations of marine birds are sensitive to disturbances and the degradation of their marine habitats.

Potential conflicts: None.

Status: The Cheyne Islands are an Important Bird Area in Canada (NU051; IBA Canada 2004) and a Key Marine Habitat Site in Nunavut (Site 4; Mallory and Fontaine 2004). However, their future status as a key site will depend on surveys to determine whether Ross's Gulls return to these islands, as other birds breeding here represent <1% of their respective Canadian populations.



Location: 75°43'N, 98°40'W

Size: 2664 km²

Description: Polar Bear Pass bisects central Bathurst Island, between Bracebridge and Goodsir inlets. It is a well-vegetated lowland surrounded by polar desert of the high Arctic. Vegetation consists of lichens interspersed with mosses, grasses, sedges, and flowering plants. Frost mounds and low- and high-centred polygons are widespread. Vegetated stream valleys, tundra ponds, and lakes are numerous. The hills north of Polar Bear Pass are of Ordovician to Devonian origin and consist mainly of limestone and shales (Blake 1964). Higher elevations are almost devoid of vegetation.

Several archeological sites of the Thule culture are found within the site. The Canadian Museum of Nature operated an ecological research station from the 1960s through the 1980s.

Biological value: Polar Bear Pass is a relatively large and isolated wetland surrounded by sparsely vegetated, rolling uplands. It is an area of exceptional biodiversity, considering its high Arctic location. Fifty-four species of birds have been recorded at the site, 30 of which are known to breed (S.D. MacDonald, pers. commun.). Representative species include King Eider, Greater Snow Goose, Thayer's Gull, Parasitic, Long-tailed, and Pomarine jaegers, Red Phalarope, White-rumped Sandpiper, Sanderling, and Black-bellied Plover. The abundance of all birds is highly variable between years (Mayfield 1983).

There are no population estimates for the birds of Polar Bear Pass. Density estimates, now nearly 30 years old, indicate that sedge/moss meadows held 8.0 White-rumped Sandpipers/km², 7.0 Red Phalaropes/km², and 1.25 Blackbellied Plovers/km² (Mayfield 1983).

Lemmings, arctic fox, muskoxen, and Peary caribou are the most abundant of eight mammal species found on the site (Nettleship and Smith 1975). In spring and summer, polar bears regularly pass through the area en route between Goodsir Inlet and 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 haul out at 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 is sensitive to disturbance. Pollution of offshore waters would result in the degradation of marine habitats.

Potential conflicts: An area immediately to the northeast on Bathurst Island has high mineral potential.

Status: This key site lies entirely within the Polar Bear Pass National Wildlife Area, created in 1986. Polar Bear Pass is also a Ramsar site (Wetland of International Importance) (Ramsar 2005) and an International Biological Programme



Site (Site 1-2; Nettleship and Smith 1975). There is a proposal to create a National Park immediately north of this key site.

NU Site 7 - Baillie-Hamilton Island

Location: 75°45'N, 94°17'W

Size: 2.5 km²

Description: Baillie-Hamilton Island is located 15 km north of Cornwallis Island, in the middle of Queens Channel. The island is flat-topped, and the cliffs reach 215 m above sea level on the southeastern corner at Washington Point. The entire island consists of Cambrian, Silurian, and Devonian sandstone, limestone, and dolomite (Thorsteinsson 1973; de Kemp 1999).

Water flows south from Penny Strait through Queens Channel and Wellington Channel to Lancaster Sound. A series of recurrent polynyas form in the Penny Strait/Queens Channel area (Smith and Rigby 1981). The marine environment of Queens Channel is described in Mallory and Fontaine (2004).

Biological value: Approximately 3000 pairs of Blacklegged Kittiwakes, representing nearly 1.5% of the Canadian population, nest on the cliffs of southeastern Baillie-Hamilton Island at Washington Point (Nettleship 1980). A survey of the site in 2003 yielded an estimate of approximately 2500 birds (M.L. Mallory, unpubl. data). This is one of Canada's northernmost kittiwake colonies (Nettleship 1980). Kittiwakes arrive at the nesting cliffs about mid-May and leave by early October.

Substantial numbers of northern Common Eiders (*S. m. borealis*) and King Eiders use the polynyas near the island during migration (Davis et al. 1974). Glaucous Gulls breed here, and a few Black Guillemots may overwinter in the polynyas and nest at the site; 15 were seen north of Dundas Island in April 1977 (Renaud and Bradstreet 1980).

Queens Channel is also an important region for walrus, bearded seal, ringed seal, and polar bear. All of these species may overwinter near the polynyas (Riewe 1992).

Sensitivities: Concentrations of marine birds are sensitive to disturbances and the degradation of their marine habitats.

Potential conflicts: None.

Status: Washington Point is an International Biological Programme Site (Site 1-10; Nettleship 1980), an Important Bird Area in Canada (NU049; IBA Canada 2004), and part of Key Marine Habitat Site 4 in Nunavut (Mallory and Fontaine 2004).

