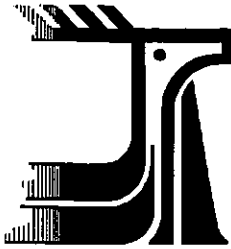


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STATUS OF ENDANGERED
WILDLIFE IN CANADA

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COMITÉ SUR LE STATUT
DES ESPÈCES MENACÉES
DE DISPARITION AU
CANADA

OTTAWA (ONT.) K1A 0H3
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UPDATED STATUS REPORT ON THE ROSS' GULL
RHODOSTETHIA ROSEA

IN CANADA

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88
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1996

BY



ROBERT ALVO

DOUG MCRAE

STEWART HOLOHAN

AND

GEORGE DIVOKY



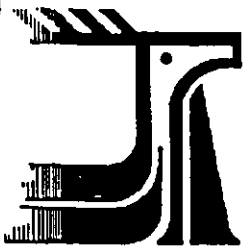
STATUS ASSIGNED IN 1996
VULNERABLE

REASON: VERY SMALL POPULATION WITH LOW PRODUCTIVITY.

OCCURRENCE: MANITOBA AND NORTHWEST TERRITORIES.

COSEWIC - A committee of representatives from federal, provincial and private agencies which assigns national status to species at risk in Canada.

CSEMDC - Un comité de représentants d'organismes fédéraux, provinciaux et privés qui attribue un statut national aux espèces canadiennes en péril.



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JUNE 1994

NOTES

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DEFINITIONS

SPECIES:	"Species" means an indigenous species, subspecies, variety or geographically defined population of wild fauna and flora.
VULNERABLE: (V)	A species of special concern because of characteristics that make it particularly sensitive to human activities or natural events.
THREATENED: (T)	A species likely to become endangered if limiting factors are not reversed.
ENDANGERED: (E)	A species facing imminent extirpation or extinction.
EXTIRPATED: (XT)	A species no longer existing in the wild in Canada, but occurring elsewhere.
EXTINCT: (X)	A species that no longer exists.
NOT AT RISK: (NAR)	A species that has been evaluated and found to be not at risk.
INDETERMINATE: (I)	A species for which there is insufficient scientific information to support status designation.

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**UPDATED STATUS REPORT ON THE ROSS' GULL
*RHODOSTETHIA ROSEA***

IN CANADA

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**STATUS ASSIGNED IN 1996
VULNERABLE**

Population Size and Trend

The Ross' Gull (*Rhodostethia rosea*) has been listed as "vulnerable" in Canada since 1981 (Macey 1981). The following information was available at that time:

- Only two Canadian breeding localities had been published, one in the high Arctic (Cheyne Islands (76°18'N 97°30'W) in Penny Strait, Northwest Territories) (MacDonald 1978) and one in the Hudson Bay Lowland (Churchill, Manitoba (58°47'N 94°12'W)) (Chartier and Cooke 1980).
- A historical third locality (Meighen Island (79°55'N 99°30'W)) had been reported (Stefansson 1921 (cited by Macey 1981)), but the eggs submitted to the Canadian National Museum of Natural Sciences (now the Canadian Museum of Nature) to support that record were later found by Taverner (1933 (cited by Macey 1981)) to be Ivory Gull (*Pagophila eburnea*) eggs. The eggs were re-verified in 1995 by Michel Gosselin at the Museum. This erroneous record by Stefansson (1921) has subsequently reappeared in Dementiev and Gladkov (1951). The Museum's Catalogue Number assigned to the eggs is "E1608", not "E1008" as stated by Macey (1981) (Michel Gosselin, pers. comm.).
- Ivory Gulls have subsequently been found nesting close to Meighen Island, at Perley Island (80°11'N 99°15'W), while Ross' Gulls have not (MacDonald, 1978).
- The existence of the above two breeding localities, specimens in breeding condition taken on Seymour Island (76°47'N 101°17'W) (near Bathurst Island) by MacDonald in 1974 and 1975 (Macey 1981), earlier sight records from various areas in the Arctic Archipelago (Godfrey 1986), and a specimen with shelled eggs in its oviduct and sight records at the McConnell River (61°N 95°W) (C.D. MacInnes, pers. comm.) all suggested that a small, widely distributed population may have always existed in Canada. However, it was not possible to estimate population numbers (Macey 1981).
- The Canadian population was considered to have probably always been small. However, because there was no evidence to suggest that a change in status had occurred in the Canadian population, the Ross' Gull was not considered to be in immediate danger in Canada (Macey 1981).
- The Russian population was thought to be fairly stable at about 10,000 sexually mature birds, and the species was considered common on its main nesting grounds in the Kolyma - Indigirka Lowland in Russia (Borodin et al.,

1978 (cited in Macey 1981)).

- Macey (1981) stated that, "Observations at Point Barrow [Alaska] in the fall suggest numbers are decreasing". However, newer information indicates that no decrease is evident from historical numbers (1800s) or during the period from 1970 to the present (Divoky et al. 1988).

Quite a bit of new information has been obtained since the first COSEWIC report (Macey 1981), much of it published in Russian.

The species appears to have nested annually or almost annually at Churchill from 1980 to 1994, and the known breeding population has varied between 1 and 5 pairs (observations by Doug McRae, Bonnie Chartier, Stewart Holohan and Rudolf Koes, including observations reported to them by others). The maximum number of known nests in any year was five in 1982 (Doug McRae, pers. comm.). Some locations may be kept secret in order to avoid disturbance (Rudolf Koes, pers. comm.).

Breeding success has been fairly low, with Arctic Fox (Alopex lagopus), weasels and bad weather probably being partly to blame (Rudolf Koes, pers. comm.) In 1981 one nest containing an unknown number of eggs was robbed by an egg collector, who took not only the contents but the nest and the hummock it was built on, cut away from the ground with a spade. The egg(s) were estimated to have been worth \$10,000 to \$20,000 on the black market (Neil 1981). In 1984, the marsh breeding site was flooded by Manitoba Hydro with the result that when six of the birds returned, all previous nesting sites were under water; four birds disappeared and one pair nested elsewhere, raising one young (Gollop 1984). In 1992 a nest was abandoned because of a photographer's presence next to the nest. However, low breeding success is typical for this species (Andreev and Kondrate'ev 1981; Ilicev et al. 1989; Densley 1991).

Charlie MacInnes (Ontario Ministry of Natural Resources) worked on geese at the McConnell River. He has 12 years of good records: 1959-1960, and 1964-1973. Yet the 1965 specimen and the 1973 observation of two individuals on June 2 were his only records of Ross' Gull in the area for 12 years (Charlie MacInnes, pers. comm.). Vagrancy of birds in breeding plumage during the breeding period should not be considered rare. On Cooper Island, 30 km east of Point Barrow, Divoky (pers. comm.) saw Ross' Gulls in three of twenty years -- all were in breeding plumage, including on one occasion a pair.

There may have been more than one bird at McConnell River in 1965. C.D. MacInnes wrote in a letter dated December 13, 1994 to R. Alvo:

"There may well have been more than one bird in 1965. Bernie Lief and I saw one in early afternoon (13:10 CDST), over 3 km from our

base camp, among 50 - 100 Sabine's Gull. The individual collected was seen after 17:30, about 100 m from the base camp. There is no sure proof of whether 1 or 2 birds were involved."

One adult was seen at Moosonee, Ontario on May 14-23, 1983 -- its moult had virtually completed to alternate plumage. The bird appears to have migrated in spring into the region from the south with Bonaparte's Gulls. It was presumed to be a northbound migrant out of suitable breeding range/habitat (Abraham 1984).

An adult Ross's Gull of unknown sex was taken on 14 June 1985 at Arctic Bay (73°01'N 85°07'W), Baffin Island, by Glen Williams (Canadian Museum of Nature Cat. No. 86167, Michel Gosselin, pers. comm.).

Two adults were seen at La Pérouse Bay (40 km e. of Churchill) flying inland from Hudson Bay, June 10, 1984 (John D. Reynolds, pers. comm.).

One sub-adult was seen by Derek Jackson and Graham Sandy on June 28, 1994 (per Stewart Holohan).

The number of sightings of Ross's Gull south of its breeding range in North America has increased considerably during the 1980s. It is not known whether this is due to a real increase in the number of birds south of the breeding range or whether it is merely a consequence of an increase in the number and effort of observers (Bledsoe and Sibley 1985). However, it is known that the species is being recorded with increasing frequency at traditional birding sites in the British Isles.

A young of the year Ross' Gull was observed in Colorado following the 1982 breeding season, when no birds fledged from the nests under observation at Churchill. It is not known where the bird hatched.

The Ross' Gull population in Alaskan waters in September - October is at least 20,000 (Divoky et al., 1988), and the eastern movement at Point Barrow (71 20'N, 156 00'W) in 1984 was estimated at a minimum of 15,000. A maximum flock of 4,300 individuals was observed feeding at Point Barrow on September 29, 1976 (Kessel and Gibson 1978). The pelagic population at the pack ice edge in the Chukchi Sea in 1970 was estimated between 20,700 and 38,000 (Divoky 1988). Fall Alaskan populations would not include the few birds that summer in the eastern Arctic (Meltofte et al. 1981) or those that move east from the Siberian breeding grounds and eventually end up in northwestern Europe (Cramp and Simmons 1983). The world population was underestimated by Bannikow and Flint (1978) at 10,000, and recent censuses of Siberian breeding grounds indicate that the population may be up to 50,000 individuals (Degtyaryev

1991).

Population trends are not known with great precision for the Ross' Gull, but the magnitude of migration at Point Barrow in 1984 (Divoky et al. 1988) indicates that numbers are probably not unlike those encountered in the late 1800s by Murdoch (1899).

Beginning about mid-September, Ross' Gulls move eastward from the Soviet Chukchi Sea to the region of Point Barrow, and then into the Beaufort Sea in late September or early October. There is a return movement into the Chukchi Sea in mid- to late October. After returning from the Beaufort Sea, the birds stay at the Chukchi ice edge, apparently moving into the Bering Sea as the Chukchi Sea freezes over in November (Divoky et al. 1988). This finding that a return western movement occurs has gone a long way toward solving the age old puzzle of where the species winters -- it was generally assumed that the Arctic Ocean was a major wintering ground, although Murdoch (1885, cited in Densley (1977)) suggested that the September and October birds might retrace their route westwards after encountering the edge of the permanent pack ice north of the Alaskan coast.

The remoteness of both the breeding and wintering grounds and the annual variation in the timing and location of the fall migration make regular monitoring of the population difficult. Monitoring the September - October passage at Point Barrow would provide the best minimum population estimates given the dispersed nature of the population on the breeding grounds (Divoky et al. 1988). The productivity of the population could also be monitored by observing the frequency of age classes at Point Barrow.

Habitat

In Canada Ross' Gulls have nested in both the high Arctic and in the Hudson Bay Lowland. Widely varying habitats have been used for nesting, from marshy tundra to gravel reefs. In their normal Russian breeding range, the principal habitat is shrub and tussock tundra with low trees, sedge meadows and numerous ponds (Densley 1991).

The habitat used at Churchill is very similar to the Kolyma lowland habitat used for nesting (S. Holohan, pers. comm.). It consists of hummocks supporting grasses, lichens and dwarf willows (*Salix* sp.), lower areas with grasses and sedges, small pools, and some shallow lakes (Chartier and Cooke 1980). There appears to be much potential habitat for the Ross' Gull in the Hudson Bay Lowland; one way to check for them would be to check Arctic Tern colonies, as they often nest in association with this species (Densley 1991).

On the Cheyne Islands, NWT, Ross' Gulls nested on 3 reefs each about 400 m long and about 1 m high (S.D. MacDonald 1978). A nearby polynya attracts the birds when it opens up in late spring. The

reefs were checked for several years, and up to 7 pairs of gulls were found in one year. However, there was much predation. The young often hatched, but disappeared -- Glaucous Gulls were the suspected culprits (S.D. MacDonald, pers. comm.). Gulls and jaegers are also major predators in Russian colonies, where fledging success is normally very low (Densley 1991). The Cheyne Islands site was visited again in 1986, but no Ross' Gulls were observed (Theresa Aniskowicz, pers. comm.).

The highly concentrated nature of the Ross' Gull's migration in September - October at Point Barrow makes it very vulnerable to any pollution event that could change prey availability.

During fall migration, Ross' Gulls have a distinct preference for feeding in loose ice at the edge of Arctic pack ice. In the Chukchi Sea in September and October, densities and occurrences were highest in areas with 20% ice coverage, whereas in the Beaufort Sea densities were similar in ice and open water areas (Divoky 1988).

In the nearshore they are concentrated within 400 m of shorelines, where invertebrate populations at the surface are apparently highest (Divoky, unpublished data). The overland portion of spring migration occurs in river valleys (Ilicev et al. 1989).

If the main wintering area is in the Bering Sea including the Gulf of Anadyr to as far south as the Sea of Okhotsk (Divoky 1988; Brazil 1991; Ilicev et al. 1989), then the gulls probably occur along the loose pack ice similar to that encountered during the autumn migration in the Chukchi Sea. However, all the ice in the wintering area would be first-year ice thus providing different feeding opportunities (Divoky et al. 1988).

Of the two known Canadian breeding locations for Ross' Gulls, only Churchill has protected status, but the other site is even more protected in fact by its almost impossible to reach location. The Manitoba Department of Natural Resources designated a large area around Churchill as the "Churchill Special Conservation Area". The designation could be eliminated at a later date. The area includes all the areas where the Ross' Gull has nested at Churchill. The designation allows for a ministerial order that would restrict public access to particular parts of the Area, such as nest sites. It was designated under the Manitoba Wildlife Act (Ron Larche, pers. comm.). Unfortunately, "although most visitors to the area, including tour groups, appear to not unduly harass the birds, this can not be said for all observers. Most problematic are the photographers, who seem to disregard the birding code of ethics by disturbing the nesting area(s). It should also be noted that the area (i.e. Akudlik Marsh) is poorly posted." (Rudolf Koes, pers. comm.). Approaching nests closer than 50 m is probably undesirable (Densley 1991). However, in Russia, Ross' Gulls nest successfully beside hunting camps (S. Holohan, pers. obs.).

Evaluation and Proposed Status

We feel that there is considerable evidence to suggest that there are other breeding locations in Canada that have not yet been discovered, both in the high Arctic and in the Hudson Bay Lowland. However, it seems clear that the Canadian population is quite small. Data from Point Barrow suggest that there has been little change in population numbers since the end of the 1800s (Divoky et al. 1988). Indeed, there is little to indicate that the population should have decreased -- for example, little seems to have changed so far in its breeding, migration or wintering habitats. The substantially higher global population recently estimated for the species (Degtyaryev 1991) is probably the result of more accurate surveys now being done on the Russian nesting grounds (Densley 1991).

There is no immediate threat to the tiny Canadian population. In the past, unfortunately, a number of birds were shot for museum specimens. Also, there is probably a black market for the eggs and even live birds (Whelan 1981; Anonymous 1994; M. Densley, pers. comm.).

Exploratory oil drilling has occurred in the late 1980s and early 1990s in the northern Chukchi and western Beaufort Seas, where birds congregate in the autumn. Other areas used at this time by Ross' Gulls have been leased for oil drilling. The concentrated nature of the population during September - October makes the species vulnerable to any pollution event that could change prey availability (Divoky 1988). However, it should be noted that no gull species show major impacts from oil spills because they can avoid the slicks and because they do not pass through the slick the way diving birds do (King and Sanger 1979). Ross' Gulls forage on or just below the surface of the ice or water by four main methods: contact-dipping; hovering; surface-plunging, in which they immerse only the breast and part of the head; and, surface-feeding, by riding on the water surface and taking food from the immediate water surface (Densley 1979).

Breeding success has been low on both known Canadian sites, but this appears to be typical for this species (Andreev and Kondrat'ev 1981; Densley 1988).

The data provided in this report strongly suggest that the Ross' Gull population in Canada is stable or increasing as indicated by the increase in non-breeding season reports in North America. Because of its small numbers, it could be seriously affected by illegal egg collecting or an environmental disaster in areas that it uses in any season. We therefore recommend a continued "vulnerable" status in Canada. The species is neither "threatened" nor "endangered" in Canada because there is nothing to suggest that it is in decline.

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Acknowledgements

Funding for this report was provided by the Canadian Wildlife Service. We thank the following people for providing information on the status of the Ross's Gull in their jurisdiction:

Newfoundland: Joe Brazil, Troy Wellicome.

PEI: Rosemary Curley.

Nova Scotia: Sherman Boates, David Nettleship.

New Brunswick: Pat Kehoe, Rod Cumberland, Bruce Johnson.

Quebec: Yves Aubry, Jacques Larivée, Michel Huot, Pierre Laporte, Guy Jolicoeur.

Ontario: Ross James, Irene Bowman, George van Drunen, Paul Prevett, Richard Pratt.

Manitoba: Bob Nero, Peter Taylor, Bob Jones, Jim Duncan.

Saskatchewan: Jeff Keith, Dale Hjertaas, Al Smith.

Alberta: Roger Edwards, Bill Hall.

BC: Bill Harper, Gary Kaiser, Syd Cannings.

NWT: Chris Shank, Bob Bromleym, Charlie MacInnes.

Yukon: David Mossop.

Others who provided information were: Colleen Hyslop, Barry Hughson, Theresa Aniskowicz, Sarah Climenhaga, Erica Dunn, A.H. Bledsoe, Fred Cooke, Stewart MacDonald, Tony Erskine, Michel Gosselin, Rudolf Koes, Michael Densley, Charlie MacInnes, Joe Jehl.