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Ross's Gulls (*Rhodostethia rosea*) Breeding in Greenland: A Review, with Special Emphasis on Records from 1979 to 2007

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ABSTRACT. This review summarizes breeding records of Ross's gull in Greenland with special emphasis on the period between 1979 and 2007. The review comprises both previously published records (including some published only in Danish) and unpublished reports and breeding records from 2004 and 2006. The majority of the Greenland breeding records fall into two geographically isolated areas that differ in habitat and climate: the Disko Bay area in West Greenland and the Northeast Water Polynya in Northeast Greenland. Despite the fact that antagonistic interactions with arctic terns are common, Ross's gulls show a nest site preference for the edge of tern colonies, suggesting breeding association between these species. A general increase in breeding records in Greenland since 1978 is most likely the result of increased ornithological effort. Successful breeding has not yet been confirmed, and a Ross's gull fledgling remains to be seen in Greenland. The Greenland breeding records suggest an opportunistic strategy in choice of breeding site among vagrant and possibly first-time breeders.

Key words: Ross's gull, *Rhodostethia rosea*, Arctic, Greenland, arctic tern, *Sterna paradisaea*, breeding association

RÉSUMÉ. Nous présentons ici un résumé des enregistrements de reproduction de la mouette rosée au Groenland, plus particulièrement pendant la période s'échelonnant entre 1979 et 2007. Cela comprend des enregistrements déjà publiés (dont certains n'ont été publiés qu'en danois) de même que des rapports inédits et des enregistrements de reproduction pour la période allant de 2004 à 2006. La majorité des enregistrements de reproduction du Groenland touchent des régions géographiquement isolées dont l'habitat et le climat diffèrent : la région de la baie Disko dans l'ouest du Groenland et la région Northeast Water Polynya dans le nord-est du Groenland. Même si des interactions antagonistes avec la sterne arctique s'avèrent courantes, la mouette rosée préfère que son nid se situe en bordure des colonies de sternes, ce qui laisse croire qu'il y a une association de reproduction entre ces espèces. Depuis 1978, l'augmentation générale des enregistrements de reproduction au Groenland est fort probablement attribuable aux efforts ornithologiques plus intenses qui ont été déployés. Toujours rien ne permet de confirmer si la reproduction est réussie, et aucune mouette rosée en bas âge n'a été repérée au Groenland. Les enregistrements de reproduction du Groenland laissent présumer l'existence d'une stratégie opportuniste en ce qui a trait au choix de lieu de reproduction chez les reproducteurs vagabonds et peut-être même chez les reproducteurs qui en sont à leur première fois.

Mots clés : mouette rosée, *Rhodostethia rosea*, Arctique, Groenland, sterne arctique, *Sterna paradisaea*, association de reproduction

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INTRODUCTION

Among Arctic explorers and naturalists, Ross's gull (*Rhodostethia rosea*) since the earliest records has been surrounded by a mythic glow. Although our knowledge of the species has notably improved, a Ross's gull sighting is still one of the most prized among modern birdwatchers.

Sir James Clark Ross first described the species from Arctic Canada in 1823, but an earlier specimen had been collected in West Greenland in 1813 and catalogued in the Hofmuseum of Vienna under the name *Larus collaris* (Hjort, 1985). In 1905, after almost a century of speculation on the location of the species' breeding grounds, S.A. Buturlin discovered the core distribution area in Northeast Siberia (Blomqvist and Elander, 1981; Densley, 1999). There, he found Ross's gulls in small, loose colonies, with nests placed in tussocks on islands and at ponds in the Siberian "waterscapes" both within and beyond the tree line (Densley, 1991, 1999). A combination of remote and inaccessible areas and secretive behaviour at the breeding site makes it difficult to obtain reliable population estimates, but the total world population of Ross's gull is not high. An aerial survey estimated the total Russian population of breeding Ross's gulls between 45 000 and 55 000 individuals (Degtyarev, 1991).

Non-breeding Ross's gulls occur in irregular numbers in most of the Arctic seas as far north as 87° N during late summer and autumn. Particularly high numbers have been

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observed at sea in the area from north of Franz Josef Land and Svalbard to Northeast Greenland (Meltofte et al., 1981; Falk et al., 1997; Hjort et al., 1997). From August to early October, several thousand individuals migrate east off Point Barrow, Alaska, while numbers of the same magnitude are seen migrating in the opposite direction during October–November (Blomqvist and Elander, 1981; Divoky et al., 1988; Densley, 1999). Wintering areas are largely unknown, but presumably the ice-free areas along the Chukchi Peninsula in the Bering Sea hold the majority of the Siberian population (Densley, 1999).

Beyond Siberia, very few confirmed breeding sites are known. Apart from the Greenland records, Ross's gulls have been found breeding at three sites in Arctic Canada: two in Penny Strait (~76.5° N) and one at Prince Charles Island (~68° N) (Macdonald, 1978; Béchet et al., 2000; Mallory et al., 2006). Furthermore, the species has been a regular, annual visitor at Churchill, Manitoba, Canada (~54° N) since 1978, with several breeding records during the period from 1978 to 2005 (Densley, 1999; R. Franken and M. Mallory, unpubl. data). At Svalbard, breeding has still not been confirmed with certainty, but a record from 1955 at Isfjorden, West Spitsbergen (~78° N) probably involved a breeding Ross's gull (Løvenskiold, 1963). The sighting of three adult birds (one pair plus one single bird) north of Spitsbergen (around Moffen, ~80° N) on 1 July 1997 may also have involved breeding birds (Densley, 1999).

Like the other two true Arctic gull species, Sabine's gull (*Xema sabini*) and to a lesser degree ivory gull (*Pagophila eburnea*), Ross's gull shows a strong preference for nesting in the vicinity of arctic tern (*Sterna paradisaea*) colonies in Greenland. This inter-specific breeding association is documented at the core Siberian breeding area (Densley, 1999) and at other breeding sites outside the main area of distribution (e.g., Kampp and Kristensen, 1980; Béchet et al., 2000; Mallory et al., 2006).

In Canada, a recovery strategy has recently focused on Ross's gull, and the species is now treated as a scarce, but annual breeder that occurs consistently at predicted sites in the Canadian Arctic (R. Franken and M. Mallory, unpubl. data). This current review of the Greenland breeding records identifies two sites where breeding has occurred regularly since 1980, suggesting that Ross's gull could be given similar status under Greenland management.

GREENLAND BREEDING RECORDS

A previous review of the breeding records of Ross's gull in Greenland up until 1980 was published by Kampp and Kristensen (1980); thus, this current review will not deal with those records in detail. Here, we focus on the confirmed and likely breeding records from Greenland in the period 1979 to 2007, with special emphasis on unpublished observations from Disko Bay in 2004 and 2006.

Disko Bay Area

The southern part of Disko Bay in central West Greenland (Fig. 1) is in many ways the "cradle" of the first scientific knowledge of Ross's gull and holds the most and the earliest records of Ross's gull in Greenland. It was off the settlement of Qeqertarsuaq that the world's first specimen was collected in 1813 (Hjort, 1985) and the first breeding record was also discovered in this region by a Greenlandic hunter from Qasigiannguit in 1880 (Fig. 1). In 1885, a pair of Ross's gulls was found breeding at a site near the settlement of Ikamiut, and in 1979, almost a century later, a pair was found at one of the islands at Kitsissunnguit (Kampp and Kristensen, 1980). These latter three breeding records are all within 30 km of Kitsissunnguit, and they probably all originate from this archipelago, the most important site in Greenland for breeding Ross's gulls.

Kitsissunnguit (Grønne Ejland)

Ornithologists have occasionally visited Kitsissunnguit for short periods since 1946. However, longer periods (10–60 days) of ornithological fieldwork were first conducted on the islands in 1996 and continued in 2002–06. Located in the southern part of Disko Bay (68.85° N, 52.00° W), this archipelago includes four larger islands, along with many islets and skerries. The shores are low and generally rocky, with a few pocket beaches, salt marshes, and lagoons. The islands' interiors are dominated by extensive dwarf scrub heaths (especially *Empetrum nigrum*), with more lush vegetation (mainly cotton weed *Eriophorum* spp.) around the numerous small ponds. Kitsissunnguit supports the largest arctic tern colony in Greenland, with approximately 20000 breeding pairs, along with a high diversity of other breeding waterbirds (Egevang et al., 2004).

Kampp and Kristensen (1980) found a Ross's gull nest with a single egg on the easternmost island (Angissat) in the Kitsissunnguit archipelago on 13 June 1979. Revisiting the site 13 days later, they found no sign of the birds. The nest was placed directly on sand in the margin of a lagoon very close to the waterline (1 m) and close to an arctic tern nest (2 m). The gulls were observed in antagonistic encounters with the terns on several occasions, but the gulls did not initiate these. Kampp and Kristensen (1980) speculated that the nest had most likely been mistaken for a tern nest and the egg harvested by local Inuit, or alternatively, that it was flooded during high tide.

During fieldwork at Kitsissunnguit in 1996, Frich (1997) found four adult Ross's gulls occupying the same strip (within 100 m) of coast in the period 6–23 June. Although the birds seemed very faithful to the site and both courtship behaviour and a copulation attempt were observed, no direct evidence of breeding was found. This potential breeding site was not in an area with a high risk of flooding, but it was visited daily by local Inuit harvesting arctic tern eggs. Frich (1997) concluded that if the gulls

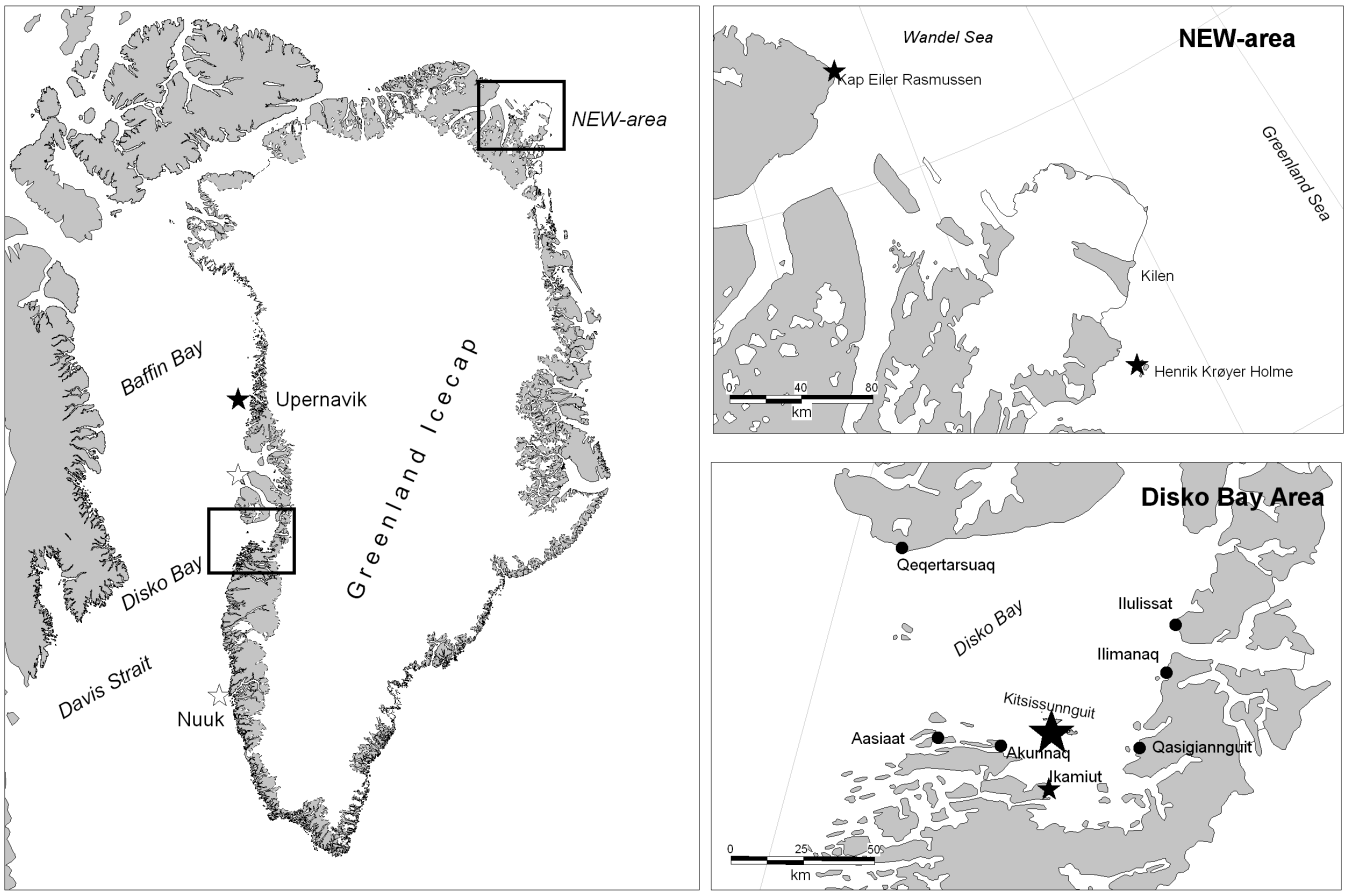

FIG. 1. Map of Greenland, showing the location of the two most important sites for Ross's gull breeding records, the Disko Bay area and the Northeast Water (NEW) polynya (left). The names of sites, towns, and settlements mentioned in the text are shown in the more detailed maps on the right. Dots (•) indicate towns and settlements. The large star (★) indicates a site with two to four confirmed breeding records; a small star (⋆), a site with one breeding record; and the open star (☆), a site with a likely, but unconfirmed breeding record.

had in fact been breeding that year, it was likely that their eggs had also been harvested, as in 1979.

In 2004, Kitsissunnguit was visited for a shorter period in June for arctic tern monitoring work. Again, a total of four adult Ross's gulls in perfect breeding plumage were seen between 24 and 28 June, and a single nest containing two eggs was found (L. Witting, pers. comm. 2004). The nest was placed on barren gravel in the narrow zone between the bare rocks of the coast and the vegetated interior of the island, where the terns nested. The eggs measured 42.98 × 30.48 mm and 41.85 × 30.44 mm, and on 28 June, when the field team left Kitsissunnguit, both eggs were pipped. The outcome of this breeding record and whether it involved one or two nests remains unknown. The gulls were observed interacting with arctic terns on several occasions both in antagonistic encounters and in a communal mobbing response to human presence. One bird would always be incubating while one, two, or sometimes three of the other adult birds would be on the ground nearby or involved in mobbing intruders.

In 2006, a total of four adults were observed simultaneously at Kitsissunnguit, but the total number present was likely six birds (C. Egevang, pers. obs.). Most observations were made on the same island where birds were observed in 2004, but at a different site. Between one and four birds were seen on several occasions between 17 June and 7 July at a small lake (approx. 5000 m^2) with high breeding densities of arctic tern and red-necked phalarope (*Phalaropus lobatus*), and smaller numbers of nesting red phalarope (*Phalaropus fulicarius*), long-tailed duck (*Clangula hyemalis*), mallard (*Anas platyrhynchos*), and red-breasted merganser (*Mergus serrator*). The gulls were mostly observed on the wing, either in pairs performing display flights or in antagonistic encounters with arctic terns. Usually when a Ross's gull rested on the ground, it would quickly be chased away by a nearby arctic tern. These interactions were usually initiated by the terns, as described by Kampp and Kristensen (1980), but on a few occasions (estimated 10–15%) we observed gulls initiating interactions. The Ross's gulls showed a strong response to the presence of humans, with alarm calls and flights close overhead. They were easily scared when on the ground and would flush at distances of less than 50 m. Although the moist, boggy area surrounding the lake resembled habitat described for the Siberian breeding grounds, the gulls did not nest in this particular area.

Instead, a nest was found 5.5 km east of this area on a small, exposed group of skerries. This nest was located in a small tussock of grass surrounded by bare rocks and small rock pools at the edges of a high-density arctic tern colony and approximately 10 m from the shoreline. When found on 28 June, the nest contained three chicks (estimated age: 2–6 days), but on the next visit (2 July), only one chick (the oldest) remained alive. The other two chicks lay dead in the nest (later included in the study skin collection at Copenhagen Zoological Museum, cat. no. 95.275, 95.276). The pair was alarmed by our presence at the nest site and spent a relatively long time circling in the air before returning to the nest, compared with the surrounding terns. A week later, on 8 July, there was no sign of the Ross's gull chick. The one adult bird seen briefly at the site made a very limited response to our presence, so the chick was presumed dead. A last visit to the skerries on 25 July brought no further observations of Ross's gull.

In early July 2007, a group of birdwatchers visited Kitsissunnguit for a period of four days, during which they had several observations of two adult Ross's gulls close to the 2004 breeding site. Although the birds were repeatedly observed within a small area, breeding could not be confirmed (S. Holst and P. Larsson, pers. comm. 2007).

Ornithological fieldwork was also conducted at Kitsissunnguit in 2002 (60 days), 2003 (30 days), and 2005 (45 days) without any sightings of Ross's gulls. Although a single pair could easily be overlooked among the high numbers of breeding terns, the substantial amount of time spent in the field without sightings strongly suggests that Ross's gulls were not present in those years.

Apart from the four breeding records described above, Ross's gull has been observed on several occasions in the southern part of Disko Bay. These included some observations at Kitsissunnguit during the breeding season: an adult bird was shot close to the islands in mid-June 1968 (Boertmann, 1994); Ballegaard (1979) mentions a shot bird from Kitsissunnguit in June 1975; and Frich (1997) observed an adult bird in July 1990, close to the 1996 breeding site. Furthermore, a bird was shot at Kitsissunnguit as early as 1869, i.e., a decade before the first known breeding record there (Petersen, 1928). There is also a single record from the northern part of Disko Bay: on 1 July 1973, an adult was observed in a tern colony at the tip of Nuussuaq Peninsula (H. Fencker, as reported by F. Salomonsen, pers. comm. 1973). It is likely that the presence of these birds represented breeding attempts.

NEW Area

The Northeast Water Polynya (NEW) is located in the High Arctic zone off the coast of northeast Greenland (Fig. 1). This polynya, with associated lead zones along the coast, is the only significant open water in summer along the otherwise ice-filled waters off Northeast Greenland, and it is important for both breeding and staging seabirds (Falk et al., 1997). Breeding Ross's gulls have been found on a few occasions on the coasts and islands of this polynya, and non-breeding birds occur in relatively high numbers. The avifauna of these inaccessible waters was poorly known until the early 1980s, when researchers were able to visit the region on icebreakers (Meltofte et al., 1981; Hjort et al., 1983). In the southern part of the NEW area is the Henrik Krøyer Holme archipelago, where breeding or potential breeding Ross's gulls have been recorded twice.

Henrik Krøyer Holme

Henrik Krøyer Holme (HKH) is situated about 25 km off the main coast of Northeast Greenland (80.65° N, 13.75° W,) and comprises four small islets rising no more than 20 m above sea level. The islets, which consist mainly of barren gravel, are surrounded by sea ice most of the year, but open water usually forms north of the archipelago during spring. They are almost free of vegetation and characterized by late snowmelt (Hjort et al., 1983; Falk et al., 1997). HKH holds high numbers of breeding arctic terns, as well as the largest colonies of Sabine's gull and ivory gull in Greenland (Forchhammer and Maagaard, 1990; Boertmann, 2000; Gilg et al., 2003). Because the site is extremely remote, ornithologists have visited HKH on only four occasions: a short visit in 1980 (without observation of breeding Ross's gull), a visit to the southernmost islet in 1993, fieldwork at the northernmost islands in 2003, and fieldwork at the central island in 2007 (without observations of Ross's gull).

In 1993, a pair of Ross's gulls was found breeding at HKH. The nest on the southern island contained three eggs when visited on 5 July. Whether this nest was located near breeding arctic terns is not known, but terns did breed on Henrik Krøyer Holme in 1993 (Falk et al., 1997; M. Elander, pers. comm. 2006).

On 9 August 2003, a team of French researchers observed a pair of Ross's gulls performing territorial behaviour restricted to a small area on the northern island, where the gulls were "constantly mobbed by arctic terns" (Gilg et al., 2003). Although no eggs or chicks were observed, the strong response of the adult birds led the team to conclude that these birds either were failed breeders or had a chick hidden somewhere in the area. This potential breeding pair was found in a loosely mixed group of arctic terns and Sabine's gulls at the edge of an ivory gull colony.

Apart from the confirmed breeding records at HKH, a pair of Ross's gulls has been observed on two occasions in the NEW area at Kilen, just 50 km north of HKH. Kilen is within the Arctic desert, and both arctic terns and Sabine's gulls breed on the vegetation-poor, gravelly coastal plain. At least two Ross's gulls were seen at this site on 12 July 1984 (T. Jensen, as reported by M. Elander, pers. comm. 2006), and again a pair was observed mobbing long-tailed skuas (*Stercorarius longicaudus*) on 6 June 1993 (M. Elander, pers. comm. 2006). It is likely that these mainland observations represented breeding attempts, although breeding is not confirmed. Together with the HKH records,

they strongly suggest that the NEW area is a site used recurrently by breeding Ross's gulls in Greenland. Furthermore, Ross's gulls have been regularly observed from icebreakers in the waters around HKH during summer (Hjort, 1980; Falk et al., 1997).

In 1979, a Ross's gull nest containing one young chick and one (likely addled) egg was found at Kap Eiler Rasmussen (Fig. 1) in Peary Land (Hjort, 1980). This is about 250 km northwest of HKH and at the coastal lead system of open waters associated with the NEW polynya.

Other Confirmed Breeding Records from Greenland

A pair of Ross's gulls and a nest containing eggs were found at Aavertuut (73.27° N, 56.46° W), Upernavik District, West Greenland (Boertmann, 1994). Very little information remains of this breeding record, other than the fact that one adult bird was shot (Boertmann, 1994). If the location was correctly reported, however, the site comprises one larger island and three islets, apparently without breeding arctic terns, but with breeding common eider (*Somateria mollissima*), black guillemot (*Cepphus grylle*) and glaucous gull (*Larus hyperboreus*). An arctic tern colony is found only 4 km from Aavertuut, and with the many skerries and islets in this area, the site could easily have been confused.

Other Unconfirmed Breeding Records from Greenland

From the Nuuk area in southern West Greenland, eight sightings are known from the first half of the last century, all in May–July. One of these was a bird, shot on 1 June 1927, with well-developed testes and brood-patches. Also in 1927, a local fisherman in the Nuuk area observed a Ross's gull in late August that judging from the description may have been a juvenile (Petersen, 1928).

DISCUSSION

In total, there have been 10 confirmed breeding records for Ross's gull in Greenland. Although few, these records reveal some common traits in the species occurrence outside the core breeding area in Siberia and raise some interesting questions.

Two Geographical "Hotspots" in Greenland

This review identifies two recent sites used recurrently by Ross's gull in Greenland: the Disko Bay area and the NEW area. These sites contrast in both climate (High- vs. Low-Arctic zone) and habitat (Arctic desert vs. moist dwarf scrub heath with rocky shores), and neither resembles the habitat of the Siberian breeding grounds. The fact that Ross's gulls have been observed here suggests a high degree of flexibility in the species' choice of nesting habitat outside of Siberia.

Trends in Occurrence

The Greenland breeding records of Ross's gull include only two confirmed records before 1979 and at least eight confirmed or likely records since 1979 (Table 1). This difference in numbers has two likely explanations: a genuine increase in the number of birds appearing outside the Siberian breeding grounds, or an increase in ornithological effort in Greenland. There is no doubt that the latter explanation applies for both observations of non-breeding birds and breeding records in the remote NEW area, where very limited ornithological activity took place before 1980. In West Greenland, however, people have been aware of unusual birds throughout the past 150 years (Boertmann, 1994), and no significant trend ($F = 1.498$, $df = 15$, $p = 0.2398$) is detectable in the records of adult (potential breeding) birds in the period 1880–2007. Yet some regional trends are apparent. It is striking that no records exist from the Disko Bay area for the period 1901–40, a period which has several records from the Nuuk area (Kampp and Kristensen, 1980). Since that time, adult Ross's gulls have not been recorded in the Nuuk area. This pattern in occurrence has previously been suggested to originate in climatic differences (Salomonsen, 1967); that is, warmer periods favoured the occurrence in the Nuuk area. Although there may in fact be a weak correlation (Kampp and Kristensen, 1980), strong evidence is difficult to obtain.

Opportunistic Breeding or Self-Maintaining Populations?

Béchet et al. (2000) suggest an opportunistic strategy in Ross's gulls, in which pair-wise migration enables the birds to nest sporadically when they encounter a favourable breeding site. This hypothesis would assume that mate retention occurs throughout the non-breeding season, an assumption that is partly supported by late summer observations in the Arctic Sea by Hjort et al. (1997), or that pair bonding takes place at wintering areas. Alternatively, the discrete breeding sites could also represent small self-sustaining populations. The Greenland records support the opportunistic strategy by the lack of observations during three high-effort field seasons at Kitsissunnguit, a pattern also found at potential Canadian breeding sites (Mallory et al., 2006). Furthermore, the lack of successful breeding records in Greenland and the presence of apparently non-breeding pairs may support this hypothesis. Although lack of successful breeding in Greenland could be explained by egg harvesting, it could also suggest that the birds are first-time breeders.

Origin of the Greenland Breeding Birds

The origin of the breeding birds in the NEW area may be explained by the presence of many non-breeding birds on the Atlantic side of the Arctic Ocean during winter and spring, a small proportion of which may seek new breeding territory close by. Where the West Greenland birds come

TABLE 1. Records of breeding Ross's gulls in Greenland, including confirmed records (where eggs or chicks were observed) and four records of likely but unconfirmed breeding.

Area/Breeding site	Year	Breeding Confirmed?	Breeding Association with Arctic Terns?
Disko Bay Area, West Greenland:			
Qasigiannguit[1]	1880	Yes	Unknown
Ikamiut	1885	Yes	Yes
Nuussuaq peninsula	1973		Yes
Kitsissunnguit	1979	Yes	Yes
Kitsissunnguit	1996		Yes
Kitsissunnguit	2004	Yes	Yes
Kitsissunnguit	2006	Yes	Yes
Kitsissunnguit	2007		Yes
Nuuk Area, West Greenland:			
Godthaabsfjorden	1927		Unknown
Upernavik, West Greenland:			
Aavertuut	1984	Yes	Unknown
NEW Area, Northeast Greenland:			
Henrik Krøyer Holme	1993	Yes	Yes
Henrik Krøyer Holme	2003		Yes
Peary Land, Northeast Greenland:			
Kap Eiler Rasmussen	1979	Yes	No

[1] Hometown of the hunter, not the breeding site.

from is more puzzling. In spring, the edge of the West Ice forms in a southwest–northeast line across the Davis Strait and Baffin Bay, meeting the coast of West Greenland around the Disko Bay area in May. Salomonsen (1967) explained the irregular occurrence of Nearctic shorebirds in the Disko Bay area by this barrier. The West Ice edge may also function as a guiding line for migrating Ross's gulls, although not as a barrier, but as a preferred feeding area during migration. This hypothesis assumes that a small number of Ross's gulls are present in the Northwest Atlantic (including Baffin Bay and Davis Strait) in winter or that they arrive from the Pacific through the Northwest Passage in early spring. The assumption could perhaps be verified by comparing arrival dates at breeding sites in West Greenland and Arctic Canada.

Breeding Association with Arctic Terns

The review of Greenland Ross's gull breeding sites suggests a close breeding association with arctic terns. Although breeding at sites without arctic terns has been recorded in Greenland (Hjort, 1980), the majority of the nests were found within or very close to tern colonies. Although the many hostile encounters with terns must represent a significant energy expenditure to the gulls, the close relation to arctic tern colonies is apparent. The breeding records from Kitsissunnguit showed that the nests of Ross's gulls were placed on bare rock or in sand in the narrow zone between the shoreline and the edge of the ternery. This choice of nest site likely reflects a need for communal defence against predators (which is provided effectively by the terns), though this advantage is balanced by the antagonistic encounters with the breeding terns. Nesting in the interior of the tern colony would probably offer a higher level of protection, but the antagonistic encounters may be too frequent, so as a trade-off, the nest is placed in poor habitat (or at least different from habitat chosen in Siberia) with a greater chance of flooding and a potential higher level of predation.

Conservation and Threats in Greenland

Ross's gull has been legally protected in Greenland, in terms of hunting and egg harvesting, since 1977. A high proportion of the West Greenland records presented in this review involve birds that were shot or birds whose eggs were likely harvested. This is especially so with the older records, and although the attitude towards seabird harvesting has changed somewhat in Greenland through the last decades, a threat to this rare species may still exist. Frich (1997), reporting that one of the four birds observed in 1996 showed signs of gunshot, suspected that the potential nest had been harvested. And as recently as May 1999, a second-summer Ross's gull was offered for sale at the market for hunting products in Nuuk (A. Rosing-Asvid, pers. comm. 2007).

New legislation that banned the harvest of arctic tern eggs in Greenland came into force in 2002, and although some illegal egg harvesting still takes place in West Greenland (C. Egevang, pers. obs.), the magnitude of tern eggs now taken on Kitsissunnguit is significantly lower than that reported for the period 1980–2000 (Kampp and Kristensen, 1980; Frich, 1997). Thus, the risk of accidental harvesting of Ross's gull eggs is now lower than it was previously, and may give this species a chance to establish an isolated population in southern Disko Bay.

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