Distribution and numbers of moulting non-breeding geese in Northeast Greenland

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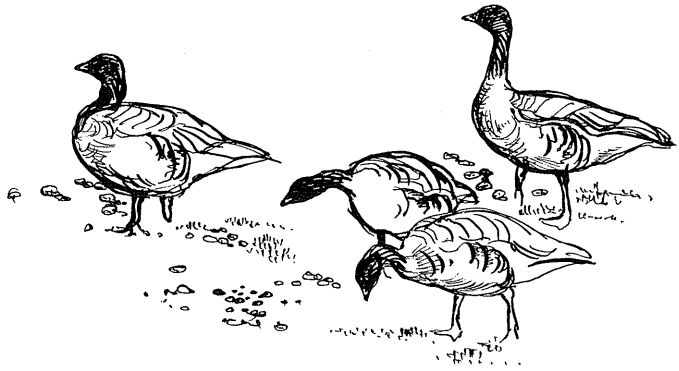
(Med et dansk resumé: Antal og udbredelse af fældende ikke-ynglende gæs i Nordøstgrønland)



During the summer of 1988 moulting non-breeding geese were surveyed from aircraft in most of Northeast Greenland. In total a little less than 10000 Barnacle Geese and c. 28000 Pink-footed Geese were counted. The literature on geese in Northeast Greenland adds a few thousand more of each species. However, the total population counts in the wintering grounds indicate that many more moulting non-breeding geese must be present in Northeast Greenland. Two hitherto unknown areas were found to equal Jameson Land in importance for moulting Pink-footed Geese, but Jameson Land is still the most important area for moulting non-breeding Barnacle Geese in Greenland.

Important concentrations of breeding and moulting non-breeding Pink-footed *Anser brachyrhynchus* and Barnacle Geese *Branta leucopsis* occur in Northeast Greenland. The non-breeding aggregations are not only of local origin, since many Icelandic Pink-footed Geese migrate to Northeast Greenland to moult (Christensen 1967).

Moulting areas for both species have been reported from the region between Scoresby Sund (70° N) and Nordmarken (78° N) with the most important areas in Jameson Land (Jennov 1963, Marris & Webbe 1969, Rosenberg et al. 1970, Meltofte 1975, 1977, Hjort 1976, Hardy 1979, Meltofte et al. 1981, Madsen et al. 1984b, Cabot et al. 1988). In total, about 12000 moulting non-breeding Pink-footed Geese and 7-8000 Barnacle Geese have been estimated in Northeast Greenland (Madsen et al. 1984b). However, large areas of favourable habitats have never been surveyed. Moreover, both species have increased in recent years (Cabot et al. 1988, Fox et al. 1989). Many more moulting non-breeding geese might therefore be found in Northeast Greenland.

In the summer of 1988 an aerial survey was conducted covering most of the currently known areas for moulting geese. This survey initiated a project under the Greenland Home Rule, surveying biologically and archaeologically important areas in the Northeast Greenland National Park (Bay & Boertmann 1989). The zoological work was conducted in co-operation with the Zoological Museum in Copenhagen. The present paper presents the census results obtained during the survey, and summarizes the available information on moulting non-breeding geese and moulting areas in Northeast Greenland.

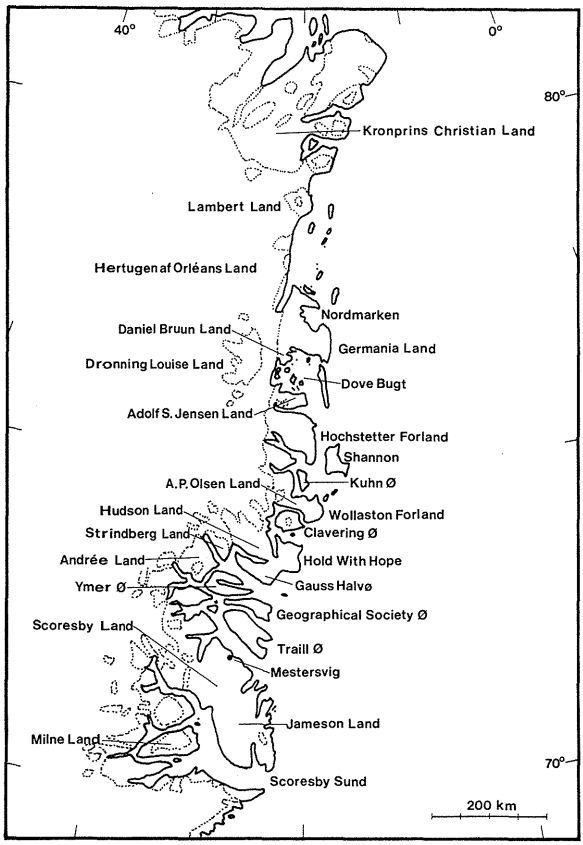


Fig. 1. Northeast Greenland with names of major areas mentioned in the text.
Nordøstgrønland med angivelse af de væsentligste landområder, der nævnes i teksten.

Methods

The 1988 aerial survey was carried out between Mestersvig (72° 12' N) and Nordmarken (78° 00' N) during the period 5 - 8 July 1988. The aircraft used was a Partenavia P 68 Observer supplied with Omega navigation equipment. Flight speed was 165 km/h and altitude 50 - 100 m during survey flight.

Survey routes were planned on the basis of the known distribution of biologically important areas in North Greenland and Jameson Land (Aastrup et al. 1986, Bay & Holt 1987), of the sources given above and of studies of topographical maps and false colour infra-red aerial photos (on which vegetated areas are coloured red). All major lowland areas (below 300 m altitude) were covered.

The main purpose of the survey was to locate areas with concentrations of Muskoxen *Ovibos moschatus*, moulting non-breeding geese and dense vegetation, which were all chosen as indicators of biologically important areas. Consequently, the flights were not designed to obtain a total count of moulting geese. Only Hochstetter Forland was systematically covered by four parallel transects.

Two observers worked during the survey flights. All observations were recorded on tape recorder. All goose flocks were recorded separately and the proportion of birds flying was likewise recorded.

Some information from areas not surveyed in 1988 but visited during the summer of 1989 is also included (Boertmann et al. 1990).

Only literature records concerning moulting non-breeding geese are considered here. Records after the first week of August are omitted, because the geese usually move to other sites or habitats when flight is regained (Madsen et al. 1984b).

Where several records of moulting non-breeding geese exist from the same area, the maximum number is used in the following discussion.

In Jameson Land, moulting geese have been surveyed by the Greenland Environmental Research Institute over several years. Their census data from 18-20 July 1988 (Mosbech et al. 1989) are included here.

Tab. 1. Number of moulting non-breeding geese in the different areas surveyed by aircraft in 1988. Observed broods are omitted.
Antal fældende ikke-ynglende gæs i de forskellige områder overfløjet i 1988. Kuld er udeladt.

Area *Område*	Barnacle Goose *Bramgås*	Pink-footed Goose *Kortnæbbet Gås*	Unidentified *Ubestemt Gås*
Jameson Land[a]	6035	5560	–
Traill Ø	126	45	47
Islands in Kong Oscar Fjord	15	0	0
Geographical Society Ø	133	16	0
Ymer Ø	49	11	2
Gauss Halvø	226	243	165
Hudson Land	109	13	0
Hold With Hope	567	1257	183
Clavering Ø	0	60	350
A. P. Olsen Land	220	20	31
Wollaston Forland	304	1763	0
Sabine Ø	0	0	0
Kuhn Ø	0	1204	88
Shannon	169	210	0
Hochstetter Forland	226	6479	485
Langelv Dal	37	308	0
Adolf S. Jensen Land	65	94	42
Store Koldewey	0	0	0
Islands in Dove Bugt	72	25	0
Dronning Louise Land	11	336	120
Daniel Bruun Land	137	1335	340
Germania Land[b]	411	6397	147
Sønder- & Nordmarken	379	2288	50
Total	9437	27664	2050

a: census by the Greenland Environmental Research Institute (Mosbech et al. 1989)
optælling foretaget af Grønlands Miljøundersøgelser (Mosbech et al. 1989)
b: incl. an area visited in 1989 but not surveyed in 1988
et område optalt i 1989 fra jorden er medtaget

Results

The weather during the counts in 1988 was stable with clear sky. Strong winds caused only local, minor problems. In most lowland areas the snow cover was less than 10%. Only very few areas had more than 50%: the eastern part of Geographical Society Ø, the area east of Uglehøjen in Hold With Hope, the eastern part of Albrechtsletten in Wollaston Forland, the easternmost part of Shannon, the lowland south of Flade Bugt in Germania Land and the northern tip of Nordmarken.

Tab. 1 gives the number of geese in all areas surveyed in 1988. Tab. 2 shows the proportion of geese still able to fly and the number of broods recorded in the different areas.

Major moulting areas

The following is a summary of the major moulting areas known in Northeast Greenland, including a review of the literature and an estimate of the numbers of non-breeding geese present in 1988.

Figs 2 and 3 show the distribution of moulting non-breeding geese in Northeast Greenland.

Region south of 72° N

South of Scoresby Sund a few moulting Pink-footed and Barnacle Geese have been reported from the Ammassalik area (Chapman 1934, Ray 1973). A few non-breeding Barnacle Geese have also been found along the Blosseville Kyst (Smart undated).

From the Scoresby Sund area early reports on moulting non-breeding geese are given by Bay (1894), Deichmann (1909) and Pedersen (1926, 1930).

From the 1950s onwards, several British and Irish expeditions studied and ringed geese in Jameson Land and Scoresby Land (Marris & Ogilvie 1962, Hall 1963, 1966, Campbell undated, Hall & Waddingham 1966, Marris & Webbe 1969, Ferns & Green 1975). Vrånes (1971) reported moulting Barnacle Geese in the Hurry Fjord area and in

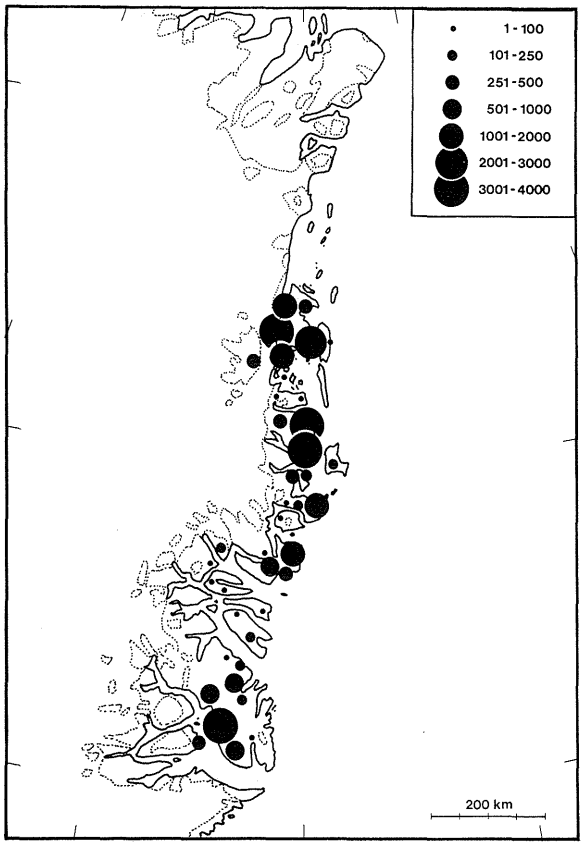


Fig. 2. Distribution of non-breeding moulting Pink-footed Geese in Northeast Greenland. Compiled from data obtained during aerial surveys in 1988 and from the literature (see text). In areas north of Kong Oscar Fjord covered by both the 1988 survey and earlier counts, the highest numbers are used. An unknown number moult in Hertugen af Orléans Land and in Lambert Land.
Fordelingen af fældende ikke-ynglende Kortnæbbede Gæs i Nordøstgrønland.

Tab.2. Proportion (pct) of birds still able to fly among the moulting geese, and number of broods observed. Proportion of flying geese based on at least 100 birds in each case. No. of broods are minima, because they are difficult to see from an aircraft, especially when the goslings are small.
Andel af de optalte fældegæs som var i stand til at flyve, og antal kuld set i de forskellige områder.

Area *Område*	Able to fly *I stand til at flyve*		No. of broods *Antal kuld*	
	Barnacle G. *Bramgås*	Pink-footed G. *Kortnæbbet Gås*	Barnacle G. *Bramgås*	Pink-footed G. *Kortnæbbet Gås*
Islands in Kong Oscar Fjord	–	–	3	0
Traill Ø	13	–	3	1
Geographical Society Ø	25	–	1	0
Ymer Ø	–	–	0	0
Gauss Halvø	12	26	0	0
Hudson Land	0	–	6	0
Hold With Hope	5	10	0	0
Clavering Ø	–	–	0	0
A. P. Olsen Land	0	–	6	0
Wollaston Forland	0	3	1	0
Kuhn Ø	–	56	0	0
Shannon	24	2	0	0
Hochstetter Forland	0	8	0	0
Langelv Dal	–	20	0	0
Adolf S. Jensen Land	–	–	1	0
Islands in Dove Bugt	3	–	21	0
Dronning Louise Land	–	5	0	0
Daniel Bruun Land	0	3	17	0
Germania Land	2	8	3	0
Sønder- & Nordmarken	3	8	11	0

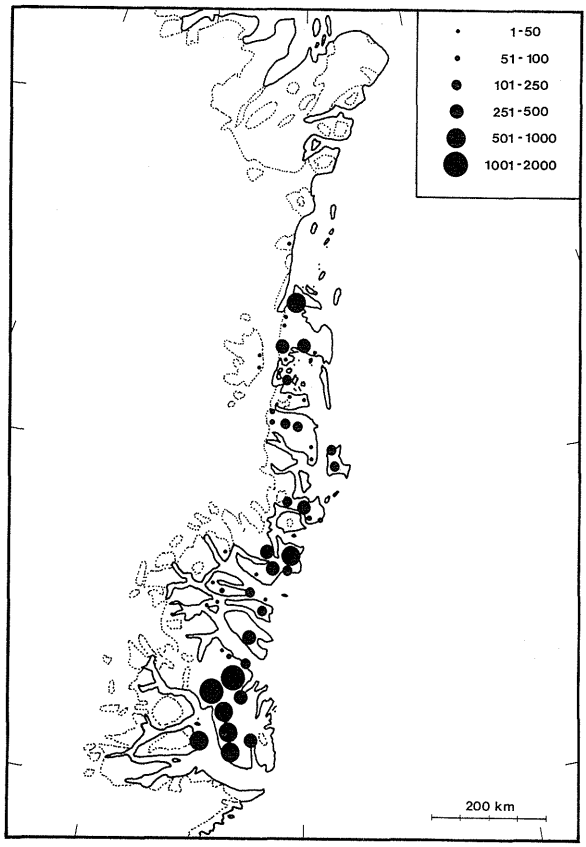


Fig. 3. Distribution of non-breeding moulting Barnacle Geese in Northeast Greenland. Compiled from data obtained during aerial surveys in 1988 and from the literature (see text). In areas north of Kong Oscar Fjord covered by both the 1988 survey and earlier counts, the highest numbers are used.
Fordelingen af fældende ikke-ynglende Bramgæs i Nordøstgrønland.

Kjoveland. Hansen (undated) reported few moulting Barnacle Geese in Hurry Fjord in 1979.

In 1982, 1983, 1984, 1987, 1988 and 1989 the Greenland Environmental Research Institute carried out aerial and ground based censuses of geese in Jameson Land and the south-eastern part of Scoresby Land (Madsen & Boertmann 1982, Madsen 1984, Madsen et al. 1984a, 1984b, 1985, Mortensen et al. 1988, Mosbech et al. 1989). In 1987 the eastern part of Milne Land was also surveyed (Mortensen et al. 1988). In 1984 Cabot (1984) counted the moulting geese in Ørsted Dal and reached figures almost identical to those obtained during the aerial survey in the same year.

In Jameson Land the most important areas for Pink-footed Geese are Heden, Ørsted Dal and Kjoveland/Gurreholm Dal. In total 5560 moulting Pink-footed Geese were counted in 1988 (Mosbech et al. 1989). The Barnacle Geese are mostly found in Heden, Ørsted Dal, Kjoveland/Gurreholm Dal and the valleys around Pingel Dal. 6035 moulting Barnacle Geese were counted in 1988 (Mosbech et al. 1989).

The eastern part of Milne Land holds at least 500 Pink-footed Geese and 600 Barnacle Geese (Vrånes 1971, Mortensen et al. 1988).

In total, at least 6000 non-breeding Pink-footed Geese and 6600 non-breeding Barnacle Geese are estimated to moult in the region between 70° and 72° N. However, large areas to the west of Hall Bredning in Scoresby Sund have never been surveyed.

Region between 72° and 74° N

On Traill Ø, Geographical Society Ø, Ymer Ø and the islands in Kong Oscars Fjord only a few moulting non-breeding geese were recorded in 1988. In total less than 100 Pink-footed Geese and about 350 Barnacle Geese were seen.

Ferns & Green (1975) found less than 200 non-breeding Pink-footed Geese and c. 550 non-breeding Barnacle Geese on Traill Ø and the southern shores of Kong Oscar Fjord. Hardy (1979) found 258 Pink-footed Geese and 295 Barnacle Geese in the same region. Brathay East Greenland Expedition 1985 (Anon. undated) found very few moulting Pink-footed Geese in Karup Elv on Traill Ø. Greenwood et al. (undated) reported very few

moulting Pink-footed Geese from Andrée Land. From Strindberg Land, Goodhart & Wright (1958) reported 200 Pink-footed Geese and 35 Barnacle Geese and from western Ymer Ø they reported only few geese. Kempf (unpublished) reported c. 420 Barnacle Geese and c. 400 Pink-footed Geese from Traill Ø, Geographical Society Ø and Strindberg Land in the years 1979 and 1982.

From the extensive lowlands in Gauss Halvø/ Hudson Land/Hold With Hope large numbers of mainly non-breeding geese of both species have been reported (Løppenthin 1932, Bird & Bird 1941, Goodhart & Wright 1958, Jennov 1963, Marris & Webbe 1969, Hjort 1976, Elander & Blomqvist 1986). Particularly, Vestersletten, Badland Dal, Østersletten and Tobias Dal are all known to hold many geese, and this was confirmed by the aerial survey in 1988. The area was also visited by the Hold With Hope expedition in 1988 (J. V. N. Turner in litt.). In total, the area probably holds at least 3000 non-breeding Pink-footed Geese and 1500 non-breeding Barnacle Geese.

In summary, at least 3700 non-breeding Pink-footed Geese and 2500 non-breeding Barnacle Geese are estimated to moult between 72° and 74° N. However, large areas to the west of 25° W have not been surveyed for geese.

Region between 74° and 76° N

On the west coast of Clavering Ø 60 non-breeding Pink-footed Geese moulted in 1988. On lakes in the central part about 350 geese (probably Pink-footed Geese) were seen during a ferry flight.

The valleys in eastern A. P. Olsen Land (Store Sødal) hold many moulting non-breeding Barnacle Geese. 232 were counted during the 1988 survey and Marris & Webbe (1969) recorded about 200 in 1966.

The extensive lowlands in Wollaston Forland, namely Albrechtsletten and the area east of Zackenberg, are known as important moulting areas for non-breeders of both species (Jennov 1963, Johnsen 1953, Marris & Webbe 1969, Rosenberg et al. 1970, Meltofte 1972). This was confirmed by the 1988 census. Probably at least 2000 Pink-footed Geese and 350 Barnacle Geese moult here.

West of Kap Maurer on Kuhn Ø, 170 non-breeding Pink-footed Geese moulted in 1988. On the northern part of the west coast about 1000 Pink-footed Geese were counted 5 July. An exceptionally large proportion were able to fly (Tab. 2) and a subsequent observation two days later revealed only about 400. The site could be a staging area for geese on their way to moulting grounds further north. In total 550 non-breeding Pink-footed Geese are estimated to moult on Kuhn Ø.

On the northern part of the large Shannon Island, Meltofte et al. (1981) reported about 200 moulting and 30 pairs of Barnacle Geese. In the 1988 survey about 170 moulting Barnacle Geese were found in the southern and central parts of the island. Large flocks of Barnacle Geese able to fly were seen on Shannon at the end of August 1989 (J. Böcher & C. Bay pers. comm.). Only few Pink-footed Geese were recorded during the 1988 survey.

Meltofte et al. (1981) estimated in 1976 that at least 3000 non-breeding Pink-footed Geese moulted in Hochstetter Forland. The 1988 survey found a total of 6500 Pink-footed Geese. Meltofte et al. (1981) mentioned no non-breeding Barnacle Geese, and only c. 230 were recorded during the 1988 survey. Pedersen (1934) and Bird & Bird (1941) have likewise mentioned Hochstetter Forland as a moulting area for non-breeding Pink-footed Geese.

At Langsø in Langelv valley Sellar et al. (1981) counted 130 Barnacle Geese (incl. broods) and 90 Pink-footed Geese in 1980. The 1988 survey counted fewer Barnacle Geese but many more Pink-footed Geese.

In Vandrepasset and at the head of Bessel Fjord small numbers of Barnacle Geese were recorded in 1989 (Boertmann et al. 1990).

At least 9600 non-breeding Pink-footed Geese and 1250 non-breeding Barnacle Geese are estimated to moult between 74° and 76° N.

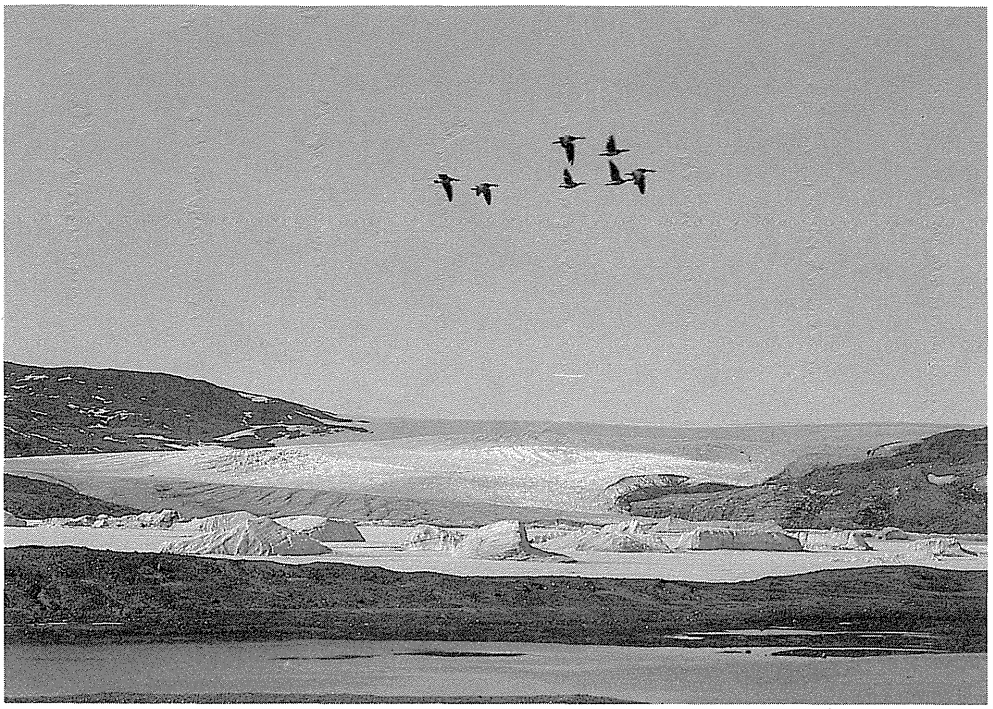
Region between 76° and 78° N

Few geese moult in Adolf S. Jensen Land with less than 100 non-breeders of both species recorded in 1988.

On the islands of Dove Bugt only few moulting non-breeding geese were found, but there are several colonies of breeding Barnacle Geese (Meltofte 1975, Boertmann et al. 1990).

On the large nunatak, Dronning Louise Land, more than 300 moulting Pink-footed Geese but only few Barnacle Geese were recorded in 1988.

In Germania Land, Daniel Bruun Land and Nordmarken, at least 9000 moulting non-breeding Pink-footed Geese were counted in 1988. They were concentrated in the narrow lowland along the edge of the inland ice (about 7000 birds in an area 100 km long and 5-10 km wide), along the south coast of Germania Land and to a lesser degree at Flade Bugt and in Nordmarken. Only one transect



Den hidtil nordligste yngleplads for Bramgæs i Nordøstgrønland blev i 1989 fundet på Hertugen af Orléans Land, og mindre antal gæs fælder også i dette område. Foto: Hans Meltofte.

line was performed in the lowland along the inland ice, and several suitable areas were not covered at all, so many more Pink-footed Geese probably moult here. At least 900 Barnacle Geese were counted in the same area. They were concentrated in northern Daniel Bruun Land, along the south coast of Germania Land and in Nordmarken. Cabot et al. (1988) found several new colonies and moulting areas for Barnacle Geese in Nordmarken.

Meltofte (1975) estimated at least 1000 moulting Pink-footed Geese in the eastern part of Germania Land. The area along the inland ice, with the hitherto largest number recorded in Greenland, has until now been unknown as a moulting area.

In all, at least 9300 Pink-footed Geese and 900 Barnacle Geese are estimated to moult in the region between 76° N and 78° N.

Region north of 78° N

In late June 1989 Boertmann et al. (1990) visited and surveyed Hertugen af Orléans Land just north of the 1988 study area. Two areas with relatively lush vegetation were obviously grazed by geese, and several moulted remiges from the previous year were found. Two flocks of Pink-footed Geese arrived during the visit.

Further north C. Bay (pers. comm.) saw a flock of Pink-footed Geese in August 1987 at Blåsø in Kronprins Christian Land at 79° 30' N, and in early August 1990 he saw some flocks and found a dead specimen with moulted remiges in southern Lambert Land. Hence, an unknown number of Pink-footed Geese moult as far north as Lambert Land and apparently also in southern Kronprins Christian Land. Even from Peary Land, a few Pink-footed Geese have been reported (Grant 1972).

In Hertugen af Orléans Land three new colonies of Barnacle Geese were found and small flocks of non-breeders were encountered (Boertmann et al. 1990). Barnacle Geese might very well breed in Lambert Land further north (Cabot in litt.), although none were seen in 1990 during botanical field work in the southern parts (C. Bay pers. comm.). An observation in 1985 of 7 non-breeders in Kilen in Kronprins Christian Land (Hjort et al. 1987) suggests that moulting birds even can be found north of Lambert Land.

Næsten 10 000 Bramgæs blev registreret i Nordøstgrønland under flytællingerne i 1988, men mindst ligeså mange ikke-ynglende fugle opholder sig på ukendte steder. Foto: Mads Forchhammer.

Discussion

The survey was carried out in early July. This is somewhat earlier than the optimal time for counting non-breeding geese in moult (Madsen et al. 1984b). The major problems caused by this early timing of the census were that some non-breeders were still able to fly (Tab. 2) and some had probably not yet arrived at their moulting grounds. On the other hand, the broods were just about to hatch so nearly all geese seen were actually non-breeders.

It is evident that the figures obtained during the 1988 survey do not represent all the non-breeding geese in the survey area. The non-breeders of the two species differ in their overall habitat selection (Meltofte 1975, Madsen & Mortensen 1987) and, as the survey was planned as a reconnaissance, it was not possible to cover all suitable moulting habitats for any of the species. The moulting Barnacle Geese in particular occur in small habitats in hilly surroundings, which were poorly covered by the survey. The Pink-footed Geese primarily moult in extensive lowland areas at large and early icefree waters such as lakes, rivers and river-outlets (Meltofte 1975, Meltofte et al. 1981, Madsen & Mortensen 1987). These lowland areas were usually covered by one or two transects only, leaving many suitable habitats unsurveyed.

The Pink-footed Goose population has increased strongly since 1960 (Fox et al. 1989). In Northeast Greenland this is reflected by a northward extension of the breeding range (Meltofte et al. 1981): the Pink-footed Goose now breeds as far north as Germania Land (Forchhammer 1990). The number of non-breeders has also increased (Meltofte 1975, the present survey) and moulting grounds are now found as far north as 78°30'N. This northward extension indicates that the populations of the moulting Pink-footed Geese in southern Northeast Greenland are close to the carrying capacity of their habitats, as described from Jameson Land (Madsen & Mortensen 1987).

The extensive moult migration in late June and early July from Iceland to Northeast Greenland was discovered in the early sixties (Christensen 1967). It is now a very significant and conspicuous phenomenon almost everywhere in Northeast Greenland (Hansen undated, Rosenberg et al. 1970, Meltofte 1976, Meltofte et al. 1981, Forchhammer 1990 etc.). Early observers did not register the moult migration (Meltofte 1976) which probably evolved towards its present large scale during the middle of this century (Madsen 1990). Some early observers (e.g. Pedersen 1926, 1934),

Både ynglende og fældende Bramgæs opholder sig oftest i frodige kær omkring mindre søer, mens de Kortnæbbede Gæs samles i større flokke i lavlandsområder nær isfri elve, søer og elvmundinger. Foto: Mads Forchhammer.

however, did report a great surplus of non-breeders, some of which may have performed a moult migration from Iceland.

The non-breeding population can be estimated at at least 80 000 (data from Salmon (1988) and Fox et al. (1989)). In Northeast Greenland c. 30 000 non-breeders can be accounted for if maximum survey data from different years and areas are totalized. Many of the missing non-breeders, at least 50 000, may very well moult within the 1988 survey area, but some probably do so in areas north of 78° N. However, a large segment of the non-breeding population may moult in Iceland. Recent surveys have revealed some thousand non-breeding Pink-footed Geese there and many more may be present (Fox et al. 1987, I. Petersen in litt.). It is not likely that non-breeding Pink-footed Geese occur in any numbers in Southeast Greenland. The habitats there are not suitable and observations of non-breeding geese leaving Iceland in late June indicate that they head for Northeast Greenland (Taylor 1953, Marris & Webbe 1969, I. Petersen pers. comm.).

C. 11 000 non-breeding Barnacle Geese can be accounted for in Northeast Greenland if maximum survey data from different years and areas are totalized. There are probably at least twice as many non-breeders in the population (see data given by Cabot et al. (1988) and Salmon (1989)). The missing non-breeders probably moult in the unsurveyed parts of the 1988 survey area and in the inner regions of Scoresby Sund, Kong Oscar Fjord and Kejser Franz Joseph Fjord.

In conclusion, the 1988 survey revealed two areas of similar importance for moulting Pink-footed Geese as Jameson Land, and confirmed that Jameson Land is the major moulting area for Barnacle Geese.

Conservation of moulting areas

Apart from Jameson Land and the Scoresby Sund area, all the areas holding concentrations of moulting non-breeding geese are within the North and Northeast Greenland National Park (which is also a Biosphere Reserve).

16 areas in Northeast Greenland have been designated as Important Bird Areas (IBAs) (Grimmet & Jones 1989) (Tab. 3). Of these the Greenland Home Rule have designated three as Ramsar sites (Tab. 3). Most of the presently known areas with concentrations of moulting geese are IBAs (Tab. 3).

Tab.3. Important Northeast Greenland moulting areas for non-breeding geese and their international conservational status. Except for Jameson Land and Milne Land, all areas are part of the North and Northeast Greenland National Park. IBA = Important Bird Area (see Grimmett & Jones 1989). Ramsar = areas designated according to the Ramsar Convention. Figures for geese is the fraction (pct) of moulting geese on each site relative to the total winter population. Mainly based on 1988 censuses in Northeast Greenland and on the winter 1987/88 count in the British Isles (Salmon 1988, 1989). Figures in brackets are based on estimated numbers.
De vigtigste nordøstgrønlandske gåsefældeområders internationale beskyttelsesstatus. IBA = Important Bird Area (vigtigt område for fugle). Ramsar = Områder udpeget i henhold til Ramsarkonventionen. For hvert område angives andelen (%) af fældende ikke-ynglende gæs i forhold til den totale vinterbestand.

Area *Område*	IBA No.	Ramsar	Barnacle G. *Bramgås*	Pink-footed G. *Kortnæbbet Gås*
Jameson Land[a]				
Heden	015	yes	6.9	2.1
Ørsted Dal	011	no	4.9	0.5
Kjoveland	013	no	3.5	0.5
Fleming Fjord	012	no	1.4	0.1
Milne Land[b]	no	no	1.7	0.3
Hold With Hope[c]	001, 002, 003, 004	no	2.7 (4.4)	0.9 (1.7)
A. P. Olsen Land	no	no	0.6	0.0
Wollaston Forland	no	no	0.9 (1.0)	1.0 (1.2)
Hochstetter Forland	005	yes	0.7	3.8
Shannon	006	no	0.5 (1.1)	0.1
Germania Land				
South coast etc.[d]	007, 009[e]	no	0.9	1.2
Western part[f]	no	no	0.8	4.1
Flade Bugt	008	no	0.0	0.2

a: incl. parts of Scoresby Land *incl. dele af Scoresby Land*
b: surveyed in 1987 (Mortensen et al. 1988) *undersøgt 1987*
c: incl. eastern parts of Hudson Land *incl. østlige dele af Hudson Land*
d: area between Stormelven, Hvalrosodden, southern part of Sælsø, and the large lake in Slædelandet
området mellem Stormelven, Hvalrosodden, sydlige del af Sælsø og den store sø i Slædelandet
e: only a small part is included as IBA *kun en lille del er med som IBA*
f: this area extends into Søndermarken and Daniel Bruun Land
dele af dette område ligger i Søndermarken og Daniel Bruun Land

The most important area not designated as an IBA is the western part of Germania Land, where at least as many Pink-footed Geese moult as in the Ramsar sites Heden (in Jameson Land) and Hochstetter Forland. This particular area obviously deserves to be designated as an IBA and a Ramsar site. Moreover, the southern part of Germania Land between IBA Nos 007 and 009, and including the large lake in Slædelandet, deserves designation at least as an IBA. This also applies to two lowland areas in Wollaston Forland: Albrechtsletten and the south coast between Zackenberg and Daneborg. Finally the Hold With Hope area (IBAs Nos 001 to 004), which holds a rather large part of the Barnacle Goose population, should be designated as a Ramsar site.

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Resumé

Antal og udbredelse af fældende ikke-ynglende gæs i Nordøstgrønland

I NØ Grønland forekommer Kortnæbbet Gås og Bramgås almindeligt, og fælles for begge arter er, at kun en mindre del af bestanden yngler. Den øvrige del samles i flokke på egnede steder, hvor de fælder, og gennem det

meste af juli er de ude af stand til at flyve. Bramgæssene tilhører en bestand, som kun yngler i NØ Grønland, mens de Kortnæbbede Gæs tilhører en bestand som yngler både i NØ Grønland og Island. Størstedelen af de ikke-ynglende Kortnæbbede Gæs, der fælder i NØ Grønland, stammer fra Island.

Fældende gæs er meget følsomme over for forstyrrelser i form af f.eks. helikopteroverflyvninger. Gæssene blev derfor, sammen med koncentrationer af Moskusokser og områder med tæt vegetation, udvalgt som indikatorer på biologisk følsomme områder i et kortlægningsprojekt udført af det grønlandske hjemmestyres miljø- og naturforvaltning i samarbejde med Zoologisk Museum. Sådanne følsomme områder blev i sommeren 1988 registreret fra flyvemaskine i den centrale og sydlige del af den nord- og nordøstgrønlandske nationalpark.

I Tab. 1 ses det samlede antal fældegæs set i de forskellige landområder, samt antallet af fældegæs talt samme år af Grønlands Miljøundersøgelser i Jameson Land, der ligger umiddelbart syd for nationalparken. Fig. 2 og 3 viser gæssenes fordeling, og her er medtaget tidligere optællinger fra områder, der ikke blev overfløjet i 1988.

Jameson Land har hidtil været kendt som det væsentligste fældeområde for Kortnæbbet Gås, men der blev i 1988 fundet yderligere to områder med et antal gæs i samme størrelsesorden (Tab. 1). Der må imidlertid være mange flere fældende Kortnæbbede Gæs, enten i områder, der ikke blev overfløjet i 1988, eller i Island, hvor der for nylig er fundet store antal af fældegæs.

For Bramgåsens vedkommende er Jameson Land stadig det væsentligste fældeområde. Også for Bramgåsens vedkommende må der findes mange flere fældegæs end dem, der blev talt i 1988.

I NØ Grønland er der udpeget tre Ramsar-områder, de to bl.a. med begrundelse i store koncentrationer af fældende gæs (Tab. 3). Men yderligere et par områder burde udpeges, nemlig lavlandet langs indlandsisen i det vestlige Germania Land og de store lavlandsområder i Hold With Hope området.

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