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Results from the survey of the
Light-Bellied Brent Goose and
Barnacle Goose populations on
Tusenøyane and southwestern
Svalbard in July 1995

Jan Ove Bustnes
Endre Persen
Georg Bangjord



NINA • NIKU

NINA Norsk institutt for naturforskning

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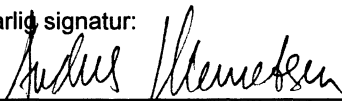
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Abstract

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In early July 1995, we counted the Barnacle Goose population on Olsholmen, Isøyane and Dunøyane, southwestern Svalbard, and the population of Brent Goose and Barnacle Goose on Tusenøyane, southeastern Svalbard. We found about 290 adult Barnacle Geese and 694 nests on the southwestern islands. However, very few nests had produced young because of predation by polar bears. On Tusenøyane we recorded 508 adult Brent Geese, 190 young (70 families) and 27 nests. Mean clutch size was 3.6 eggs, and brood size was 2.93 young. We observed 192 adult Barnacle Geese, 13 young (5 families) and 45 occupied nests on Tusenøyane. Clutch size was 3.0 eggs, and brood size was 2.6 young. We saw no signs of foxes, but some islands had been visited by polar bears. Most Brent Geese were found on islands with few Barnacle Geese, and vice versa. At present there seems to be little competition for nesting habitats between the two species.

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I juli 1995 ble det utført tellinger av hvitkinngåsbestanden på Olsholmen, Isøyane og Dunøyane på sørvest Svalbard, og bestandene av ringgås og hvitkinngås på Tusenøyane, sørøst Svalbard. Vi fant ca 290 voksne hvitkinngås på de sørvestlige øyene, og 694 reir. Det var likevel svært få reir som produserte unger, på grunn av predasjon fra isbjørn. På Tusenøyane fant vi 508 voksne ringgås og 190 unger (70 familier) og 27 reir. Gjennomsnittlig kullstørrelse var 3.6 egg og 2.93 unger. Vi observerte 192 voksne hvitkinngås, 13 unger (5 familier) og 45 okkuperte reir. Kullstørrelsen var 3.0 egg og 2.6 unger. Hekkesuksessen på Tusenøyane var middels i 1995. Vi fant ingen spor av rev, men isbjørn hadde vært på flere av øynene. De fleste ringgjessene ble funnet på øyer med få hvitkinngås og omvendt. For øyeblikket tror vi at det er lite konkurranse om hekkehabitater mellom artene på disse øyene.

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Forord

Disse gåseregistreringene er en del av Sysselemannens og Norsk Polarinstitutt's regelmessige opptellinger av fuglereservatene på Svalbard. Også andre arter enn gås ble registrert i 1995, men disse dataene er ikke rapportert her. Vi ønsker å takke Geir H. Moe for all hjelp under feltarbeidet. Vi vil også takke mannskapet på Polarsyssel, for at de gjorde denne turen mulig ved sin uredde holdning til dravis. Rob Barrett fortjener også en takk for å ha rettet opp engelsken i denne rapporten.

Desember 1995

Jan Ove Bustnes

Content

Abstract.....	3
Referat.....	3
Forord.....	4
Content.....	4
1 Introduction.....	5
1.1 Breeding habitat competition.....	5
2 Study area and methods.....	5
2.1 Methods.....	6
3 Results.....	6
3.1 Southwestern Svalbard.....	6
3.2 Tusenøyane.....	8
3.3 Breeding habitat competition.....	8
4 Discussion.....	8
4.1 Southwestern Svalbard.....	8
4.2 Tusenøyane.....	9
4.3 Breeding habitat competition.....	9
5 Summary.....	11
6 Sammendrag.....	11
7 References.....	12

1 Introduction

Since the beginning of this century the Svalbard population of Light-bellied Brent Goose *Branta bernicla hrota* has declined dramatically, and reached a historical low at 1600-2000 individuals in 1970 (Madsen 1984). The causes of the decline included both factors in the breeding areas and in the wintering areas (Madsen et al. 1989). The population has increased during the last 20 years, and is presently estimated to 4000-6000 individuals (Madsen et al. 1989). Most of this population breeds on Tusenøyane on southeastern Svalbard (Persen 1986, Madsen et al. 1989, 1992).

In contrast, the management of the Svalbard Barnacle Goose *Branta leucopsis* has been very successful, and the population has increased from 300 individuals in the 1940's to a present number of 13 000. This has led to an expansion of the breeding range of this species. In 1969 there were no Barnacle Geese at Tusenøyane, but in 1985 there were breeding pairs on several islands, and on some islands they even outnumbered the Brent Geese (Persen 1986). A part of the Barnacle Goose population that breeds on Svalbard, such as in Ny-Ålesund, is surveyed annually, and both reproductive parameters and numbers are recorded. Other parts of the population, such as those in the bird reserves on southwestern Svalbard and Tusenøyane, are only sporadically counted. The Brent Goose population on Tusenøyane has also been counted at irregular intervals.

In 1995, Sysselmannen organised an expedition to the goose colonies in these areas, and personel from NINA and Norsk Polarinstitutt participated. The expedition had two main objectives concerning the geese; first, to count the breeding populations and to measure the reproductive output of both the Barnacle Goose and Brent Goose. Secondly we wanted to establish whether there has been a change in the distribution of Barnacle Geese and Brent Geese on the different islands on Tusenøyane.

1.1 Breeding habitat competition

The expansion of the Barnacle Goose has led to concern that it may outcompete the Brent Goose on the breeding grounds. This was first expressed by Owen & Norderhaug (1977), and was based on the fact that the previous breeding areas for Brent Goose on the western coast of Svalbard is now dominated by Barnacle geese (Persen 1986). In recent years interspecific aggression between the species has also been observed on the breeding sites (Madsen et al. 1989).

In the 1980's (1985, 1987 and 1989) counts of Brent Geese and Barnacle Geese were carried out on Tusenøyane (Persen 1986, Madsen et al. 1989, 1992). In 1987, their habitat use and breeding density were mapped on Lurøya. As a pilot study, we wanted to compare the present situation to the situation 8 years ago, both for numbers and breeding distribution. Any expansion by one species at the expense of the other should be possible to detect after 8 years.

2 Study area and methods

On southwestern Svalbard we surveyed the following islands, all of which are nature reserves: Olshomen, Isholmane (Flatholmen, Isøykalven and Nordre Isøy), and Dunøyane (Nordre Dunøya, Store Dunøya and Fjørholmen).

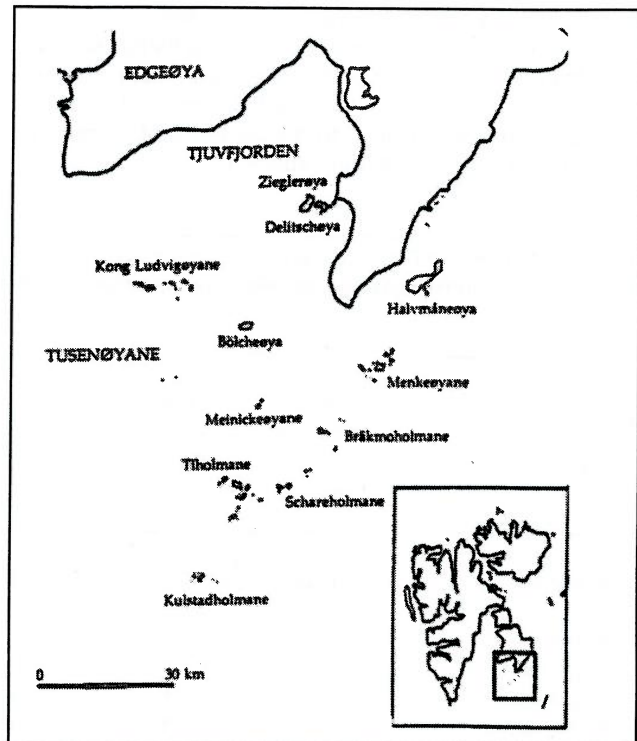


Figure 1. Location map of Tusenøyane, southeastern Svalbard. - Kart som viser Tusenøyane, sørøst Svalbard.

At Tusenøyane all island groups were visited except Schareholmane and Kulstadhholmane. However not all islands could be reached because of ice conditions. Of a total of 26 islands, we visited 17, while two were counted from neighbouring islands. Island groups visited were Tiholmane (Lurøya, Kalvøya, Langåra and Rugla), Brækmoholman (Store Brækmoholmen), Meineckeøyanne (east and west islands), Menkeøyanne (Andrikken, Gassen and Blåmåken. Alka and Teisten were counted from neighbouring islands), Bølshøya, Kong Ludvig øyanne (Arentzøya, østre Russeholme, vestre Russeholme, midtre Russeholme, Ekongen and Bruhnsøya). We estimated that we covered 75-80% of the area.

All the islands are low and rocky with varying degrees of vegetation cover. Many of them have small ponds and wetlands. The vegetation mostly consists of moss carpets. For a more detailed description of the study area see Madsen et al. (1989, 1992) and Persen (1986). Weather conditions changed during the expedition, and we experienced both heavy rain and sunshine. However, this had little influence on our observation activities.

2.1 Methods

The expedition started from Longyearbyen on July 6 and ended on July 13.

The vessel Polarsyssel was used for transportation. Counts were carried out between 7 and 12 July (7-8 July on southwestern islands and 9-12 July on Tusenøyane). We landed on the islands using a small aluminium boat.

Birds were counted on the different islands by four persons, and most islands were covered in detail. All species encountered were recorded. In addition we also counted nests, noted clutch sizes and number of young in broods. Empty nests of Brent Goose and Barnacle Goose were distinguished by the presence of faecal piles around the nests of the latter species.

we found recent tracks and faeces of Polar Bears. Most the Barnacle Goose nests were preyed upon and few seemed to have produced any young. Common Eider nests had also been preyed upon. The reproductive output from these colonies was extremely low in 1995. We observed 3 colour banded geese on these islands (see **appendix 1**).

3.2 Tusenøyane

Table 2 shows the total number of geese on the different islands and islets in the Tusenøyane archipelago. We observed 510 adult Brent Geese and 182 Barnacle

Table 1. Numbers of Barnacle Geese on different islands on southwestern Svalbard.
Antall hvitkinngås på forskjellige øyer på sørvest Svalbard.

Location Lokalitet	Nests (occupied) Reir (okkuperte)	Families Familier	No. of young Ant. unger	Non-breeders Depredated Ikke-hekkere Predaterte	Total no. of adults Totalt antall voksne
Olsholmen	14 (14)	2	0	8	36
Isøyane					
Flathomen*	0	0	0	0	0
Isøykalven*	14 (0)	1	3	8	10
Nordre Isøya*	202 (6)	3	5	21	51
Dunøyane					
Nordre Dunøy*	194 (0)	0	0	79	79
Store Dunøy*	216 (2)	1	4	50-70	50-70
Fjørholmen*	54 (0)	0	0	57	57
Total	694	7	12		283-303

* Recent tracks and faeces of polar bears were recorded.

* Spor og avføring fra isbjørn funnet.

3 Results

3.1 Southwestern Svalbard

Table 1 shows the number of Barnacle Goose on each island that was visited. A total of 285-300 birds were observed, with the highest numbers on Dunøyane (>70%). However, we counted a total of 694 nests that had been used in 1995 (67% on Dunøyane). Therefore most birds had left the colonies by the time we arrived. We found only seven Barnacle Goose families, and a few nests that still contained eggs, but the majority were hatching. The geese had probably departed for the feeding areas on the mainland. On most of the islands

Geese. Tiholmane (30% of the total), Menkeøyane (22%), Bølschøya (19%) and Kong Ludvig øyene (26%) had high numbers of Brent Geese, while only Bølschøya (30%) and Kong Ludvigøyane (55%) had high numbers of Barnacle Geese. The reason why we did not observe Barnacle Geese on Tiholmane was probably that we could not land on Hornøya. We observed a total of 67 Brent Goose families, of which 87% were on Tiholmane, Bølschøya and Kong Ludvig øyane (**Table 2**). In contrast we only found five Barnacle Goose families, of which three were on Bølschøya. Sixteen occupied Brent Goose nests were located, which were only 19% of all pairs with offspring (eggs or young). In contrast, 40 occupied Barnacle Goose nests were found, which means that 89% of the pairs were not hatched at the time

when we visited Tusenøyane. In other words, the Barnacle Goose nested much later than the Brent Goose. Of 510 adult Brent Goose, only 166 were caring for either eggs or young (83 pairs). This means that 67% of the population had been preyed upon, or were non-breeders.

The same figure for Barnacle Goose was 46% (45 pairs). During our visits to the islands we observed no foxes or tracks of foxes. However, we found fresh tracks and faeces of polar bears on Tiholmane (Lurøya, Kalvøya, Langåra, Rugla) and Store Brækmoholme. It is possible

Table 2. Numbers of geese on different islands in the Tusenøyane archipelago.
Antall gjess på forskjellige øyer innen øygruppen Tusenøyane.

Place Lokalitet	Brent Goose Ringgås					Barnacle Goose Hvitkinngås				
	Nests (occupied)	Families	No.of young	Non-breeders Depredated	Total no. of adults	Nests (occupied)	Families	No.of young	Non-breeders Depredated	Total no. of adults
	Reir (okkuperte)	Familier	Ant. unger	Ikke-hekkende Predaterte	Totalt voksne	Reir (okkuperte)	Familier	Ant. unger	Ikke-hekkende Predaterte	Totalt voksne
Tiholmane										
Lurøya	14(1)	13	39	2	30	0	-	-	-	0
Kalvøya	4(0)	3	5	35	41	0	-	-	-	0
Langåra	0(-)	-	-	-	0	0	-	-	-	0
Rugla	6(0)	2	7	77	81	0	-	-	-	0
Brækmoholman										
Store Brækm.	0(0)	-	-	-	0	4(1)	0	0	0	4
Meineckeøyane										
Vestre	2(2)	0	1	2	6	8(8)	0	0	0	16
Østre	4(2)	1	3	4	12	4(1)	0	0	?	8
Menkeøyane										
Andrikken	1(0)	0	0	17	19	0	-	-	-	0
Gassen	5(1)	4	14	44	62	0	-	-	-	0
Blåmåken	1(0)	1	4	23	25	0	-	-	-	0
Teisten*	? (?)	0	0	3	3	0	-	-	-	0
Alka**	? (?)	0	0	3	3	0	-	-	-	0
Bølschøya	20(0)	21	61	56	98	5(5)	3	10	38	54
Kong Ludvig øyene										
Arentzøya	3(3)	1	1	0	8	8(8)	2	3	28	48
Ø.Russeholme	1(1)	2	8	18	24	0	-	-	-	0
V.Russeholme	1(1)	0	0	0	2	1(1)	0	0	0	2
M.Russeholme	3(3)	3	10	28	40	3(3)	0	0	0	6
Ekongen	1(1)	14	35	4	32	7(7)	0	0	14	28
Bruhnsøya	3(2)	1	3	18	24	6(6)	0	0	4	16
Total		67	190		510		5	13		182
* observations made from Andrikken. Observasjoner gjort fra Andrikken										
** observations made from Gassen Observasjoner gjort fra Gassen										

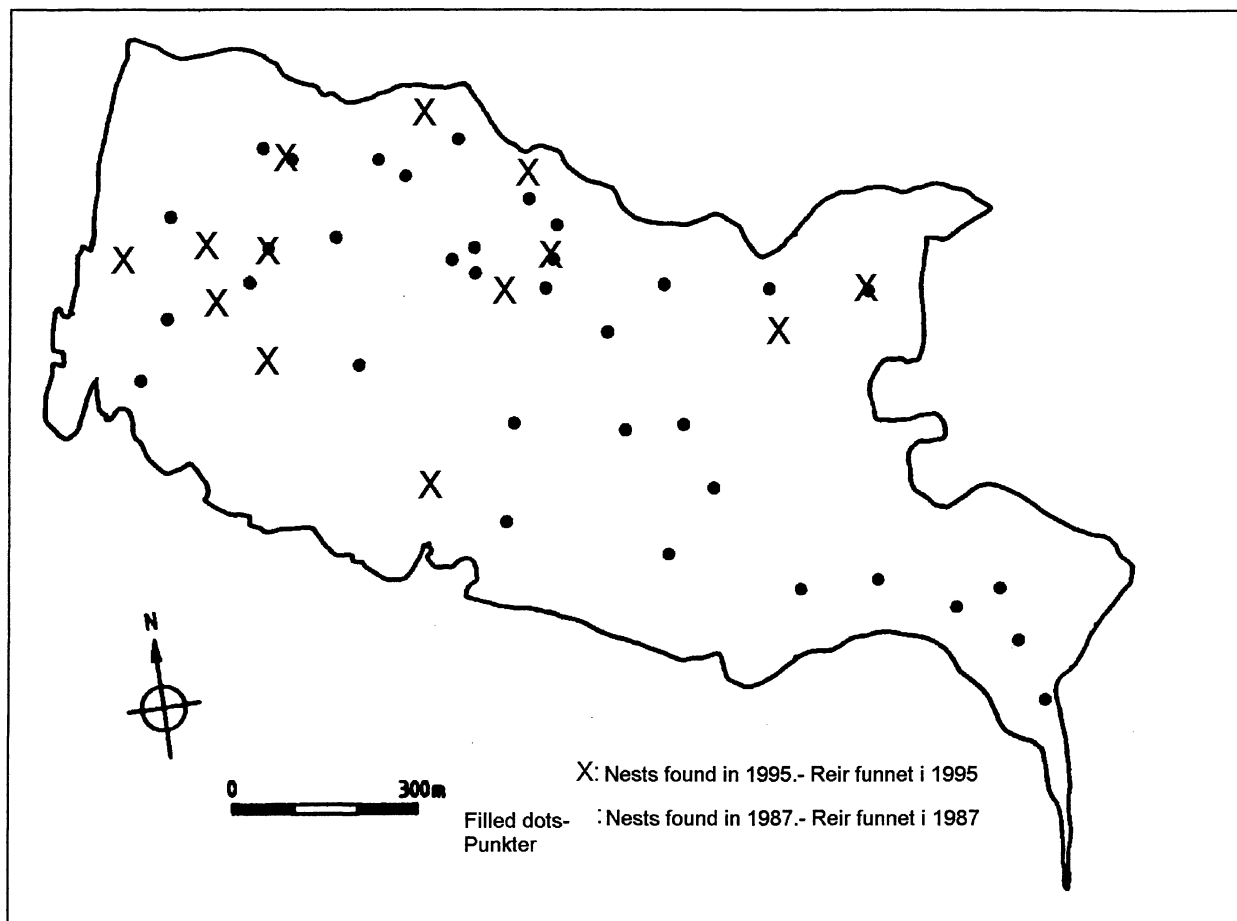


Fig. 3. Lurøya in the Tiholmane archipelago (Tusenøyane). Filled circles showing nest sites located in 1987 by Madsen et al. (1989). Crosses showing nest sites located in 1995. Lurøya i øygruppa Tiholmane (Tusenøyane). Fylte sirkler viser reir funnet av Madsen et al. (1989) i 1987. Kryss viser reir påvist i 1995.

that the other islands also had been visited by these mammals.

The mean clutch size of Brent Geese was 3.6 eggs, while the brood size was 2.9 young. For Barnacle Goose the values were 3.0 and 2.6 (Table 3).

On Østre Russeholme we observed a Dark-bellied Brent Goose paired with a Light-bellied Brent Goose. We observed 3 marked Brent Geese and 3 marked Barnacle Geese (see appendix 1)

3.3 Breeding habitat competition

To determine whether the two species preferred the same or different islands, we calculated the proportion of the total number of each species on each island or islet. 57% of all Brent Geese were on island with no Barnacle Geese, and 62% of the Barnacle Geese were on islands with only 14% of the Brent Goose. Furthermore, 67% of the Brent Geese stayed on islands with only 14% of the Barnacle Geese. Only two islands (Bølschøya and Ekongen) had a high number and percentage of the total population of both species (19% and 30%, and 6% and 15% respectively).

We made a more detailed search for Brent Goose nests on Lurøya than on other islands, to compare our results with those of Madsen et al. (1989). We found 14

nests on the island, of which 9 were preyed upon, 4 were hatched and one still containing eggs. Figure 3 shows the distribution of these nests (except one), compared to those of Madsen et al. (1989) from 1987. As can be seen, five of the nests seem to be located at the same site as in 1987 (8 years ago), and the nest density was lower in 1995 than in 1987.

4 Discussion

4.1 Southwestern Svalbard

Since Hindrum (unpublished report) in 1992 found 719 and 446 nests on Dunøyane and Isøyane respectively, it is clear that in 1995 the initial number of breeding Barnacle Geese on the southwestern islands was rather low (694 nests recorded). For comparison, Prestrud et al. (1989) estimated the number of nests at Dunøyane and Isøyane to 550-700 and 135-260, respectively. Hindrum reported 15 nests on Olsholmen, while we had 14. However, we do not know what proportion of the clutches that had been hatched before the 1992 survey was carried out. Prestrud et al. (1989) reported 80-100 nests on this island. Our observations

clearly indicate that many Barnacle Geese did not breed in 1995.

There was a very high rate of reproduction failure in most colonies in 1995, because of polar bears. It is well established that the production in the western colonies is very variable (Prop et al. 1984, Owen 1986), and the situation in 1995 is thus probably not uncommon.

4.2 Tusenøyane

On Tiholmane geese were counted in 1987 and 1989 by Madsen et al. (1989, 1992). In 1987, 148 adult Brent Geese were observed, and in 1989 the number was 94. We observed 152 birds. It thus seems that the number has been rather stable over the last eight years. However, we can not exclude the possibility that birds moved between islands, and that our numbers are too high for this archipelago.

Table 3. Reproductive variables of geese at Tusenøyane. -
Reproduksjonsvariabler hos gress på Tusenøyane

	Brent Goose Ringgås			Barnacle Goose Hvitkinngås		
	\bar{X}	SE	N	\bar{X}	SE	N
Clutch size Kullstørrelse	3.57	0.20	7	3.0	0.19	20
Brood size Ant. unger per kull	2.93	0.15	67	2.6	1.16	5

The rest of Tusenøyane has only been counted in detail in 1989, and 425 individuals were found (including 39 ind. on Schareholmane). We found 508 in 1995. However, comparisons between 1989 and 1995 may make little sense because very few pairs were breeding in 1989, and Brent Goose families were only observed on Menkeøyane. The other main differences between the two seasons are that while we observed 98 geese on Bølschøya, it was completely empty in 1989, and that the number was higher on Meinekeøyane in 1989 (174) than in 1995 (112). On Kong Ludvig øyane we observed more birds (130) than in 1989 (111). It is thus clear that geese move between the islands when not breeding.

For Barnacle Geese, the situation on Tiholmane seems to have differed in 1995 compared to 1987 and 1989. We observed no birds in this area, while there were at least 50 adults in 1987 and 59 in 1989. The reason for this discrepancy may be that we were unable to land on Hornøya, the only island in Tiholmane where Barnacle Geese have been known to breed. However, in 1987 most non-breeding birds were observed on Kalvøya and Langåra, islands with no birds in 1995. In 1989, Madsen et al. (1992) counted 101 Barnacle

Geese on Tusenøyane, while we observed 182. Madsen et al. included Tjuvfjorden and Ziegler-Delitschøya in their survey and found a total of 210 birds.

After all, there seems to be no major changes in the total numbers of the two geese species in the period between 1987 and 1995.

Production of young is extremely variable on these arctic islands. Madsen et al. (1989, 1992) showed that the reproductive output depended on the occurrence of arctic foxes and polar bears. These mammals are the main predators of goose nests, and their occurrence on the islands, especially that of the fox, depends on how the ice breaks up. If the ice breaks up around Egdeøya first, foxes may be trapped on the islands. In such cases, there is a total reproduction failure by the geese. In 1989, there were foxes on most islands in the Tuseøyane and almost no pairs were successful (Madsen et al. 1992). Madsen et al. (1989) found 21 Brent goose families on Tiholmane in 1987, while we observed 16. Madsen et al. found a mean clutch size of four eggs, compared to our 3.6 eggs. However, sample sizes were small in both years. Mean brood sizes were 3 young (n=23) in 1987 and 2.36 in 1989 (n=11), while we had 2.93 (n=67). It seems that the production among Brent Geese was similar in 1987 and 1995.

For Barnacle Goose, no comparisons of production can be made since we did not observe any birds on Tiholmane. Madsen et al. (1989) observed 17 pairs attempting to nest on Hornøya. Unfortunately, we could not visit this island. However, we found recently moulted feathers of Barnacle Goose on Lurøya. Madsen et al. (1992) only found Barnacle Goose nests (n=24) on Meinekeøyane in 1989, which were probably depredated by fox. We found 9 occupied nests on these islands.

A new threat to the nesting geese on Tusenøyane may be the increasing number of Great Skuas. It has not previously been known to breed on Lurøya, as in 1995.

4.3 Breeding habitat competition

Concern has been expressed that Brent Goose may suffer from the expansion of the Barnacle Goose population (Owen & Norderhaug 1977, Persen 1986). In 1987 Madsen et al. (1989) found that Barnacle Goose regularly visited Lurøy, the most important Brent Goose colony in Tiholmane, and they also observed interspecific aggression between the species. However, the situation, does not seem to have changed over the 8 years since 1987. There is little reason to believe that the population of Barnacle Geese has increased much on Tusenøyane the last few years, even if we did observe more geese than Madsen et al. (1992) in 1989. However, one of the banded geese on Midtre Russeholme had been marked in Ny Ålesund as an adult in 1992 (J.M. Black pers. comm.). This indicates that there is still an immigration of birds from other parts of Svalbard to these rather pristine islands.

Our data is not conclusive, but it may seem that the majority of the Brent Goose population stays on islands where there are very few Barnacle Geese and vice versa. How important this is is hard to assess, but one interpretation could be that the two species prefer different habitats and that the potential for habitat

competition is limited. However, since the two species both depend much on the same food source during brood rearing, our observation could indicate that the two species are competing and that the Barnacle Goose is still excluded from some habitats (e.g. Lurøya). Since the Barnacle Goose population does not seem to have increased much on Tusenøyane, the habitat competition is probably low at present. At Lurøya no pairs have started breeding in spite of the interspecific aggression observed in 1987 (Madsen et al. 1989).

5 Summary

One aim of this project was to survey the breeding populations of Brent Goose and Barnacle Goose on Tusenøyane, and the Barnacle Goose in some southwestern colonies. We also wanted to assess whether there is a competition for nest habitats between the two species on Tusenøyane, by comparing the present (1995) distribution of the two species with the situation in earlier years. The expedition took place between 6 and 13 July 1995, and the vessel Polarsyssel was used for transportation. Four persons participated in the survey.

We counted the Barnacle Goose population on Olsholmen, Isøyane and Dunøyane on southwestern Svalbard. We found a total of about 285-300 adult Barnacle Geese, and 694 nests (Table 1). However, very few nests produced young because of predation by polar bears. Compared to other years, few geese seem to have bred in 1995.

At Tusenøyane, all island groups were visited except Schareholmane and Kulstadholmane. However not all islands in each archipelagoes could be reached because of ice. Of a total of 26 islands, we visited 17, while two were counted from neighbouring islands. We recorded 508 adult Brent Geese and 190 young (70 families) and 27 nests (Table 2). Mean clutch size was 3.6 eggs, and brood size was 2.93 young. We observed 192 adult Barnacle Geese, 13 young (5 families) and 45 occupied nests on Tusenøyane. Clutch size was 3.0 eggs, and brood size was 2.6 young. There seemed to have been some reproductive success among the geese on Tusenøyane in 1995. We observed no sign of foxes, but some islands had been visited by polar bears.

Most Brent Geese were found on islands with few Barnacle Geese, and vice versa. At the moment there seems to be little competition for nesting habitats between the two species.

6 Sammendrag

Hensikten med dette prosjektet var å telle opp hekkebestanden av ringgås og hvitkinngås på Tusenøyane, og bestanden av hvitkinngås på endel kolonier på sørvest Svalbard. I tillegg ønsket vi å undersøke om det er en konkurranse om hekkehabitater på Tusenøyane mellom de to gåseartene, ved å sammenligne utbredelsen av hekkebestandene idag med tidligere tellinger. Ekspedisjonen fant sted i tidsrommet 6-13 juli, og Sysselemannsbåten Polarsyssel ble brukt til transport. Fire personer deltok i tellingene.

Følgende øyer på sørvest Svalbard ble telt: Olsholmen, Dunøyane og Isøyane. Vi fant 285-300 voksne hvitkinngås og 694 reir i disse koloniene (Tabell 1). Svært få reir produserte unger på grunn av predasjon fra isbjørn. Det ser ut til at få gås hekket i 1995 sammenlignet med tidligere år.

På Tuseneøyane ble alle øygrupper besøkt untatt Schareholmane og Kulstadholmane. Av totalt 26 øyer ble 17 besøkt, og 2 ble telt fra nabøyer. Totalt på Tusenøyane fant vi 508 voksne ringgås og 190 unger (70 familier) og 27 reir (Tabell 2). Gjennomsnittlig kullstørrelse var 3.6 egg og 2.93 unger. Vi observerte 192 voksne hvitkinngås, 13 unger (5 familier) og 45 okkuperte reir. Kullstørrelsen var 3.0 egg og 2.6 unger. Hekkesuksessen på Tuseneøyane var middels i 1995. Vi fant ingen spor av rev, men isbjørn hadde vært på flere av øynene.

De fleste ringgjessene ble funnet på øyer med få hvitkinngås og omvendt. For øyeblikket ser det ut til å være lite konkurranse om hekkehabitater mellom artene på disse øyene, selv om voksne fugler fra andre deler av Svalbard fremdeles kommer til disse øyene.

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Appendix 1.

We observed three colourbanded Barnacle Geese on Nordre Isøya, and three on Tusenøyane . In addition, three banded Brent Geese were found on Tusenøyane.

Vi observerte 3 hvitkinngås med fargeringer på Nordre Isøya, og 3 på Tusenøyane. I tillegg fant vi merkede ringgås på Tusenøyane.

Species	Site	Date	Ring colour	Ring code	Other Rings
Art	Lokalitet	Dato	Fargering	Ringkode	Andre ringer
Barnacle Goose	Nordre Isøya	7 July	Green	IA	-
	Nordre Isøya	7 July	Yellow	VHZ	-
	Nordre Isøya	7 July	Yellow	VLI	-
	Arentzøya	9 July	Green	CAI	-
	Midtre Russeholme	9 July	Yellow	VYI	-
	Bruhnsøya	9 July	Yellow (pale)	KFV	-
Brent Goose	Bølschøya	10 July	White	YC	Right foot: Yellow/White Left foot: Yellow/Blue
	Gassen	10.7	White	JV	Right foot: Orange/Green Left foot: Yellow/White
	Gassen	10.7	White	HL	Right foot: White Left foot: Yellow/Green

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378

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