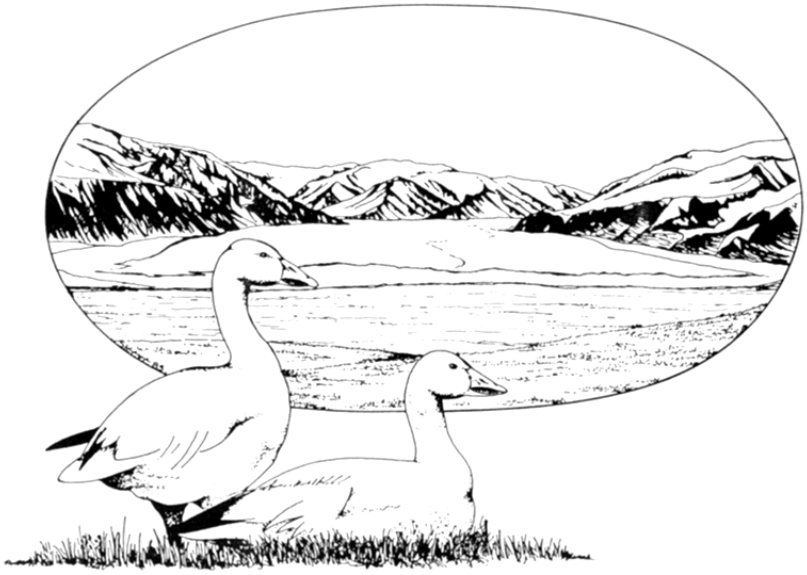
POPULATION STUDY OF GREATER SNOW GEESE AND ITS NESTING HABITAT ON BYLOT ISLAND, NUNAVUT IN 2023: A PROGRESS REPORT



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INTRODUCTION

In 2023, we continued our long-term study of the population dynamics of Greater Snow Geese (*Chen caerulescens atlantica*) and of the interactions between geese, plants and their predators on Bylot Island. Like many other goose populations worldwide, Greater Snow Geese have increased considerably during the late 20th century. The exploding population has imposed major stress on its breeding habitat, while extensive use of agriculture lands provides an unlimited source of food during winter and migratory stopovers for them. Remedial management actions during fall, winter and spring have been undertaken since 1999 in Canada and 2009 in the United States to curb the growth of this population. A synthesis report produced in 2007 evaluated the initial success of these special conservation measures. However, both the Avian Monitoring Review Steering Committee Final Report and the Greater Snow Goose Action Plan released in 2012 by the Canadian Wildlife Service called for a continued monitoring of the dynamic of this population and of its habitats. In response to those needs, the long-term objectives of this project are to (1) monitor changes in the demographic parameters of the Greater Snow Goose population, and especially the effects of the spring conservation harvest on those parameters, (2) determine the role of food availability and predation in limiting annual production of geese, and (3) monitor the impact of grazing on the Arctic vegetation.

OBJECTIVES

Specific goals for 2023 were as follows:

1) Monitor the productivity (egg laying date, clutch size and nesting success) and nesting distribution of Greater Snow Geese on Bylot Island.
2) Study the migration phenology of geese and its impact on reproductive success.
3) Mark goslings in the nest to provide a sample of known-age individuals to assess the growth and pre-fledging survival of goslings by their recapture in late summer.
4) Band goslings and adults at the end of the summer to continue the long-term study of demographic parameters such as survival and breeding propensity.
5) Monitor the abundance of lemmings and study their demography in relationship with snow conditions and the impact of predation on their cyclic fluctuations of abundance.
6) Monitor the breeding activity of other bird species and in particular avian predators (Snowy Owl, jaegers, Glaucous Gull, Peregrine Falcon and Rough-legged Hawk).
7) Monitor the breeding activity of foxes at dens.
8) Capture and mark adult foxes and their pups to study their movements, demography and foraging activity.
9) Sample plants in exclosures to assess annual production and the impact of goose grazing on plant abundance in wet meadows.
10) Maintain our automated environmental and weather monitoring system.

FIELD ACTIVITIES

***Field camps.* —** In 2023, we operated two camps on Bylot Island: the main field station, located 6 km from the coast in the largest glacial valley on the island (Qarlikturvik Valley, 73° 08' N, 80° 00' W), was occupied from 4 June to 20 August. A secondary camp, located in a narrow valley 30 km south of the main field station and 5 km from the coast ("Camp 2 area", 72° 53' N, 79° 54' W) was occupied from 22 May to 21 July (Fig. 1). Finally, 13 fly camps were also established for periods ranging from 5 to 7 days at various times throughout the island, west of Dufour Point.

***Field parties.* —** The total number of people in both camps ranged from 3 to 16 depending on the period. Members of our field party included project leaders Pierre Legagneux, Joël Bêty, Dominique Berteaux, Josée Lefebvre, Dominique Fauteux and several graduate students whose thesis projects addressed many of the objectives mentioned above: Ilona Grenztmann (PhD, objectives 1, 3 and 4), Frédéric Dulude-de Broin (PhD, objectives 7 and 8), Mathilde Poirier (PhD, objective 5), Gabriel Bergeron (PhD, objectives 5 and 6), Camille Gaudreau-Rousseau (PhD, objective 5), Matthieu Weiss-Blais (MSc, objectives 1 and 2), Mathieu Archambault (MSc, objective 7) and Louis-Pierre Ouellet (MSc, objective 8). Other students assisted them in the field, including Anne-Marie-Blanchette, Andréanne Beardsell, Marylou Beaudoin, Laurianne Dumont and Françoise Grenier. Other people in the field included Marie-Christine Cadieux, a research professionnal in charge of goose banding and plant sampling (objectives 4 and 9); Denis Sarrazin, research professionnal responsible of the maintenance of the weather stations (objective 10); and Christian Marcotte, a wildlife technician from the Canadian Wildlife Service (CWS, Quebec region). Finally, we hired two persons from Pond Inlet to work with us: James Akpaleeapik (marking goslings in nests: 5 to 15 July and goose banding: 6 to 15 August) and Floyd Tigullaraq (goose banding: 6 to 15 August.

Several other people also used our camps during the summer. They were Louis Moisan (PhD student), Laurence Gagnon (MSc student), Éliane Duchesne (research assistant), Joassie Otoovak (Pond Inlet field assistant), Éléonore Douville, Sandrine Benoît, Jonathan Brassard (research assistant at Université de Sherbrooke) and Dominique Gravel (researcher at Université de Sherbrooke), who studied shorebirds, lapland longspurs, cackling geese and insects under the supervision of Joël Bêty; the field party of Daniel Fortier (Université de Montréal), which included Élisabeth Hardy-Lachance (PhD student), who studied the permafrost and geomorphology; the field party of Esther Lévesque, Christophe Kinnard and Vincent Maire (Université du Québec à Trois-Rivières [UQTR]), which included Laurent Lessard (PhD student), Vincent Houde (MSc student), Virginie Favreau (MSc student) and Thierry Laurent-St-Pierre who studied plant ecology and hydrology; the field party of Isabelle Laurion and Jérôme Comte (Institut National de la Recherche Scientifique), which included Martial Leroy (PhD student), Emily Hallett (PhD student), Valentine Cyriaque (post-doctoral fellow), Melanie Burnett and Bonnie de Baets (PhD students at McGill University) and François Guillemette (researcher at UQTR), who studied the carbon cycle in ponds; the field party of Florent Dominé (Takuvik, Université Laval/CNRS) with Félix Lévesque-Desrosiers (PhD student) and Étienne Tremblay who studied the snow physical properties.

Other people from Pond Inlet also visited the camp for knowledge exchange or helped us with research activities. Brian Koonoo and Dennis Angnatsiak from Parks Canada guided the

research teams of Christophe Kinnard, Florent Dominé and Gilles Gauthier in snowmobiles to bring them to the main field station in early May. Bryan Koonoo, Neil Pilgrim and Patricia Panipakoocho from Parks Canada inpected both our camps on 4 July.

Environmental and weather data. **—** Environmental and weather data continued to be recorded at our four automated stations. Our network includes 3 full stations, two at low and one at high elevation (20 m and 312 m ASL, respectively) where air and ground temperature, air humidity, precipitations, snow depth, solar radiation, wind speed and wind direction are recorded on an hourly basis throughout the year (Fig. 1). A fourth station measures soil surface temperature in areas grazed and ungrazed by geese (i.e. exclosures). All automated stations were visited during the summer to download data and were found to be operating normally. Daily precipitation was also recorded manually during the summer. Finally, snowmelt was monitored by measuring snow depth at 50 stations along two 250-m transects and by visually estimating snow cover in the Qarlikturvik Valley, both at 2-day intervals.

Monitoring of goose arrival and nesting. **—** We monitored goose arrival in the Qarlikturvik Valley by counting goose pairs across the valley every two to three days from our arrival on the island until the end of snowmelt. Nest searches were carried out within walking distance (~6 km) of both the main field station and the Camp 2 mostly between 11 and 25 June. Nests were found by systematic searches conducted over various areas in the field. At Camp 2, where the main goose colony is located, nest searches were conducted using two methods: 1) over an intensively studied core area (ca 50 ha) located in the centre of the colony every year, and 2) within a variable number of 1 and 4-ha plots randomly located throughout the colony. Nest density was calculated over a fixed 20-ha area within the intensively studied core area. We also attempted to find the nests of as many neck-collared females as possible through intensive searches on foot throughout the nesting colony. All nests were revisited at least twice to determine laying date, clutch size, hatching date and nesting success. During the hatching period, we visited a sample of nests almost daily to record hatch dates and to web-tag goslings. Nests of other goose species, and in particular Cackling Geese (*Branta hutchensii*), were also systematically recorded during our field activities throughout Bylot Island.

Tracking of geese radio-marked in the south. **—** During spring staging in Quebec, we banded 577 snow geese captured with cannon-nets and we equipped 51 adult females with GPS/GSM transmitters mounted on neck collars. We were also able to monitor 31 additional females equipped with similar transmitters in previous years. On Bylot Island, we conducted intensive ground surveys (mostly from 11 to 18 June) of the breeding colony to find the nests of radio-marked geese and monitor their nests until hatching.

Goose banding. **—** From 7 to 13 August, we banded geese with the assistance of a helicopter. Goose flocks of a few hundred birds were rounded up and driven by people on foot into a holding pen made of plastic netting. All captured geese were sexed and banded with a metal band, and all recaptures (web-tagged or leg-banded birds) were recorded. A sample of young and adults was measured (body mass and length of culmen, head, tarsus and 9th primary). We also collected cloacal and blood samples on geese to study their aging process.

Small mammals. **—** We sampled lemming abundance and demography using live-traps. We trapped on two grids (330 × 330 m) in the Qarlikturvik Valley (one in wet meadow habitat and

one in mesic habitat) with 144 traps per grid and on a 3rd grid (200 × 340 m; 96 traps) in mesic habitat where a predator exclosure experiment was set up in 2012-2013 (the grid is surrounded by a chicken wire fence and covered by criss-crossing fishing line on top). The fishing line covering the grid to prevent avian predators to enter inside the enclosure was removed in summer 2022 but the fence remained in place. We used Longworth traps set at each grid intersection every 30-m. We trapped for 3 consecutive days during 3 periods (mid-June, mid-July and mid-August). Traps were checked at 12-hour intervals and all captured animals were identified, sexed, weighed and marked with electronic PIT tags or ear-tags (or checked for the presence of such tags). Finally, we sampled the abundance of lemming winter nests along 145 500-m transects randomly distributed in different habitats (mesic tundra, streams in mesic tundra and willow shrubs) between the main field station and Dufour Point.

Breeding activity of foxes at dens and marking. **—** All known fox dens located within a 600 km^2 area ranging from the Qarlikturvik Valley in the north to Dufour Point in the south and from the coast to approximately 10 km inland. Dens were visited one to five times during the summer and inspected for signs of use and/or presence of reproductive adults with pups. Automated cameras were deployed at dens showing signs of activity. We attempted to live-trap adults with cages and padded leghold traps at locations where foxes were seen hunting or travelling. At each den, we noted the species (Arctic Fox, *Vulpes lagopus*, or Red Fox, *Vulpes vulpes*), the presence of previously marked adults, and monitored for the presence of pups to determine minimum litter size. Cages and leghold traps were visited at least every 6 hours. Captured foxes were measured, weighed and tagged on both ears using a unique set of coloured and numbered plastic tags. Samples of winter and summer fur and claws were also collected for genetic and diet analyses.

Monitoring of other bird species. **—** We monitored the nesting activity of Snowy Owls (*Bubo scandiacus*), Long-tailed and Parasitic Jaegers (*Stercorarius longicaudus* and *S. parasiticus*), Glaucous Gulls (*Larus hyperboreus*), Peregrine Falcons (*Falco peregrinus*), Rough-legged Hawks (*Buteo lagopus*) and Lapland Longspurs (*Calcarius lapponicus*). Gull and Long-tailed jaeger nests were only monitored in the Qarlikturvik Valley and the Camp-2 area, but nests of other avian predators were monitored throughout the same 600 km^2 area than for foxes. Nests were found through systematic searches of suitable habitats or opportunistically and revisited to determine their fate (successful or not) until fledging.

Monitoring of plant growth and goose grazing. **—** The annual plant production and the impact of goose grazing was evaluated in wet meadows dominated by graminoid plants at one site in the Qarlikturvik Valley, a brood-rearing areas. Twelve exclosures (1 × 1 m) were installed in late June in two groups of 6 in the same general area every year. Plant biomass was sampled in ungrazed and grazed areas (i.e. inside and outside exclosures) at the end of the plant-growing season in August. Plants were sorted into sedges (Eriophorum scheuchzeri and Carex aquatilis) and grasses (Dupontia fisheri). Use of the area by geese was monitored by counting faeces on 1 × 10 m transects located near each exclosure every 2 weeks. No monitoring took place at the Camp 2 area in 2023.

PRELIMINARY RESULTS

***Weather conditions.* —** Temperatures in spring were cool. Air temperature averaged -4.9°C (2.4°C below normal) between 20 May and 5 June, the period of goose arrival, and 1.5°C (1.0°C below normal) during 5-20 June, which is the most critical period for egg formation and egg-laying. Snowpack at the end of the winter was higher than normal (snow depth was 47.6 cm on 20 May; Fig. 2). However, cool temperature in spring and snow fall in late May delayed snowmelt to the end of June, which was later than normal. Temperature throughout most of the summer were warm and the sky mainly clear and sunny. Rainfall was well below average and concentrated mostly in August (cumulative rainfall from 1 June to 17 August: 12 mm, long-term average: 76 mm).

***Goose arrival and nesting activity.* —** The first geese were detected on the hills surrounding the Qarlikturvik Valley, usually the first area used by geese after arrival, around 4 June. This number increased over the next few weeks to peak at 692 pairs on 22 June, a high number (Fig. 3). When compared to other years, goose arrival on Bylot Island tended to be later in 2023. Usually, we see a decline in goose numbers due to the movements of geese to the nesting colony and potentially to moulting sites, away from the Qarlikturvik Valley. However, in 2023, this decline did not occur and this could result from the fact that many geese decided to nest in the area which is very unusual in a low lemming year (see below).

The distribution of goose nests was highly unusual this year as several geese nested in the Qarlikturvik Valley (mostly a brood-rearing area). This usually happens in years when geese nest in associating with Snowy Owls but no owls were found in our study area in 2023.

Nest density in the center of the colony (10.6 nests/ha) was much higher than the long-term average while density outside the colony (2.5 nests/ha) was similar to the long-term average (Table 1). Egg-laying date in the colony (median: 15 June) was 3 days later than the long-term average, while geese initiated their nest even later at the Qarlikturvik Valley (median: 18 June). Average clutch size was 3.7 in the colony and 3.5 in the Qarlikturvik Valley (long-term average: 3.7; Table 1). Across the island, we found 100 nests of Cackling Geese compared to 61 in 2022 (Table 1).

***Nesting success of geese.* —** Overall, nesting success was high (70%; proportion of nests hatching at least one egg) and slightly above to the long-term average (Table 1). This was largely due to a very low activity of Arctic Foxes and avian predators around goose nests, which destroyed less nests than in normal years and far less than in years with low-lemming abundance. Nesting success was higher in the Qarlikturvik Valley (74%, n = 155) than in the Camp 2 area (colony, 70%, n = 355). During the summer, 42 neck-collared birds were sighted in the colony. Peak hatch was on 13 July for both nesting area, which is 3 days later than the long-term average (Table 1). We tagged 1710 goslings in nests at hatch in the Camp 2 area and 218 in the Qarlikturvik Valley. Overall, nesting parameters of geese in 2023 were good.

***Density of broods.* —** The density of goose faeces at the end of the summer in wet meadows of the Qarlikturvik Valley was low (4.5 ± 1.0 [SE] faeces/m^2; long-term average: 6.4). Accumulation of faeces began in mid-July, when newly-hatched broods started to move in the valley and increased steadily thereafter until mid-August.

***Tracking of geese radio-marked in the south.* —** We were able to monitor departure date of 60 adult females from southern Quebec and the migration pattern and breeding decisions in the Arctic for all of them. Birds left Quebec around 19 May and arrived in Nunavut between 27 May and 2 June. Among those, 14 females arrived on Bylot Island around 15 June. Based on their tracking, we estimated that six of them attempted nesting (median: 19 June) but none of them were successful. Through our intensive ground surveys, we were able to found the nest of two of those birds. Among the 46 females that migrated to the Arctic, 16 attempted to nest and 7 were successful. These females were also tracked during the fall migration and arrived in Quebec between 17 September and 12 October. Four of them were shot during the fall hunting season. Most geese were in Delaware, Maryland, and New Jersey on 26 January 2024.

***Goose banding.* —** The banding operation was very successful this year due to good weather prevailing throughout the banding period. We conducted 12 drives between the main field station and the Camp 2 area. We banded a total of 3497 geese, including 56 young that had been marked with web-tags at hatch. In addition, we recaptured 132 adults that were banded in previous years. We collected cloaca and blood samples from 50 goslings and 80 adults. The young:adult ratio among geese captured at banding was higher than last year (1.15:1 vs. 0.53:1 in 2022; long-term average:1.02:1). Mean brood size toward the end of brood-rearing (2.42 young, n = 189; counts conducted between 31 July and 3 August) was slightly higher than last year (2.28) but close to the long-term average (2.48). By combining information on brood size and young:adult ratio at banding, we estimated that 95% of the adults captured were accompanied by young, a moderate value. Overall, these results are indicative of a good production of young on Bylot Island by the end of the summer.

***Small mammals.* —** During our live-trapping survey, which cumulated 6,816 12-hr trapping sessions throughout the summer, we only captured 4 Collared Lemmings and no Brown Lemmings, a very low number. A formal estimation of density using capture-recapture methods confirmed that Brown Lemmings, which had reached a record high abundance in summer 2021 (>15 lemmings/ha), had continued to crash to extremely low values throughout the summer 2023 (Fig. 5). Finally, the number of lemming winter nests found along our transects confirmed a decrease in lemmings during winter as we counted 41 nests in 2023 compared to 105 in 2022.

Breeding activity of foxes at dens and marking. — A total of 127 known fox denning sites were monitored in 2023. Among these dens, we found signs of activity (fresh digging and/or footprints) at 50 of them, a high number. However, only 4 litters of Arctic Foxes were seen this year, which is typical of what can be observed in years of very low lemming abundance. A total of 14 adult Arctic Foxes were captured during the summer, including 1 individual marked in previous years. Four Arctic Foxes marked in previous years were also sighted but not recaptured. All new individuals were marked with ear-tags and a GPS collar.

***Monitoring of other bird species.* —** We found 26 active nests of Glaucous Gulls (vs. 32 in 2022), 4 nests of Parasitic Jaegers (vs. 2 in 2022), 1 nest of Long-tailed Jaegers (vs. none in 2022), no nest of Rough-legged Hawks (vs. 3 in 2022), 2 nests of Peregrine Falcons (vs. 5 in 2022) and no nest of Snowy Owls (vs. none in 2022). The low nesting activity of avian predators is typical of what we encountered in a year of low lemming abundance. We found 111 nests of Lapland Longspurs compared to 122 in 2022. Average clutch size of gulls was similar to 2022 (2.6 eggs vs 2.6 in 2022) as well as for longspurs (5.3 eggs vs. 5.5 in 2022). Nesting success was unknown for gulls, hawks,

falcons and jaegers. Fledging success (proportion of nests successful in fledging at least one young) was high for longspurs (78%).

***Plant growth and grazing impact.* —** Plant production in wet meadows of the brood-rearing area was above the long-term average and higher than the last several years. Above-ground biomass of graminoid plants in the Qarlikturvik Valley reached 59.5 ± 9.7 [SE] g/m^2 in ungrazed areas in mid-August compared to 50.6 ± 6.2 in 2022 (long-term average since 1990: 51.1 g/m^2). Biomass of both *Eriophorum* and *Dupontia* was higher compared to last year.

Grazing pressure was moderate in the wet meadows of the Qarlikturvik Valley in 2023 as geese had removed 31% of the above-ground biomass (difference between paired grazed and ungrazed plots by mid-August (long-term average: 31%). Grazing pressure was similar on both *Eriophorum* (36% of biomass removed) and *Dupontia* (29% of biomass removed).

CONCLUSIONS

Despite late spring conditions similar to 2022, reproduction of greater snow geese on Bylot Island was above average in 2023. Geese arrived relatively early and in large numbers on the island with numbers increasing until 22 June. Nesting effort (indexed by nest density in the colony) was very high despite delayed egg-laying. The delay was undoubtedly the consequence of the late spring which resulted in one of the latest snow melt in our records. This breeding delay could also be explained by an adverse wind conditions during the spring migration (Grandmont et al., unpub. data). However, we did not observe strong breeding suppression as seen in 2022. The breeding propensity (42%) was comparable to other years: breeding propensity obtained in 2019-2021 was 52% in average (range 46 to 67%) and only 5% in 2022. The high nesting density in the core of the colony in 2023 is thus quite surprising and could be explained by the very low reproduction in 2022 (very small proportion of breeders, low density, and high nest predation). Skipping a breeding event allow long-lived species to increase their body condition over the next year and increase their nesting success. Accordingly, body condition of females measured at their spring staging area was high in 2023 (Legagneux et al., unpub. data).

The very low abundance of lemmings observed in 2023 should have led to a strong reduction in nesting success as observed in our long-term monitoring. Unexpectedly, the nesting success was relatively high in 2023. The low rate of predation was likely due to a redistribution of Arctic foxes around the goose colony (almost all captured and sighted individuals were new in the population) probably due to the drastic decrease in goose abundance in 2022. Since Arctic fox depend on their food caches to survive the whole winter, most foxes with established territories in 2022 likely died or emigrate during the winter leaving room for more naive foxes to occupy the area. Fox home range sizes were indeed much higher in 2023 compared to 2022 and equivalent to home range usually found outside the goose colony (Ouelette and Berteaux, unpub. data) which is an indication of low predation. Indeed, the probability of prey encounter directly depends on the size of predator's home range size (Dulude-de Broin et al., 2023). This lower predation might also have occurred in the Qarlikturvik valley as many geese were nesting there, which is unsual for a low lemming year.

The proportion of young geese observed in our catches during banding indicates that the production on Bylot Island was relatively high in 2023. Based on the young-to-adult ratio observed during banding, we anticipated a fall flock with 27% young, a figure exceeding the long-term average (21%) and notably surpassing the previous year's figure (2%). However, the percentage of young geese observed during juvenile counts in southern Quebec this fall stood at 15% (n = 18,008). Therefore, it suggests that either the survival of young during migration from the Arctic to southern latitudes was low, or the breeding conditions on Bylot Island were not representative of the broader breeding range of the population. In 2023, spring was delayed in many areas of the High Arctic in eastern Canada. These conditions, coupled with the low abundance of lemmings—usually synchronized with Bylot's abundance—likely account for the relatively low production of geese at the population level. Hence, it appears that the favorable reproductive success experienced by snow geese on Bylot Island in 2023 does not reflect the entire breeding range of the population.

An emerging phenomenon on Bylot Island is the growing number of nesting Cackling geese. In our study area, the first nest was found in 1996. Until 2010, their presence was relatively rare. However, as we noticed a rapid increase in their number, we started to search more systematically the study area in 2014. In 2023, we found 100 cackling nests, which constitute the highest number recorded since 1996. Moreover, the nesting success of cackling was relatively high in 2023 (77% vs 31% in 2022; long-term average: 68%).

Above-ground graminoid production in wet meadows of the Qarlikturvik Valley, a prime brood-rearing area, was above average this year. Faeces counts revealed that use by broods was near average in that area which is in accordance with the moderate grazing impact on vegetation. This is partly due to the high vegetation production in 2023.

PLANS FOR 2024

The long-term objectives of our work are to study the population dynamics of Greater Snow Geese, and the interactions between geese, plants, and their predators on Bylot Island. A major focus of the project is to monitor changes in demographic parameters (such as survival rate, hunting mortality, breeding propensity, reproductive success, and recruitment) and habitat (annual plant production and grazing impact) in response to the spring conservation harvest and other special management actions implemented since 1999 in Canada and since 2009 in the United States. Other aspects of the project include *i*) understanding better the links between events occurring during the spring migration and the subsequent breeding success of geese; *ii*) studying indirect interactions between snow geese and lemmings via shared predators; *iii*) studying the ecology of the main predator of geese, the Arctic Fox; and *iv*) assessing the impact of climate change on goose reproduction and the carrying capacity of the habitat for geese. In 2024, we anticipate to:

1) Monitor productivity (egg laying date, clutch size and nesting success) and nesting distribution of Greater Snow Geese on Bylot Island.
2) Mark goslings in the nest to provide a sample of known-age individuals to assess the growth and pre-fledging survival of goslings by their recapture in late summer.
3) Band goslings and adults at the end of the summer to continue the long-term study of demographic parameters such as survival and breeding propensity.
4) Monitor the abundance of lemmings and study their demography and the impact of predation on their cyclic fluctuations of abundance.
5) Monitor wintering ecology of lemmings and ermines with passive sensors and cameras.
6) Monitor the breeding activity of other bird species, in particular avian predators (Snowy Owls, jaegers, Glaucous Gulls, Peregrine Falcons and Rough-legged Hawks).
7) Monitor the breeding activity of foxes at dens.
8) Capture and mark adult foxes and their pups to study their movements, demography and foraging activity.
9) Sample plants in exclosures to assess annual production and the impact of goose grazing on plant abundance in wet meadows.
10) Maintain our automated environmental and weather monitoring system.

In 2024, at least 5 graduate students will be involved in the Bylot Island snow goose project. **Ilona Grentzmann** (PhD) will finish her study on the effect of senescence on the population dynamics and physiology of snow geese. **Gabriel Bergeron** (PhD) will continue his study on seasonal Arctic food-web modeling. **Camille Gaudreau-Rousseau** (PhD) will continue her study on the vulnerability of lemmings to predation by ermine in different phases of the cycle. **Matthieu Weiss-Blais** (MSc) will finish his study on nest attendance of snow geese during incubation and its impact on the risk of predation by arctic foxes. **Anne-Marie Blanchette** (MSc) will start her study on the combined effect of predation on lemming populations and their grazing impact on vegetation productivity and diversity.

Table 1. Productivity data of Greater Snow Geese nesting on Bylot Island over the past decade.

	2014	2015	2016	2017	2018	2019	2020	2021	2022	**2023**	Average[2]
Number of nests monitored	491	347	337	342	277	422	580[3]	487[3]	332	**558**	--
Nest density in the core of the colony (n/ha)	7.89	9.26	5.50	8.14	3.46	5.70	8.35[3]	9.09[3]	4.09	**10.56**	5.10
Nest density in random plots (n/ha)	3.39	2.73	3.70	3.41	3.35	4.38	4.41[3]	4.15[3]	1.28	**2.45**	2.62
Median date of egg-laying	11 June	12 June	13 June	11 June	14 June	7 June	12 June[4]	13 June[4]	15 June	**15 June**	12 June
Clutch size	3.85	3.48	3.36	3.53	3.50	4.04	3.67[4]	2.75[4]	3.74	**3.66**	3.71
Nesting success[1]	91%	77%	73%	56%	50%	82%	64%[3]	--	37%	**70%**	67%
Median date of hatching	8 July	9 July	9 July	8 July	11 July	4 July	11 July[4]	10 July[4]	12 July	**13 July**	9 July
Ratio young:adult at banding	1.19:1	0.99:1	0.91:1	0.88:1	0.94:1	1.20:1	--	1.02:1	0.53:1	**1.15:1**	1.02:1
Brood size at banding	2.58	2.08	2.35	2.14	2.34	2.65	--	2.51	2.28	**2.42**	2.48
Proportion of adults with young at banding	92%	95%	78%	83%	81%	91%	--	81%	47%	**95%**	82%
Number of Cackling goose nests found	22	11	28	40	61	76	--	--	61	**100**	35[6]

[1] Mayfield estimate.
[2] Period 1989-2019 and 2022-2023. Data from 2020 and 2021 are not included in the long-term average (except banding data) because different protocols were used during the covid19 pandemic.
[3] These values were estimated from analyses of satellite images.
[4] These values are only based on the GPS-tracking of 4 females that nested on Bylot Island.
[6] Period 2010-2019 and 2022-2023.

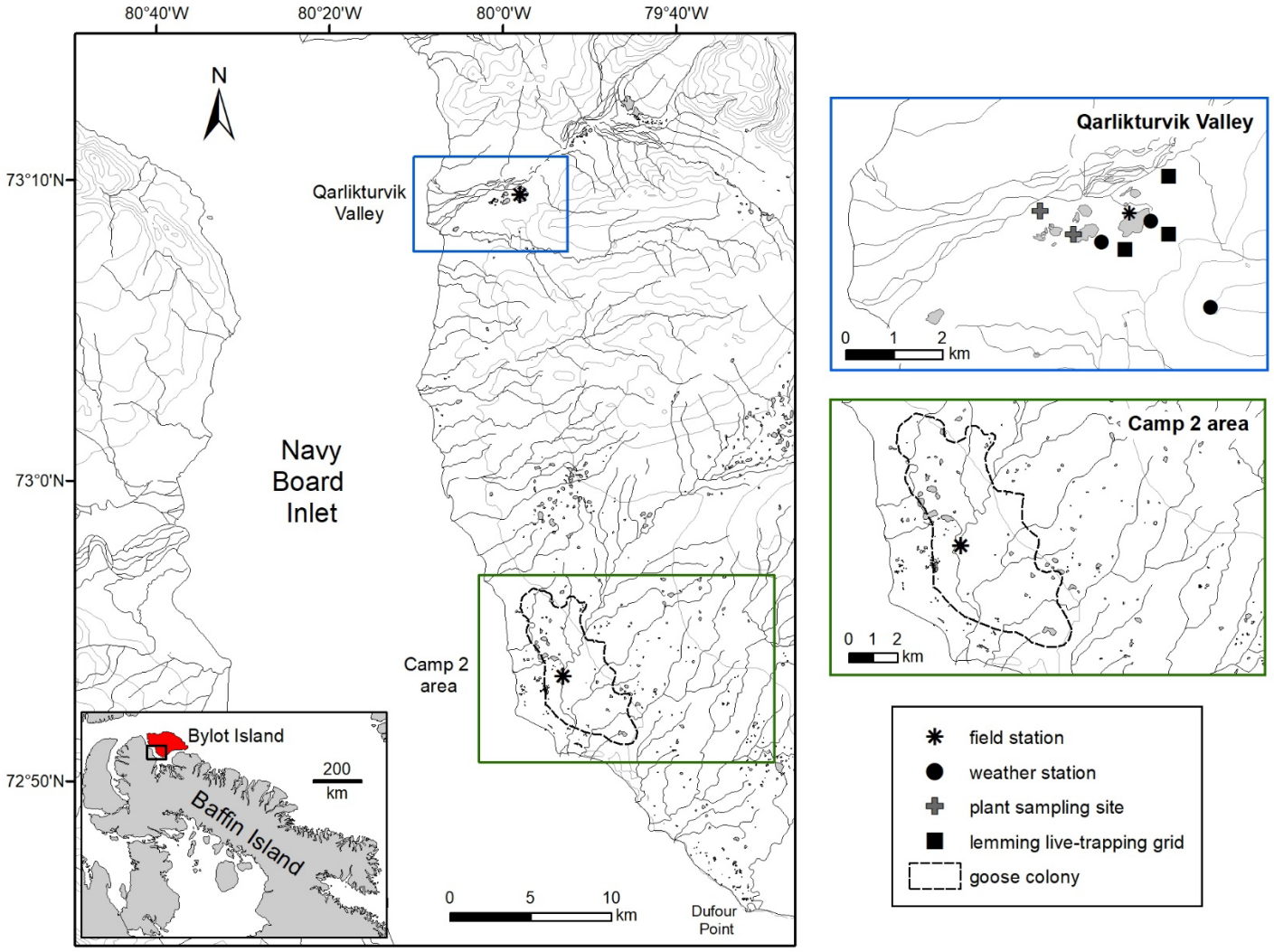

Figure 1. Location of the two main study sites (Qarlikturvik Valley and the Camp 2 area) on the South Plain of Bylot Island, Nunavut. Enlarged maps on the right present these study sites in more details, including locations of our field stations, automated weather stations, wetland sampling sites for plants, lemming live-trapping grids and the extent of the main snow goose colony. The Qarlikturvik Valley is predominantly a brood-rearing area for geese.

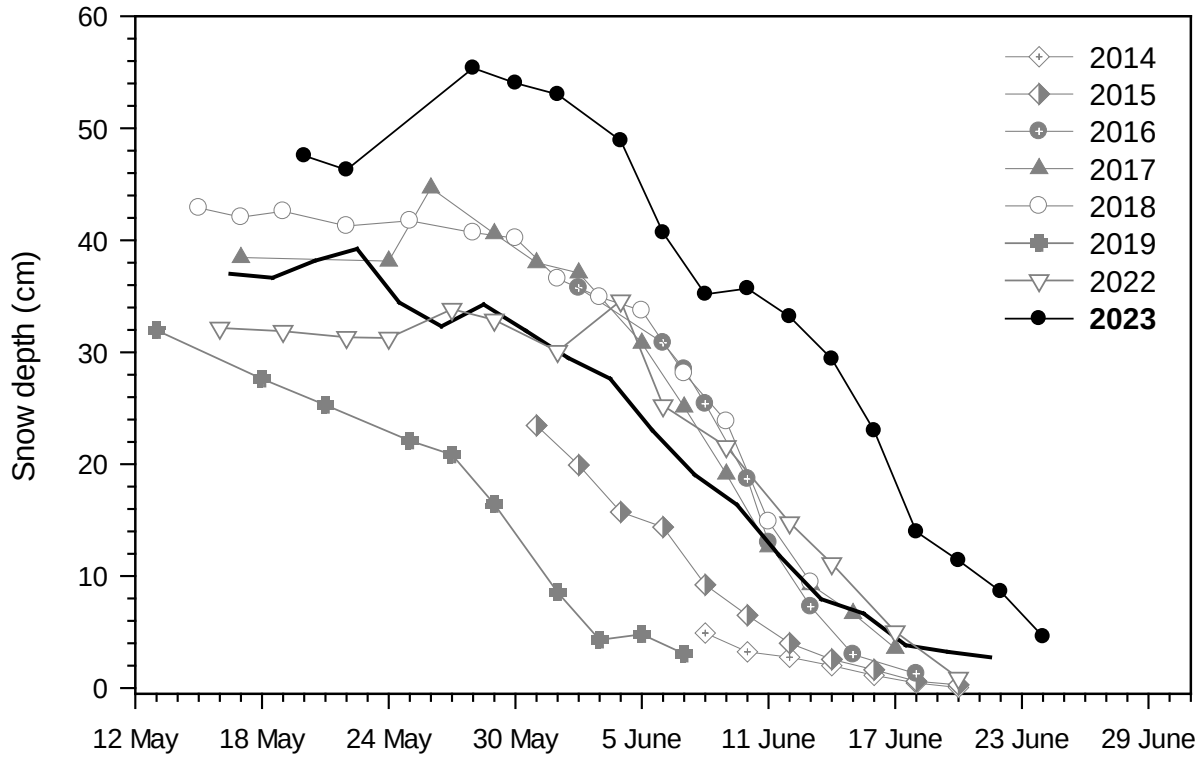

Figure 2. Average snow depth along two transects showing the rate of snowmelt in the lowlands of Bylot Island in spring over the past decade (n = 50 stations). The thick solid line represents the average snowmelt rate since 1995. No field data available in 2020 and 2021 due the covid19 pandemic.

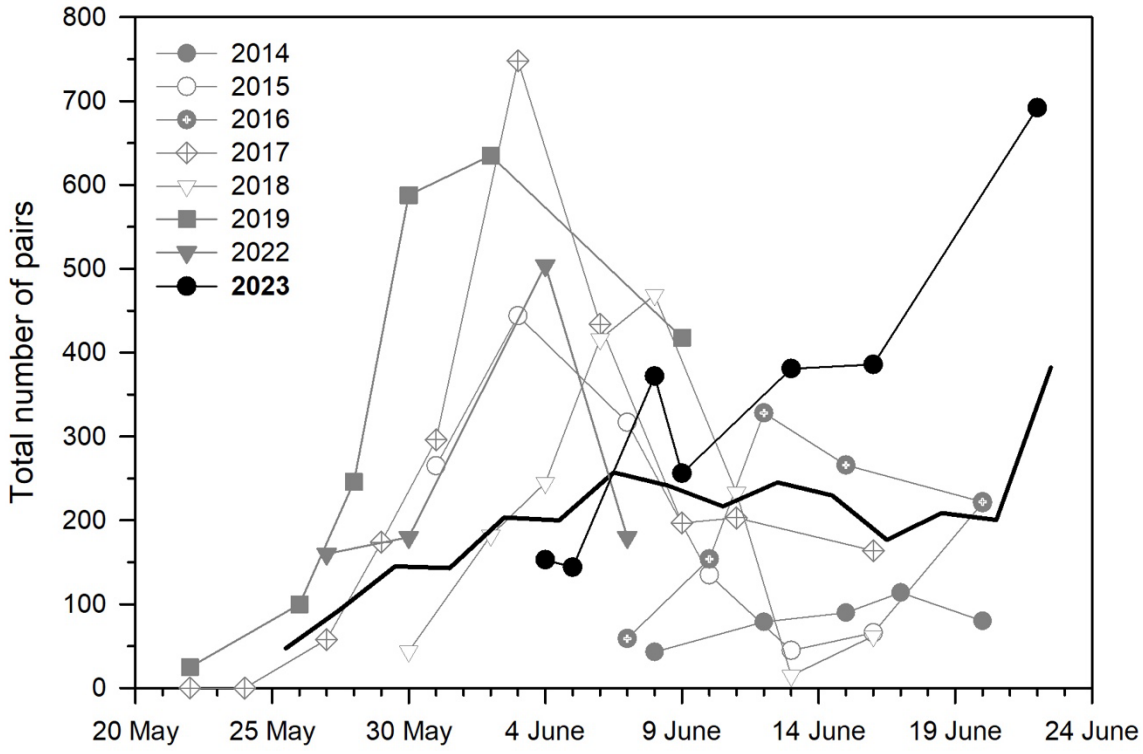

Figure 3. Total number of goose pairs counted in the Qarlikturvik Valley from arrival of our crew on Bylot Island in late May until the end of snowmelt over the past decade. The thick solid line represents the average number of goose pairs counted since 1996. No field data available in 2020 and 2021 due the covid19 pandemic.

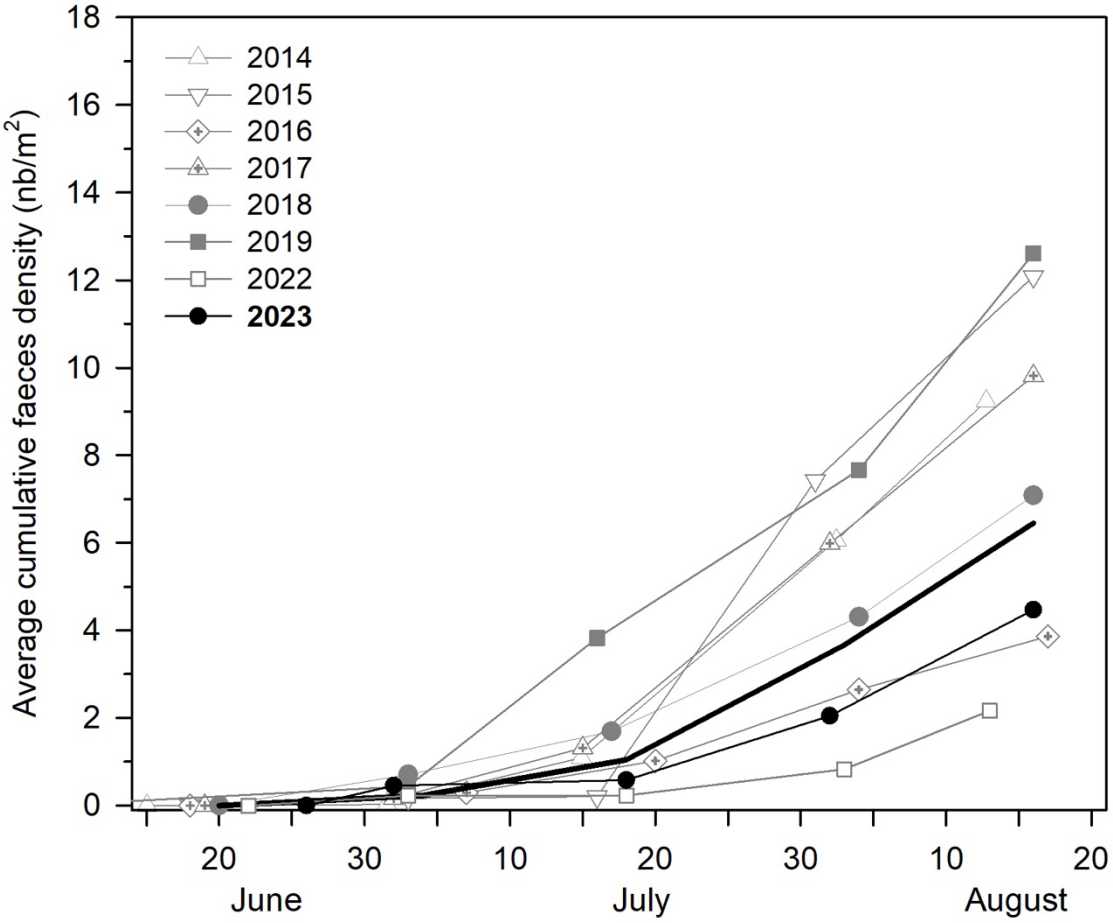

Figure 4. Average cumulative faeces density showing the use of the Qarlikturvik Valley by Greater Snow Goose families on Bylot Island throughout the summer over the past decade (n = 12 transects of 1 x 10 m; except 2013 n = 5 and 2016 n = 11). The thick solid line represents the average cumulative faeces density since 1990. No field data available in 2020 and 2021 due the covid19 pandemic.

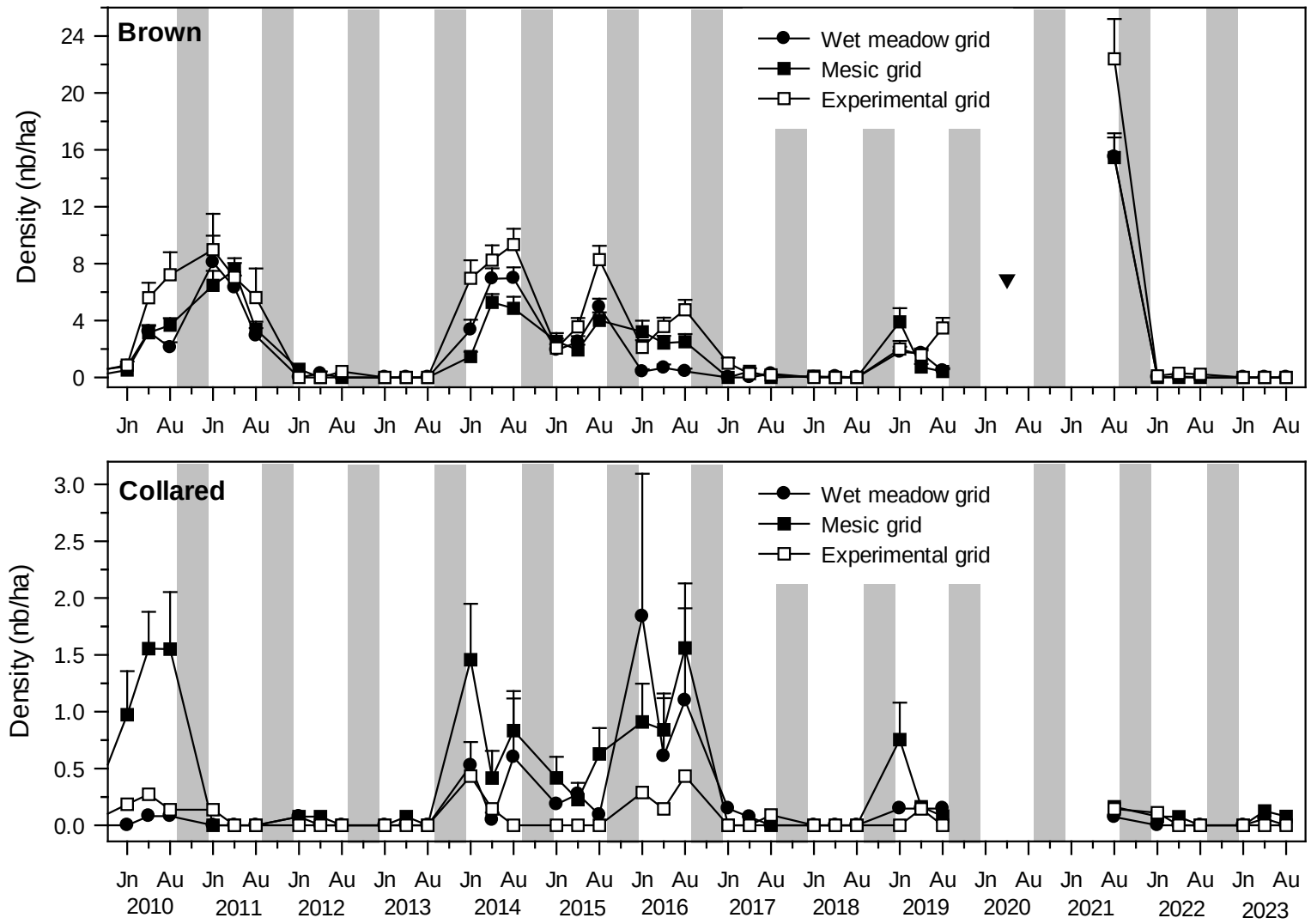

Figure 5. Annual summer density (+ SE) of Brown and Collared Lemmings on three trapping grids located in the Qarlikturvik Valley of Bylot Island over the past 14 years (snow cover was increased from 2008 to 2011 and predators were excluded from 2012 to 2022 on the experimental grid). The gray area indicates winter. Jn = mid-June, Au = mid-August. Lemming density in 2020 (both specied combined; black triangle) was inferred based on the density of snowy owls estimated through satellite images.

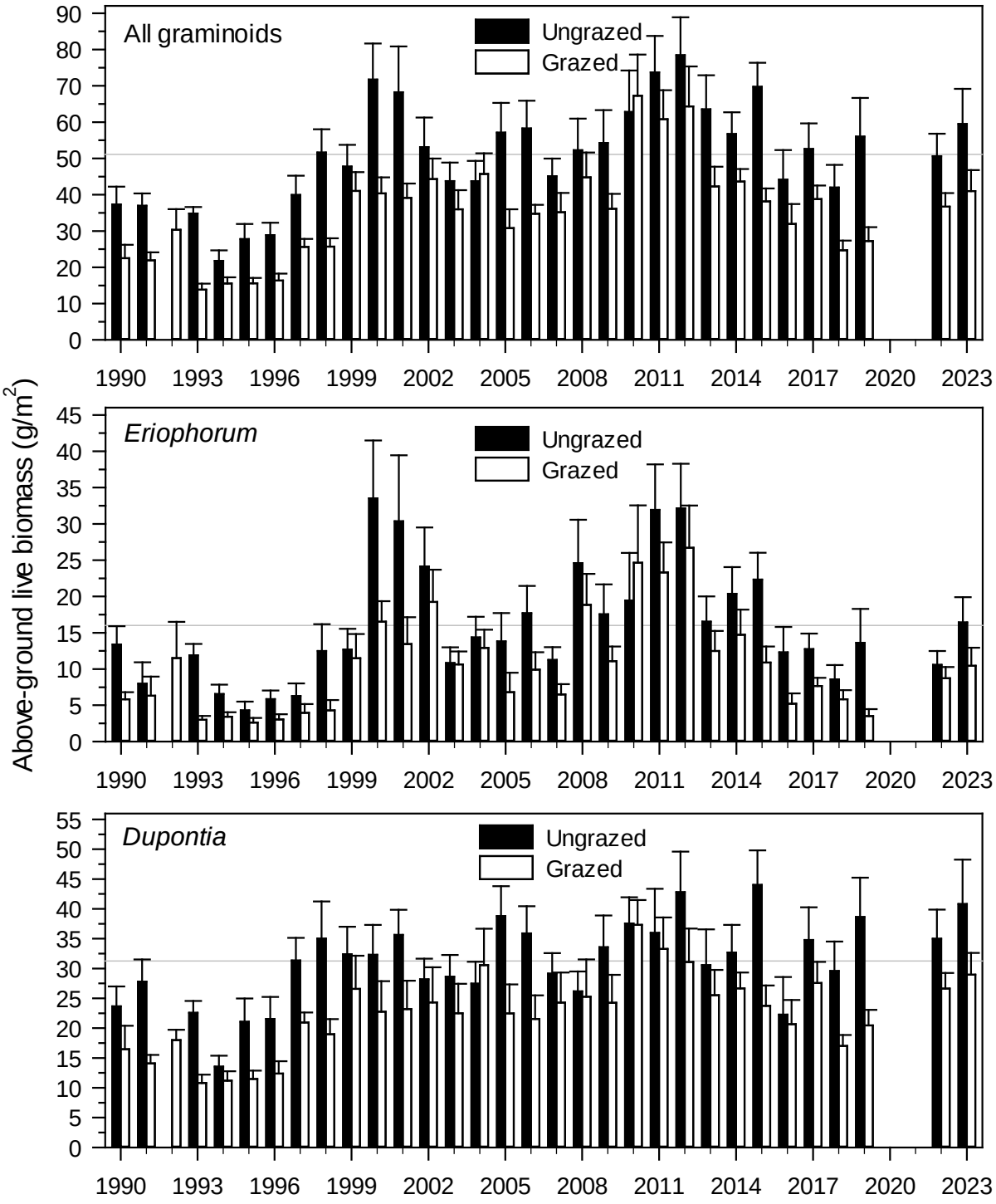

Figure 6. Live above-ground biomass (mean + SE, dry mass) of graminoids around 14 August in grazed and ungrazed wet meadows of the Qarlikturvik Valley, Bylot Island (n = 12, except in 2013, 2014 and 2016, n = 11). Total graminoids include *Eriophorum scheuchzeri*, *Dupontia fisheri* and *Carex aquatilis*. There is no data from ungrazed area in 1992. The solid gray line is the long-term average for ungrazed area. No field data available in 2020 and 2021 due the covid19 pandemic and 2023.

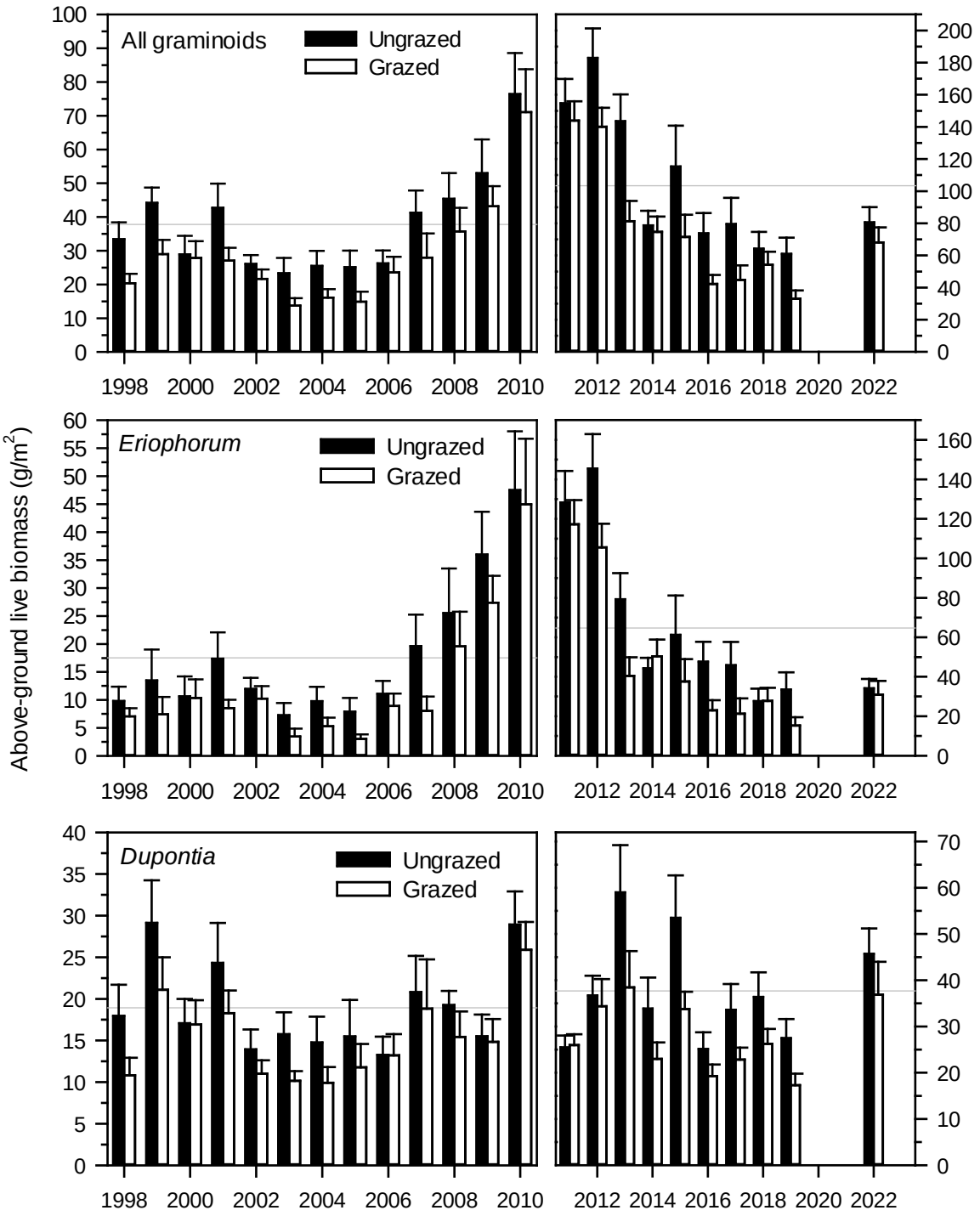

Figure 7. Live above-ground biomass (mean + SE, dry mass) of graminoids in mid-August in grazed and ungrazed wet meadows of the Camp 2 (goose colony), Bylot Island (n = 12, except in 2008 and 2014 n = 8, and 2012, 2013 and 2015 n = 10). Total graminoids include *Eriophorum scheuchzeri*, *Dupontia fisheri* and *Carex aquatilis*. Half of the exclosures had to be moved to a new site in 2011, which explains why the figure was split and the long-term average for ungrazed area (solid gray line) calculated separately before/after 2011. No field data available in 2020 and 2021 due the covid19 pandemic and 2023.

PUBLICATIONS FROM OUR WORK ON BYLOT ISLAND (1990-2024)

Papers in refereed journals

J.263. Gauthier, G., D. Berteaux, J. Bêty, P. Legagneux, D. Fauteux, D. Gravel & M.-C. Cadieux. 2024. Scientific contributions and lessons learned from 30 years of ecological monitoring of the Bylot Island tundra ecosystem. **Frontiers in Ecology and Evolution** 12:1359745. https://doi.org/10.3389/fevo.2024.1359745

J.262. Weiss-Blais, M., D. Bolduc, M.-Z. Corbeil-Robitaille, F. Dulude-de Broin, T. Grandmont, F. LeTourneux, M. Poirier, D. Sarazin & P. Legagneux. 2024. Worth the dip? Polar bear predation on swimming flightless greater snow geese and estimation of energetic efficiency. **Arctic Science** 10:233-239. https://doi.org/10.1139/AS-2023-0036

J.261. Gauthier, G., M.-C. Cadieux, D. Berteaux, J. Bêty, D. Fauteux, P. Legagneux, E. Levesque & C.-A. Gagnon. 2024. Long-term study of the tundra food web at a hotspot of Arctic biodiversity, the Bylot Island Field Station. **Arctic Science** 10: 108-124. https://doi.org/10.1139/as-2023-0029

J.260. Gauthier, G., D. Ehrich, M. Belke-Brea, F. Domine, R. Alisauskas, K. Clark, F. Ecke, N.E. Eide, E. Framstad, J. Frandsen, O. Gilg, et al. 2024. Taking the beat of the Arctic: are lemming population cycles changing due to winter climate? **Proceedings of the Royal Society B** 291:20232361. https://doi.org/10.1098/rspb.2023.2361

J.259. Reséndiz-Infante, C. & G. Gauthier. 2024. Can Arctic migrants adjust their phenology based on temperature encountered during the spring migration? The case of the greater snow goose. **Frontiers in Bird Science** 3:1307628. https://doi.org/10.3389/fbirs.2024.1307628

J.258. Dulude-de Broin, F., J. Clermont, A. Beardsell, L.-P. Ouellet, P. Legagneux, J. Bêty & D. Berteaux. 2023. Predator home range size mediates indirect interactions between prey species in an arctic vertebrate community. **Journal of Animal Ecology** 92:2373-2385. https://doi.org/10.1111/1365-2656.14017

J.257. Perkins, M., I. Stenhouse, R.B. Lanctot, S. Brown, J. Bêty et al. 2023. Factors Influencing Mercury Exposure in Arctic-Breeding Shorebirds. Ecotoxicology 32:1062-1083. https://doi.org/10.1007/s10646-023-02708-w

J.256. LeTourneux, F., F. Dulude-de Broin, T. Grandmont, M.C. Martin, J. Bêty, G. Gauthier & P. Legagneux. 2023. Additional data confirms the impact of the COVID19 lockdown on the behavior and fattening of migratory snow geese. **Biological Conservation** 286:110240. https://doi.org/10.1016/j.biocon.2023.110240

J.255. Seyer, Y., G. Gauthier, J. Bêty, J.-F. Therrien, P. Legagneux & N. Lecomte. 2023. Local food availability and nonbreeding carry-over effects affect breeding propensity and success of a tundra-nesting predator, the Long-tailed Jaeger. **Ornithology** 140:1-12. https://doi.org/10.1093/ornithology/ukad032

J.254. Beardsell, A., D. Berteaux, F. Dulude-De Broin, G. Gauthier, J. Clermont, D. Gravel & J. Bêty. 2023. Predator-mediated interactions through changes in predator home range size can lead to local prey exclusion. **Proceedings of the Royal Society B** 290:20231154. https://doi.org/10.1098/rspb.2023.1154

J.253. Gravel, R., S. Lai & D. Berteaux. 2023. Long-term satellite tracking reveals patterns of long-distance dispersal in juvenile and adult Arctic foxes (*Vulpes lagopus*). Research Society Open Science 10: 220729. https://doi.org/10.1098/rsos.220729

J.252. Poirier, M., G. Gauthier, F. Domine & D. Fauteux. 2023. Lemming winter habitat: the quest for warm and soft snow. **Oecologia** 202:211-225. https://doi.org/10.1007/s00442-023-05385-y

J.251. Moisan, L., D. Gravel, P. Legagneux, G. Gauthier, D.-J. Léandri-Breton, M. Somveille, J.-F. Therrien, J.-F. Lamarre & J. Bêty. 2023. Scaling migrations to communities: an empirical case of migration network in the Arctic. **Frontiers in Ecology and Evolution** 10:1077260. https://doi.org /10.3389/fevo.2022.1077260

J.250. Grandmont, T., P. Fast, I. Grentzmann, G. Gauthier, J. Bêty & P. Legagneux. 2023. Should I breed or should I go? Manipulating individual state during migration influences breeding decisions in a long-lived bird species. **Functional Ecology** 37:602-613. https://doi.org/10.1111/1365-2435.14256

J.249. Bolduc, D., D. Fauteux, C.-A. Gagnon, G. Gauthier, J. Bêty & P. Legagneux. 2023. Testimonials to reconstruct past abundances of wildlife populations. **Basic & Applied Ecology** 68:23-34. https://doi.org /10.1016/j.baae.2022.11.005

J.248. Deschamps, L., V. Maire, L. Chen, D. Fortier, G. Gauthier, A. Morneault, E. Hardy-Lachance, I. Dalcher-Gosselin, F. Tanguay, C. Gignac, J.M. McKenzie, L. Rochefort, & E. Lévesque. 2023. Increased nutrient availability speeds up permafrost development, while goose grazing slows it down in a Canadian High Arctic wetland. **Journal of Ecology** 111:449-463. https://doi.org/10.1111/1365-2745.14037

J.247. Clermont, J., C. Couchoux, S. Lai & D. Berteaux. 2023. Prey availability influences the effect of boldness on reproductive success in a mammalian predator. **Behavioral Ecology and Sociobiology** 77:71. https://doi.org/10.1007/s00265-023-03342-6

J.246. Seyer, Y., G. Gauthier & J.-F. Therrien. 2023. High site fidelity and low divorce rate in an Arctic monogamous seabird. **Ibis** 165:685-690. https://doi.org/10.1111/ibi.13132

J.245. Tardy, O., C. Lenglos, S. Lai, D. Berteaux & P.A. Leighton. 2023. Rabies transmission in the Arctic: an agent-based model reveals the effects of broad-scale movement strategies on contact risk between Arctic foxes. **Ecological Modelling** 476:110207. https://doi.org/10.1016/j.ecolmodel.2022.110207

J.244. Bolduc, D., D. Fauteux, É. Bharucha, J.-M. Trudeau & P. Legagneux. 2022. Ultra-light photosensor collars to monitor Arctic lemming activity. **Animal biotelemetry** 10:31. https://doi.org/10.1186/s40317-022-00302-1

J.243. LeTourneux, F., G. Gauthier, R. Pradel, J. Lefebvre & P. Legagneux. Evidence for synergistic cumulative impacts of marking and hunting in a wildlife species. **Journal of Applied Ecology** 59:2705-2715. https://doi.org/10.1111/1365-2664.14268

J.242. Fauteux, D. & G. Gauthier. 2022. Density-dependent demography and movements in a cyclic brown lemming population. **Ecology and Evolution** 12:e9055. https://doi.org/10.1002/ece3.9055

J.241. Beardsell, A., D. Gravel, J. Clermont, D. Berteaux, G. Gauthier, & J. Bêty. 2022. A mechanistic model of functional response provides new insights into indirect interactions among arctic tundra prey. **Ecology** 103:e3734. https://doi.org/10.1002/ecy.3734

J.240. Barrio, I.C., D. Ehrich, E.M. Soininen, V.T. Ravolainen, C.G. Bueno, O. Gilg, A.M. Koltz, J. Bêty et al. 2022. Developing common protocols to measure tundra herbivory across spatial scales. **Arctic Science** 8:638-379. https://doi.org/10.1139/as-2020-0020

J.239. Gignac, C., L. Rochefort, G. Gauthier, E. Lévesque, V. Maire, L. Deschamps, R. Pouliot, M. Marchand-Roy. 2022. N/P addition is more likely than N addition alone to promote a transition from moss-dominated to graminoid-dominated tundra in the High-Arctic. **Atmosphere** 13:676. https://doi.org/10.3390/atmos13050676

J.238. McCabe, R., J.-F. Therrien, K. Wiebe, G. Gauthier, D. Brinker, S. Weidensaul, D. Reid, F. Doyle, K.O. Jacobsen, T. Aarvak, I.J. Øien, R. Solheim, G. Fitzgérald, N. Smith, K. Bates, M. Fuller, E. Miller & K. H. Elliott. 2022. Density-dependent winter survival of immatures in an irruptive raptor with pulsed breeding. **Oecologia** 198:295-306. https://doi.org/10.1007/s00442-021-05057-9

J.237. Lai, S., C. Warret Rodrigues, D. Gallant, J.D. Roth & D. Berteaux. 2022. Red foxes at their northern edge: competition with the Arctic fox and winter movements. **Journal of Mammalogy** 103:586-597. https://doi.org/10.1093/jmammal/gyab164

J.236. Clermont, J., S. Woodward-Gagné & D. Berteaux. 2021. Digging into the behaviour of an active hunting predator: arctic fox prey caching events revealed by accelerometry. **Movement Ecology** 9:58. https://doi.org/10.1186/s40462-021-00295-1

J.235. Clermont, J., A. Grenier-Potvin, É. Duchesne, C. Couchoux, F. Dulude-de Broin, A. Beardsell, J. Bêty & D. Berteaux. 2021. The predator activity landscape predicts the anti-predator behavior and distribution of prey in a tundra community. **Ecosphere** 12:e03858. https://doi.org/10.1002/ecs2.3858

J.234. Kalhor, D., M. Poirier, A. Pusenkova, X. Maldague, G. Gauthier & T. Galstian. 2021. A camera trap to reveal the obscure world of the arctic subnivean ecology. **IEEE Sensors Journal** 21:28025-28036. https://doi.org/10.1109/JSEN.2021.3122203

J.233. Lamarre, J.-F. G. Gauthier, R. Lanctot, S.T. Saalfeld, O.P. Love, E. Reed, O.W. Johnson, J. Liebezeit, R.L. McGuire, M. Russell, E. Nol, L. Kolosky, F. Sanders, L. Mckinnon, S. Flemming, N. Lecomte, M.A. Giroux, S. Bauer, T. Emmenegger & J. Bêty. 2021. Timing of breeding site availability across the North-American Arctic partly determines spring migration schedule in a long-distance Neotropical migrant. **Frontiers in Ecology and Evolution** 9:710007. https://doi.org/10.3389/fevo.2021.710007

J.232. Poirier, M., D. Fauteux, G. Gauthier, F. Dominé & J.F. Lamarre. 2021. Snow hardness impacts intranivean locomotion of arctic small mammals. **Ecosphere** 12:e03835. https://doi.org/10.1002/ecs2.3835

J.231. Duchesne, E., J.-F. Lamarre, G. Gauthier, D. Berteaux, D. Gravel, & J. Bety. 2021. Variable strength of predator-mediated effects on species occurrence in an arctic terrestrial vertebrate community. **Ecography** 44: 1236–1248. https://doi.org/10.1111/ecog.05760

J.230. Bates, A.E., R.B. Primack & PAN-Environment Working Group (350 authors including G. Gauthier, P. Legagneux, J. Bêty, F. Letourneux, F. Dulude de-Broin & T. Grandmont). 2021. Global COVID-19 lockdown highlights humans as both threats and custodians of the environment. **Biological Conservation** 263:109175. https://doi.org/10.1016/j.biocon.2021.109175

J.229. Domine, F., G. Lackner, D. Sarrazin, M. Poirier & M. Belke-Brea. 2021. Meteorological, snow and soil data (2013–2019) from a herb tundra permafrost site at Bylot Island, Canadian high Arctic, for driving and testing snow and land surface models. **Earth System Science Data** 13:4331–4348. https://doi.org/10.5194/essd-13-4331-2021

J.228. Seyer, Y., G. Gauthier, J.-F. Therrien & N. Lecomte. 2021. Seasonal variations in migration strategy of a long-distance Arctic-breeding seabird. **Marine Ecology Progress Series** 677:1-16. https://doi.org/10.3354/meps13905

J.227. Therrien, J.-F., G. Gauthier, T. McDonald, N. Smith, S. Weidensaul, D. Brinker, R. McCabe, A. Robillard, J. Bêty & N. Lecomte. 2021. The irruptive nature of Snowy Owls: an overview of some of the recent empirical evidence. **AIRO** 29:527-534.

J.226. Frederick, C., C. Girard, G. Wong, M. Lemire, A. Langwieder, M.-C. Martin & P. Legagneux. 2021. Communicating with Northerners on the absence of SARS-CoV-2 in migratory snow geese. **Ecoscience** 28:217-223. https://doi.org/10.1080/11956860.2021.1885803

J.225. Meyer, N., L. Bollache, M. Galipaud, J. Moreau, F.X. Dechaume-Moncharmont, E. Afonso, A. Angerbjörn, J. Bêty et al. 2021. Behavioural responses of breeding arctic sandpipers to ground-surface temperature and primary productivity. **Science of the Total Environment** 755:142485.

J.224. Nishizawa, K., L. Deschamps, V. Maire, J. Bêty, E. Lévesque, R. Kitagawa, S. Masumoto, I. Gosselin, A. Morneault, L. Rochefort, G. Gauthier, Y. Tanabe, M. Uchida & A.S. Mori. 2021. Long-term consequences of goose exclusion on nutrient cycles and plant communities in the High-Arctic. **Polar Science** 27 :100631. https://doi.org/10.1016/j.polar.2020.100631

J.223. Beardsell, A., D. Gravel, D. Berteaux, G. Gauthier, J. Clermont, V. Careau, N. Lecomte, C.-C. Juhasz, P. Royer-Boutin & J. Bêty. 2021. Derivation of predator functional responses using a mechanistic approach in a natural system. **Frontiers in Ecology and Evolution** 9:630944. https://doi.org/10.3389/fevo.2021.630944

J.222. Grenier-Potvin, A., J. Clermont, G. Gauthier & D. Berteaux. 2021. Prey and habitat distribution are not enough to explain predator habitat selection: addressing intraspecific interactions, behavioural state and time. **Movement Ecology** 9:12. https://doi.org/10.1186/s40462-021-00250-0

J.221. Lapierre-Poulin, F., D. Fortier & D. Berteaux. 2021. Low vulnerability of Arctic fox dens to climate change-related geohazards on Bylot Island, Nunavut, Canada. **Arctic Science** 7:746–761. https://doi.org/10.1139/as-2019-0007

J.220. Poulin, M.-P., J. Clermont & D. Berteaux. 2021. Extensive daily movement rates measured in territorial arctic foxes. **Ecology and Evolution** 11:2503-2514.

J.219. LeTourneux, F., T. Grandmont, F. Dulude-de Broin, M.C. Martin, J. Lefebvre, A. Kato, J. Bêty, G. Gauthier & P. Legagneux. 2021. COVID19-induced reduction in human disturbance enhances fattening rate of an overabundant goose species. **Biological Conservation** 255:108968. https://doi.org/10.1016/j.biocon.2021.108968

J.218. McCabe, R.A., J.-F. Therrien, K. L. Wiebe, G. Gauthier, D. Brinker, S. Weidensaul & K. Elliott. 2021. Landscape cover type, not social dominance, is associated with the winter movement patterns of snowy owls in temperate areas. **Ornothology** 138:1-12. https://doi.org/10.1093/ornithology/ukaa082

J.217. Robillard, A., G. Gauthier, J.F. Therrien & J. Bêty. 2021. Linking winter habitat use, diet and reproduction in snowy owls using satellite tracking and stable isotope analyses. **Isotopes in Environmental & Health Studies** 57:166-182. https://doi.org/10.1080/10256016.2020.1835888

J.216. Meyer N., L. Bollache, F.X. Dechaume-Moncharmont, J. Moreau, E. Afonso, A. Angerbjörn, J. Bêty et al. 2020. Nest attentiveness drives nest predation in arctic sandpipers. **Oikos**. 129:1481-1492.

J.215. Reséndiz-Infante, C. & G. Gauthier. 2020. Temporal changes in reproductive success and optimal breeding decisions in a long-distance migratory bird. **Scientific Reports** 10:22067.

J.214. Davidson, S.C., G. Bohrer, E. Gurarie, S. LaPoint, P.J. Mahoney, N.T. Boelman, J.U.H. Eitel, L.R. Prugh, L.A. Vierling, J. Jennewein, E. Grier, O. Couriot, A.P. Kelly, A.J.H. Meddens, R.Y. Oliver, R. Kays, M. Wikelski, T. Aarvak, J.T. Ackerman, J.A. Alves, E. Bayne, B. Bedrosian, J.L. Belant, A.M. Berdahl, A.M. Berlin, D. Berteaux, J. Bêty, G. Gauthier et al. 2020. New ecological insights from the Arctic Animal Movement Archive (AAMA). **Science** 370:712-715.

J.213. Seyer, Y., G. Gauthier, J. Bêty, D. Fauteux & J.F. Therrien. 2020. Resource partitioning among avian predators of the Arctic tundra. **Journal of Animal Ecology** 89:2934-2945.

J.212. Berner, L.T., R. Massey, P. Jantz, B. Forbes, M. Macias-Fauria, I. Myers-Smith, T. Kumpula, G. Gauthier, L. Andreu-Hayles, B.V. Gaglioti, P. Burns, P. Zetterberg, R. D'Arrigo & S.J. Goetz. 2020. Summer warming drives widespread but not uniform greening in the Arctic tundra biome. **Nature Communications** 11:4621.

J.211. Kankaanpää T., E. Vesterinen, B. Hardwick, N.M. Schmidt, T. Andersson, P.E. Aspholm, I. Barrio, N. Beckers, J. Bêty et al. 2020. Parasitoids indicate major climate-induced shifts in Arctic communities. **Global Change Biology** 26:6276-6295.

J.210. Chevallier, C., G. Gauthier, S. Lai & D. Berteaux. 2020. Pulsed food resources affect reproduction but not adult apparent survival in arctic foxes of the High Arctic. **Oecologia** 193:557-569.

J.209. Hutchison, C., F. Guichard, P. Legagneux, G. Gauthier, J. Bêty, D. Berteaux, D. Fauteux & D. Gravel. 2020. Seasonal food webs with migrations: Multi-season models reveal indirect species interactions in the Canadian Arctic tundra. **Philosophical Transactions of the Royal Society A – Physical Sciences A** 20190354.

J.208. Curk, T., I. Pokrovsky, N. Lecomte, T. Aarvak, D.F. Brinker, K. Burnham, A. Dietz, A. Dixon, A. Franke, G. Gauthier, K.-O. Jacobsen, J. Kidd, S.B. Lewis, I.J. Øien, A. Sokolov, V. Sokolov, R. Solheim, S. Weidensaul, K. Wiebe, M. Wikelski, J.F. Therrien & K. Safi. 2020. Arctic avian predators synchronise their spring migration with the northern progression of snowmelt. **Scientific Reports** 10:7220.

J.207. Reséndiz-Infante, C., G. Gauthier, & G. Souchay. 2020. Consequences of a changing environment on the breeding phenology and reproductive success components in a long-distance migratory bird. **Population Ecology** 62:284-296.

J.206. Weiser, E.L., R.B. Lanctot, S.C. Brown, H.R. Gates, J. Bêty et al. 2020. Annual adult survival drives trends in Arctic-breeding shorebirds but knowledge gaps in other vital rates remain. **Condor**. 122:1-14.

J.205. Schmidt, E., D. Fauteux, J.F. Therrien, G. Gauthier & Y. Seyer. 2020. Improving diet assessment of Arctic terrestrial predators with the size of rodent mandibles. **Journal of Zoology** 311:23-32.

J.204. Léandri-Breton, D.-J., Bêty, J. 2020. Vulnerability to predation may affect species distribution: plovers with broader arctic breeding range nest in safer habitat. **Scientific Reports** 10: 5032.

J.203. Ehrich, D., N.M. Schmidt, G. Gauthier, R. Alisauskas, A. Angerbjörn, K. Clark, F. Ecke et al. 2020. Documenting lemming population change in the Arctic: Can we detect trends? **Ambio** 49:786-800.

J.202. Gallant, D., N. Lecomte & D. Berteaux. 2020. Disentangling the relative influences of global drivers of change in biodiversity: A study of the twentieth-century red fox expansion into the Canadian Arctic. **Journal of Animal Ecology** 89: 565–576.

J.201. Juhasz, C.-C., B. Shipley, G. Gauthier, D. Berteaux & N. Lecomte. 2020. Direct and indirect effects of regional and local climatic factors on trophic interactions in the Arctic tundra. **Journal of Animal Ecology** 89:704-715.

J.200. Wheeler, H. C., D. Berteaux, C. Furgal, K. Cazelles, N. G. Yoccoz & D. Grémillet. 2019. Identifying key needs for the integration of social–ecological outcomes in arctic wildlife monitoring. **Conservation Biology** 33:861-872.

J.199. Léandri-Breton, D.-J., J.-F. Lamarre & J. Bêty. 2019. Seasonal variation in migration strategies used to cross ecological barriers in a Nearctic migrant wintering in Africa. **Journal of Avian Biology** 50: e02101.

J.198. Larsson, P., J. von Seth, I.J. Hagen, A. Götherström, S. Androsov, M. Germonpré, N. Bergfeldt, S. Fedorov, N.E. Eide, N. Sokolova, D. Berteaux et al. 2019. Consequences of past climate change and recent human persecution on mitogenomic diversity in the arctic fox. **Philosophical Transaction of the Royal Society – Biological Sciences** 374: 20190212.

J.197. Seyer, Y., G. Gauthier, L. Bernatchez & J.-F. Therrien. 2019. Sexing a monomorphic plumage seabird using morphometrics and assortative mating. **Waterbirds** 42:380-392.

J.196. Rheubottom S.I., I.C. Barrio, M.V. Kozlov, S. Sokovnina, J.M. Alatalo, T. Andersson, A.L. Asmus, C. Baubin, F.Q. Brearley, D.D. Egelkraut, D. Ehrich, G. Gauthier et al. 2019. Hiding in the background: community-level patterns in invertebrate herbivory across the tundra biome. **Polar Biology** 42:1881-1897.

J.195. Poirier, M., G. Gauthier & F. Domine. 2019. What guides lemming movements through the snowpack? **Journal of Mammalogy** 100:1416–1426.

J.194. Tiusanen, M., T. Huotari, P. D. N. Hebert, T. Andersson, A. Asmus, J. l. Bêty, E. Davis, J. Gale, B. Hardwick, D. Hik, C. Körner, R. B. Lanctot, M. J. J. E. Loonen, R. Partanen, K. Reischke, S. T. Saalfeld, F. Senez-Gagnon, P. A. Smith, J. n. Šulavík, I. Syvänperä, C. Urbanowicz, S. Williams, P. Woodard, Y. Zaika & T. Roslin. 2019. Flower-visitor communities of an arcto-alpine plant—Global patterns in species richness, phylogenetic diversity and ecological functioning. **Molecular Ecology** 28:318-335.

J.193. Peck, K., A. Franke, N. Lecomte & J. Bêty. 2018. Nesting habitat selection and distribution of an avian top predator in the Canadian Arctic. **Arctic Science** 4:499-512.

J.192. Weiser E.L., R.B. Lanctot, S.C. Brown, H.R. Gates, R.L. Bentzen, J. Bêty et al. 2018. Environmental and ecological conditions at Arctic breeding sites have limited effects on true survival rates of adult shorebirds. **Auk** 135:29-43.

J.191. Weiser E.L., S.C. Brown, R.B. Lanctot, H.R. Gates, K. Abraham, R.L. Bentzen, J. Bêty et al. 2018. Effects of environmental conditions on reproductive effort and nest success of Arctic-breeding shorebirds. **Ibis** 160:608-623.

J.190. Weiser E.L., S.C. Brown, R.B. Lanctot, H.R. Gates, K. Abraham, R.L. Bentzen, J. Bêty et al. 2018. Life-history tradeoffs revealed by seasonal declines in reproductive traits of Arctic-breeding shorebirds. **Journal Avian Biology** 49:e01531.

J.189. Dominé, F., G. Gauthier, V. Vionnet, D. Fauteux, M. Dumont & M. Barrère. 2018. Snow physical properties may be a significant determinant of lemming population dynamics in the high Arctic. **Arctic Science** 4:813-826.

J.188. Juhasz, C.C., A. Lycke, V. Careau, G. Gauthier, J.-F. Giroux & N. Lecomte. 2018 Picking the right cache: Caching-site selection for egg predators in the Arctic. **Polar Biology** 41:2233-2238.

J.187. Fauteux, D., G. Gauthier, D. Berteaux, R. Palme & R. Boonstra. 2018. Predator-induced stress does not reduce fecundity in High Arctic lemmings. **Oecologia** 187:657-666.

J.186. Robillard, A., G. Gauthier, J.F. Therrien & J. Bêty. 2018. Wintering space use and site fidelity in a nomadic species, the snowy owl. **Journal of Avian Biology** 49(5):e01707.

J.185. Fauteux, D., G. Gauthier, M. Mazerolle, N. Coallier, J. Bêty & D. Berteaux. 2018. Evaluation of invasive and non-invasive methods to monitor rodent abundance in the Arctic. **Ecosphere** 9(2):e02124.

J.184. Fauteux, D., G. Gauthier, G. Slevan-Tremblay & D. Berteaux. 2018. Life in the fast lane: learning from the rare multi-year recaptures of brown lemmings in the High Arctic. **Arctic Science** 4:146-151.

J.183. Fauteux, D., G. Slevan-Tremblay, G. Gauthier & D. Berteaux. 2017. Feeding preference of brown lemmings for plant parts of Arctic willow. **Polar Biology** 40:2329-2334.

J.182. Léandri-Breton, D.-J., M. Jaffré & J. Bêty. 2017. A rare dark morph in the Canadian Arctic raises questions about molting and polymorphism in Long-tailed Jaeger. **Wilson Journal of Ornithology** 130: 337-340.

J.181. Lamarre, J.-F., P. Legagneux, G. Gauthier, E.T. Reed & J. Bêty. 2017. Predator-mediated negative effects of overabundant snow geese on arctic-nesting shorebirds. **Ecosphere** 8(5):e01788.

J.180. Lai S., A. Quiles, J. Lambourdière, D. Berteaux & A. Lalis. 2017. Fine-scale population genetic structure of arctic foxes (*Vulpes lagopus*) in the High Arctic. **BMC Research Notes** 10: 663-671.

J.179. Robillard, A., G. Gauthier, J.F. Therrien, G. Fitzgerald, J.F. Provencher & J. Bêty. 2017. Variability in stable isotopes of snowy owl feathers and contribution of marine resources to their winter diet. **Journal of Avian Biology** 48:759-769.

J.178. Beardsell, A., G. Gauthier, D. Fortier, J.-F. Therrien & J. Bêty. 2017. Vulnerability to geomorphological hazards of an arctic cliff-nesting raptor, the rough-legged hawk. **Arctic Science** 3:203-219.

J.177. Rioux, M.-J., S. Lai, N. Casajus, J. Bêty & D. Berteaux. 2017. Winter home range fidelity and extraterritorial movements of Arctic fox pairs in the Canadian High Arctic. **Polar Research** 36 (Sup1):11.

J.176. Lai, S., J. Bêty & D. Berteaux. 2017. Movement tactics of a mobile predator in a meta-ecosystem with fluctuating resources: the arctic fox in the High Arctic. **Oikos** 126:937-947.

J.175. Norén, K., L. Dalén, Ø. Flagstad, D. Berteaux, J. Wallén & Angerbjörn, A. 2017. Evolution, ecology and conservation – revisiting three decades of arctic fox population genetic research. **Polar Research** 36 (Sup1):4.

J.174. Elmhagen, B., D. Berteaux, R.M. Burgess, D. Ehrich, D. Gallant, H. Henttonen, R.A. Ims et al. 2017. Homage to Hersteinsson and Macdonald: climate warming and resource subsidies cause red fox range expansion and Arctic fox decline. **Polar Research** 36 (sup1): 3.

J.173. Berteaux, D., A.-M. Thierry, R. Alisauskas, A. Angerbjörn, E. Buchel, L. Doronina, D. Ehrich, N.E. Eide, R. Erlandsson, Ø. Flagstad et al. 2017. Harmonizing circumpolar monitoring of Arctic fox: benefits, opportunities, challenges, and recommendations. **Polar Research** 36 (sup1):2.

J.172. Berteaux D., N. Casajus, A. Angerbjörn & E. Fuglei. 2017. Foreword to Supplement 1: research on a polar species - the Arctic fox. **Polar Research** 36 (sup1):1.

J.171. Berteaux, D., G. Gauthier, F. Dominé, R.A. Ims, S.F. Lamoureux, E. Lévesque & N. Yoccoz. 2017. Effects of changing permafrost and snow conditions on tundra wildlife: critical places and times. **Arctic Science**, 3:65-90.

J.170. Fauteux, D., G. Gauthier, D. Berteaux, C. Bosson, R. Palme & R. Boonstra. 2017. Assessing stress in Arctic lemmings: fecal metabolite levels reflect plasma free corticosterone levels. **Physiological and Biochemical Zoology** 90:370-382.

J169. Lefebvre, J., G. Gauthier, J.-F. Giroux, A. Reed, E.T. Reed & L. Bélanger. 2017. The greater snow goose, a case study of managing an overabundant population in North America. **Ambio** 46 (Suppl. 2):S262–S274.

J.168. Chevallier, C., G. Gauthier & D. Berteaux. 2017. Age estimation of live arctic foxes *Vulpes lagopus* based on teeth condition. **Wildlife Biology**, wlb.00304.

J.167. Chevallier, C., S. Lai & D. Berteaux. 2016. Predation of arctic fox pups by common ravens. **Polar Biology** 39:1335-1341.

J.166. Bulla, M., M. Valcu, A.M. Dokter, A.G. Dondua, A. Kosztolányi, A.L. Rutten, B. Helm, B.K. Sandercock, B. Casler, B.J. Ens, C.S. Spiegel, C.J. Hassell, C. Küpper, C. Minton, D. Burgas, D.B.

Lank, D.C. Payer, E.Y. Loktionov, E. Nol, E. Kwon, F. Smith, H.R. Gates, H. Vitnerová, H. Prüter, J.A. Johnson, J.J.H. St Clair, J.-F. Lamarre, J. Rausch, J. Reneerkens, J.R. Conklin, J. Burger, J. Liebezeit, J. Bêty, J.a T. Coleman, J. Figuerola, J.C.E.W. Hooijmeijer, J.A. Alves, J.A.M. Smith, K. Weidinger, K. Koivula, K. Gosbell, K.-M. Exo, L. Niles, L. Koloski, L. McKinnon, L. Praus, M. Klaassen, M.-A. Giroux, M. Sládeček, M L. Boldenow & M.I. Goldstein. 2016. Unexpected diversity in socially synchronized rhythms of shorebirds. **Nature** 540:109-113.

J.165. Battley, P., H. Gates, R. Lanctot, D. Ward, B. Casler, S. Saalfeld, N. Rönkä, K. Sowl, B. Katrínardóttir, E. Nol, B. Sandercock, J. Bêty, M. Boldenow, E. Kwon, O. Gilg, J. Liebezeit, V.-M. Pakanen, K. Gosbell, J.-F. Lamarre, J. Coleman, R. Porter, W. English, J. Rausch, A. Taylor, J. Helmericks, S. Yezerinac, V. Loverti, R. Bentzen, J. Perz, D. Mizrahi, L. McKinnon, K. Koivula, C. Hassell, E. Weiser, M.-A. Giroux, C. Minton, D. Lank, M. Bishop, J. Alves, J. Conklin, J. Reneerkens, A. Johnson, J. Lang, M. Christie, S. Brown, N. Lecomte, N. Senner, P. Smith, L. Bollache & B. Sittler. 2016. Effects of geolocators on hatching success, return rates, breeding movements, and change in body mass in 16 species of Arctic-breeding shorebirds. **Movement Ecology** 4:1-19.

J.164. Gauthier, G., G. Péron, J.-D. Lebreton, P. Grenier & L. van Oudenhove. 2016. Partitioning prediction uncertainty in climate-dependent population models. **Proceedings of the Royal Society B Biological Sciences** 283:20162353.

J.163. Domine, F., M. Barrere, & S. Morin. 2016. The growth of shrubs on high Arctic tundra at Bylot Island: impact on snow physical properties and permafrost thermal regime. **Biogeosciences**, 13:6471-6486.

J.162. Domine, F., M. Barrere, M. & D. Sarrazin. 2016. Seasonal evolution of the effective thermal conductivity of the snow and the soil in high Arctic herb tundra at Bylot Island, Canada. **The Cryosphere** 10:2573-2588.

J.161. Fauteux, D., G. Gauthier & D. Berteaux. 2016. Top-down limitation of lemmings revealed by experimental reduction of predators. **Ecology** 97: 3231-3241.

J.160. Beardsell A., G. Gauthier, J.-F. Therrien & J. Bêty. 2016. Nest site characteristics, patterns of nest reuse and reproductive success in an arctic nesting raptor, the Rough-legged Hawk. **Auk** 133:718-732.

J.159. Robillard, A., J.-F. Therrien, G. Gauthier, J. Bêty & K.M. Clark. 2016. Pulsed resources at tundra breeding sites affect winter irruptions at temperate latitudes of a top predator, the snowy owl. **Oecologia** 181:423–433.

J.158. Marmillot, V., G. Gauthier, M.-C. Cadieux & P. Legagneux. 2016. Plasticity in molt speed and timing in an arctic-nesting goose species. **Journal of Avian Biology** 47:650-658.

J.157. Wheeler, H. C., D. Berteaux, C. Furgal, B. Parlee, N. G. Yoccoz & D. Grémillet. 2016. Stakeholder perspectives on triage in wildlife monitoring in a rapidly changing Arctic. **Frontiers in Ecology and Evolution** 4:128.

J.156. Perreault, N., E. Lévesque, D. Fortier & L.J. Lamarque. 2016. Thermo-erosion gullies boost the transition from wet to mesic vegetation. **Biogeosciences** 13: 1237-1253.

J.155. Lai, S., J. Bêty & D. Berteaux. 2015. Spatio–temporal hotspots of satellite–tracked arctic foxes reveal a large detection range in a mammalian predator. **Movement Ecology** 3:37

J.154. Christin, S., M-H. St-Laurent & D. Berteaux. 2015. Evaluation of Argos telemetry accuracy in the High-Arctic and implications for the estimation of home-range size. **Plos One** 10:e0141999.

J.153. Doiron, M., G. Gauthier & E. Lévesque. 2015. Trophic mismatch and its effects on the growth of young in an Arctic herbivore. **Global Change Biology** 21:4364-4376.

J.152. Fauteux, D., G. Gauthier & D. Berteaux. 2015. Seasonal demography of a cyclic lemming population in the Canadian Arctic. **Journal of Animal Ecology** 84:1412-1422.

J.151. Gauthier, G., P. Legagneux, M.-A. Valiquette, M.-C. Cadieux & J.-F. Therrien. 2015. Diet and reproductive success of an Arctic generalist predator: Interplay between variations in prey abundance, nest site location and intraguild predation. **The Auk** 132:735-747.

J.150. Berteaux, D., D. Gallant, B. N. Sacks & M.J. Statham. 2015. Red foxes (*Vulpes vulpes*) at their expanding front in the Canadian Arctic have indigenous maternal ancestry. **Polar Biology** 38:913-917.

J.149. Souchay, G., G. Gauthier, J. Lefebvre & R. Pradel. 2015. Absence of difference in survival between two distant breeding sites of greater snow geese. **Journal of Wildlife Management** 79:570-578.

J.148. Therrien, J.-F., D. Pinaud, G. Gauthier, N. Lecomte, K. L. Bildstein & J. Bêty. 2015. Is pre-breeding prospecting behaviour affected by snow cover in the irruptive snowy owl? A test using state-space modelling and environmental data annotated via Movebank. **Movement Ecology** 3:1-8.

J.147. Soininen, E.M., G. Gauthier, F. Bilodeau, D. Berteaux, P. Taberlet, L. Gielly, G. Gussarova, E. Bellemain, K. Hassel, H.K. Stenøien, L. Epp, A. Schrøder-Nielsen, C. Brochmann, N.G. Yoccoz. 2015. Highly overlapping winter diet in two sympatric lemming species revealed by DNA metabarcoding. **Plos One** 10:e0115335.

J.146. Therrien, J.-F., G. Gauthier, A. Robillard, N. Lecomte & J. Bêty. 2015. Écologie de la reproduction du harfang des neiges dans l'Arctique canadien. **Le Naturaliste Canadien** 139:17-23.

J.145. Souchay, G., G. Gauthier & R. Pradel. 2014. To breed or not: a novel approach to estimate breeding propensity and potential reproductive trade-offs in an Arctic-nesting species. **Ecology** 95:2745-2756.

J.144. van Oudenhove, L., G. Gauthier & J.D. Lebreton. 2014. Year-round effects of climate on demographic parameters of an arctic nesting goose species. **Journal of Animal Ecology** 83:1322-1333.

J.143. Therrien, J.-F., G. Gauthier, D. Pinaud & J. Bêty. 2014. Irruptive movements and breeding dispersal of snowy owls: a specialised predator exploiting a pulsed resource. **Journal of Avian Biology** 45:536-544.

J.142. Lewis, L.R., E. Behling, H. Gousse, E. Qian, C.S. Elphick, J.-F. Lamarre, J. Bêty, J. Liebezeit & B. Goffinet. 2014. First evidence of bryophite diaspores in the plumage of transequatorial migrant birds. **PeerJ** 2:e424.

J.141. McKinnon, L., D. Berteaux, and J. Bêty. 2014. Predator-mediated interactions between lemmings and shorebirds: a test of the alternative prey hypothesis. **The Auk** 131:619-628.

J.140. Bilodeau, F., G. Gauthier, D. Fauteux & D. Berteaux. 2014. Does lemming winter grazing impact vegetation in the Canadian Arctic? **Polar Biology** 37:845–857.

J.139. Soininen, E.M., D. Ehrich, N. Lecomte, N.G. Yoccoz, A. Tarroux, D. Berteaux, G. Gauthier, L. Gielly, C. Brochmann, G. Gussarova & R.A. Ims. 2014. Sources of variation in small rodent trophic niche: new insights from DNA metabarcoding and stable isotope analysis. **Isotopes in Environmental & Health Studies** 50:361-381.

J.138. Legagneux, P., G. Gauthier, N. Lecomte, N.M. Schmidt, D. Reid, M-C. Cadieux, D. Berteaux, J. Bêty, C.J. Krebs, R.A. Ims, N.G. Yoccoz, R.I.G. Morrison, S.J. Leroux, M. Loreau, & D. Gravel. 2014. Arctic ecosystem structure and functioning shaped by climate and herbivore body size. **Nature Climate Change** 4:379-383.

J.137. Doiron, M., G. Gauthier & E. Lévesque. 2014. Effects of experimental warming on forage quality and availability for an Arctic herbivore. **Journal of Ecology** 102:508-517.

J.136. Souchay, G., O. Gimenez, G. Gauthier & R. Pradel. 2014. Variations in band reporting rate and implications for kill rate in greater snow geese. **Avian Conservation Ecology** 9:1 (www.ace-eco.org/vol9/iss1/ art1/).

J.135. Bêty, J., M. Graham-Sauvé, P. Legagneux, M.-C. Cadieux & G. Gauthier. 2014. Fading indirect effects in a warming Arctic tundra. **Current Zoology** 60:189-202.

J.134. Legagneux, P., A.A. Simard, G. Gauthier & J. Bêty. 2013. Effect of neck collars on the body condition of migrating Greater Snow Geese. **Journal of Field Ornithology** 84:201-209.

J.133. Therrien, J.-F., G. Gauthier, E. Korpimäki & J. Bêty. 2013. Predation pressure imposed by avian predators suggests summer limitation of small mammal populations in the Canadian Arctic. **Ecology** 95:56-67.

J.132. Gauthier, G., J. Bêty, M.-C. Cadieux, P. Legagneux, M. Doiron, C. Chevallier, S. Lai, A. Tarroux & D. Berteaux. 2013. Long-term monitoring at multiple trophic levels suggests heterogeneity in

responses to climate change in the Canadian Arctic tundra. **Philosophical Transaction of the Royal Society – Biological Sciences** 368:20120482.

J.131. Bilodeau, F., G. Gauthier & D. Berteaux. 2013. Effect of snow cover on the vulnerability of lemmings to mammalian predators in the Canadian Arctic. **Journal of Mammalogy** 94:813-819.

J.130. Souchay, G., G. Gauthier & R. Pradel. 2013. Temporal variation of juvenile survival in a long-lived species: the role of parasites and body condition. **Oecologia** 173:151-160.

J.129. Bolduc, E., N. Casajus, P. Legagneux, McKinnon L., H. G. Gilchrist, M. Leung, Morrison R.I.G., Reid D., Smith P.A., Buddle C.M. & J. Bêty. 2013. Terrestrial arthropod abundance and phenology in the Canadian Arctic: modeling resource availability for arctic-nesting insectivorous birds. **Canadian Entomologist** 145:155-170.

J.128. Bilodeau, F., G. Gauthier & D. Berteaux. 2013. The effect of snow cover on lemming population cycles in the Canadian High Arctic. **Oecologia** 172:1007-1016.

J.127. Bilodeau, F., D. Reid, G. Gauthier, C.J. Krebs, D. Berteaux & A. Kenney. 2013. Demographic response of tundra small mammals to a snow fencing experiment. **Oikos** 122:1167-1176.

J.126. Bilodeau, F., A. Kenney, S. Gilbert, E. Hofer, G. Gauthier, D. Reid, D. Berteaux & C.J. Krebs. 2013. Evaluation of a technique to trap lemmings under the snow. **Arctic** 66:32-36.

J.125. McKinnon, L., D. Berteaux, G. Gauthier & J. Bêty. 2013. Predator-mediated interactions between preferred, alternative and incidental prey in the arctic tundra. **Oikos** 122:1042-1048.

J.124. Desnoyers, M., G. Gauthier & J. Lefebvre. 2013. Stable associations within greater snow goose flocks: do they exist beyond family bonds? **The Auk** 129:611-622.

J.123. Ferguson, S., D. Berteaux, A. Gaston, J. Higdon, N. Lecomte, N. Lunn, M. Mallory, J. Reist, D. Russell, N. Yoccoz & X. Zhu. 2012. Time series data for Canadian arctic vertebrates: IPY contributions to science, management, and policy. **Climatic Change** 115:235-258.

J.122. Juillet, C., R. Choquet, G. Gauthier & R. Pradel. 2012. Carry-over effects of spring hunt and climate on recruitment to the natal colony in a migratory species. **Journal of Applied Ecology** 49:1237-1246.

J.121. Doiron, M., P. Legagneux, G. Gauthier & E. Lévesque. 2012. Broad-scale satellite Normalized Difference Vegetation Index data predict plant biomass and peak date of nitrogen concentration in Arctic tundra vegetation. **Applied Vegetation Science** 16:343-351.

J.120. McLennan, D.S., T. Bell, D. Berteaux, W. Chen, L. Copland, R. Fraser, D. Gallant, G. Gauthier, D. Hik, C.J. Krebs, I. Myers-Smith, I. Olthof, D. Reid, W. Sladen, C. Tarnocai, W. Vincent & Y. Zhang. 2012. Recent climate-related terrestrial biodiversity research in Canada's Arctic national parks: review, summary and management implications. Biodiversity 13:157-173.

J.119. Tarroux, A., J. Bêty, G. Gauthier & D. Berteaux. 2012. The marine side of a terrestrial carnivore: intra-population variation in use of allochthonous resources by arctic foxes. **Plos One** 7:e42427.

J.118. Therrien, J.-F., G. Gauthier & J. Bêty. 2012. Survival and reproduction of adult snowy owls tracked by satellite. **Journal of Wildlife Management** 76: 1562-1567.

J.117. Legagneux, P., G. Gauthier, D. Berteaux, J. Bêty, M.-C. Cadieux, F. Bilodeau, E. Bolduc, L. McKinnon, A. Tarroux, J.-F. Therrien, L. Morissette & C.J. Krebs. 2012. Disentangling trophic relationships in a high arctic tundra ecosystem through food web modeling. **Ecology** 93:1707-1716.

J.116. McKinnon, L., M. Picotin, E. Bolduc, C. Juillet & J. Bety. 2012. Timing of breeding, peak food availability, and effects of mismatch on chick growth in birds nesting in the High Arctic. **Canadian Journal of Zoology** 90:961-971.

J.115. Giroux, M.-A., D. Berteaux, N. Lecomte, G. Gauthier, G. Szor & J. Bêty. 2012. Benefiting from a migratory prey: spatio-temporal patterns in subsidization of an arctic predator. **Journal of Animal Ecology** 81: 533-542.

J.114. Reid, D., F. Bilodeau, C.J. Krebs, G. Gauthier, A.J. Kenney, B. S. Gilbert, M.C.Y. Leung, D. Duchesne & E. Hofer. 2012. Lemming winter habitat choice: a snow-fencing experiment. **Oecologia** 168:935-946.

J.113. Krebs, C.J., F. Bilodeau, D. Reid, G. Gauthier, A.J. Kenney, S. Gilbert, D. Duchesne & D.J. Wilson. 2012. Are lemming winter nest counts a good index of population density? **Journal of Mammalogy** 93:87-92.

J.112. Legagneux, P., P.L.F. Fast, G. Gauthier & J. Bêty. 2012. Manipulating individual state during migration provides evidence for carry-over effects modulated by environmental conditions. **Proceedings of The Royal Society B** 279:876-883.

J.111. Cameron, C., D. Berteaux & F. Dufresne. 2011. Spatial variation in food availability predicts extrapair paternity in the arctic fox. **Behavioral Ecology** 22: 1364-1373.

J.110. Duchesne, D., G. Gauthier & D. Berteaux. 2011. Habitat selection, reproduction and predation of wintering lemmings in the Arctic. **Oecologia** 167:967-980.

J.109. Ehrich, D., A. Tarroux, J. Stien, N. Lecomte, S. Killengreen, D. Berteaux & N.G. Yoccoz. 2011. Stable isotope analysis: modelling lipid normalization for muscle and eggs from arctic mammals and birds. **Methods in Ecology and Evolution** 2:66-76.

J.108. Gauthier, G., D. Berteaux, J. Bêty, A. Tarroux, J.-F. Therrien, L. Mckinnon., P. Legagneux & M.-C. Cadieux. 2011. The tundra food web in a changing climate and the role of exchanges between ecosystems. **EcoScience** 18:223-235.

J.107. Therrien, J.-F., G. Gauthier & J. Bêty. 2011. An avian terrestrial predator of the Arctic relies on the marine ecosystem during winter. **Journal of Avian Biology** 42:363-369.

J.106. Therrien, J.-F., G. Fitzgerald, G. Gauthier & J. Bêty. 2011. Diet-tissue discrimination factors of carbon and nitrogen stable isotopes in snowy owl blood. **Canadian Journal of Zoology** 89:343-347.

J.105. Duchesne, D., G. Gautier & D. Berteaux. 2011. Evaluation of a method to determine the breeding activity of lemmings in their winter nests. **Journal of Mammalogy** 92:511-516.

J.104. Mckinnon, L., P.A. Smith, E. Nol, J.L. Martin, F.I. Doyle, K.F. Abraham, H.G. Gilchrist, R.I.G. Morrison & J. Bety. 2010. Lower predation risk for migratory birds at high latitudes. **Science** 327:326-327.

J.103. Therrien, J.-F. 2010. Territorial behavior of Short-eared Owls, *Asio flammeus*, at more than 1000 km north of their current breeding range in north-eastern Canada: evidence of range expansion. **Canadian Field-Naturalist** 124:58-60.

J.102. Juillet, C., R. Choquet, G. Gauthier & R. Pradel. 2010. A capture-recapture model with double-marking, live and dead encounters, and heterogeneity of reporting due to auxiliary mark loss. **Journal of Agricultural, Biological and Environmental Statistics** 16:88-104.

J.101. Côté, G., R. Pienitz, G. Velle & X. Wang. 2010. Impact of geese on the limnology of lakes and ponds from Bylot Island (Nunavut, Canada). **International Review of Hydrobiology** 95:105-129.

J.100. Tarroux, A., D. Berteaux & J. Bêty. 2010. Northern nomads: ability for extensive movements in adult arctic foxes. **Polar Biology** 33:1021-1026.

J.99. Tarroux, A., D. Ehrich, N. Lecomte, T.D. Jardine, J. Bêty & D. Berteaux. 2010. Sensitivity of stable isotope mixing models to variation in isotopic ratios: evaluating consequences of lipid extraction. **Methods in Ecology and Evolution** 1:231-241.

J.98. Pouliot R., M. Marchand-Roy, L. Rochefort & G. Gauthier. 2010. Estimating moss growth in arctic conditions: a comparison of three methods. **The Bryologist** 113:322-332.

J.97. Béchet, A., J.-F. Giroux, G. Gauthier & M. Belisle. 2010. Why roost at the same place? Exploring short-term fidelity in staging snow geese. **Condor** 112:294-303.

J.96. Valéry, L., M.-C. Cadieux & G. Gauthier. 2010. Spatial heterogeneity of primary production as both cause and consequence of foraging patterns of an expanding Greater Snow Goose colony. **Ecoscience** 17:9-19.

J.95. Morrissette, M., J. Bêty, G. Gauthier, A. Reed & J. Lefebvre. 2010. Climate, indirect trophic interactions, carry-over and density-dependent effects: which factors drive high arctic snow goose productivity? **Oikos** 119:1181-1191.

J.94. Gruyer, N., G. Gauthier & D. Berteaux. 2010. Demography of two lemming species on Bylot Island, Nunavut, Canada. **Polar Biology** 33:725-736.

J.93. McKinnon, L., & J. Bêty. 2009. Effect of camera monitoring on survival rates of High-Arctic shorebird nests. **Journal of Field Ornithology** 80:280-288.

J.92. Pouliot R., L. Rochefort, and G. Gauthier. 2009. Moss carpets constrain the fertilizing effects of herbivores on graminoid plants in arctic polygon fens. **Botany** 87:1209-1222.

J.91. Gagnon, C.A. & D. Berteaux. 2009. Integrating Traditional Ecological Knowledge and Ecological Science: a question of scale. **Ecology and Society** 14, article 19.

J.90. Gauthier, G., C.J. Krebs, D. Berteaux & D. Reid. 2009. Arctic lemmings are not simply food limited – a comment on Oksanen et al. **Evolutionary Ecology Research** 11: 483-484.

J.89. Lecomte, N., G. Gauthier, J.-F. Giroux, E. Milot & L. Bernatchez. 2009. Tug of war between continental gene flow and rearing site philopatry in a migratory bird: the sex-biased dispersal paradigm reconsidered. **Molecular Ecology** 18:593-602.

J.88. Lecomte, N., G. Gauthier, & J.-F. Giroux. 2009. A link between water availability and nesting success mediated by predator-prey interactions in the Arctic. **Ecology** 90:465-475.

J.87. Ellis, C.J., L. Rochefort, G. Gauthier & R. Pienitz. 2008. Paleoecological evidence for transitions between contrasting land-forms in a polygon-patterned High Arctic wetland. **Arctic, Antarctic and Alpine Research** 40:624-637.

J.86. Careau, V., J.-F. Giroux, G. Gauthier & D. Berteaux. 2008. Surviving on cached food – the energetics of egg-caching by arctic foxes. **Canadian Journal of Zology** 86:1217-1223.

J.85. Jasmin, J.N., L. Rochefort & G. Gauthier. 2008. Goose grazing influences the fine-scale structure of an arctic wetland bryophyte community. **Polar Biology** 31:1043-1049.

J.84. Dickey M.-H., G. Gauthier, & M.-C. Cadieux. 2008. Climatic effects on the breeding phenology and reproductive success of an arctic-nesting goose species. **Global Change Biology** 14:1973-1985.

J.83. Gruyer, N., G. Gauthier & D. Berteaux. 2008. Cyclic dynamics of sympatric lemming populations on Bylot Island, Nunavut, Canada. **Canadian Journal of Zoology** 86:910-917.

J.82. Careau, V., N. Lecomte, J. Bêty, J.-F. Giroux, G. Gauthier & D. Berteaux. 2008. Food hoarding of pulsed resources: temporal variations in egg-caching behaviour of arctic fox. **Ecoscience** 15:268-273.

J.81. Lecomte, N., V. Careau, G. Gauthier, & J.-F. Giroux. 2008. Predator behaviour and predation risk in the heterogeneous Arctic environment. **Journal of Animal Ecology** 77:439-447.

J.80. Gauthier G. & J.-D. Lebreton. 2008. Analysis of band-recovery data in a multisate capture-recapture framework. **Canadian Journal of Statistics** 36:1-15.

J.79. Szor, G., D. Berteaux & G. Gauthier. 2008. Finding the right home: distribution of food resources and terrain characteristics influence selection of denning sites and reproductive dens in arctic foxes. **Polar Biology** 31:351-362.

J.78. Lecomte, N., G. Gauthier, & J.-F. Giroux. 2008. Breeding dispersal in a heterogeneous landscape: the influence of habitat and nesting success in greater snow geese. **Oecologia** 155:33-41.

J.77. Carmichael, L.E., G. Szor, D. Berteaux, M.-A. Giroux, C. Cameron & C. Strobeck. 2007. Free love in the far North: plural breeding and polyandry of arctic foxes (*Alopex lagopus*) on Bylot Island, Nunavut. **Canadian Journal of Zoology** 85:338-343.

J.76. Carmichael, L. E., J. Krizan, J. A. Nagy, E. Fuglei, M. Dumond, D. Johnson, A. Veitch, D. Berteaux & C. Strobeck. 2007. Historical and ecological determinants of genetic structure in arctic canids. **Molecular Ecology** 16:3466–3483.

J.75. Gauthier, G., P. Besbeas, J.-D. Lebreton & B.J.T. Morgan 2007. Population growth in snow geese: A modeling approach integrating demographic and survey information. **Ecology** 88:1420-1429.

J.74. Audet, B., E. Lévesque & G. Gauthier. 2007. Seasonal variation in plant nutritive quality for greater snow goose goslings in mesic tundra. **Canadian Journal of Botany** 85:457-462.

J.73. Audet, B., G. Gauthier & E. Lévesque. 2007. Feeding ecology of greater snow goose goslings in mesic tundra on Bylot Island, Nunavut, Canada. **Condor** 109:361-376.

J.72. Careau, V., J.F. Giroux, & D. Berteaux. 2007. Cache and carry: hoarding behaviour of arctic fox. **Behavioral Ecology and Sociobiology** 62 :87-96.

J.71. Careau, V., N. Lecomte, J.F. Giroux, & D. Berteaux. 2007. Common ravens raid arctic fox food caches. **Journal of Ethology** 25:79-82.

J.70. Mainguy, J., G. Gauthier, J.-F. Giroux & I. Duclos. 2006. Habitat use and behaviour of greater snow geese during movements from nesting to brood-rearing areas. **Canadian Journal of Zoology** 84:1096-1103.

J.69. Mainguy, J., G. Gauthier, J.-F. Giroux & J. Bêty. 2006. Gosling growth and survival in relation to brood movements in Greater Snow Geese (*Chen caerulescens atlantica*). **The Auk** 123:1077-1089.

J.68. Lecomte, N., G. Gauthier, L. Bernatchez & J.-F. Giroux. 2006. A new non-damaging blood sampling technique of waterfowl embryos. **Journal of Field Ornithology** 77:24-27.
J.67. Gauthier, G., F. Fournier & J. Larochelle. 2006. The effect of environmental conditions on early growth in geese. **Acta Zoologica Sinica** 52(supplement):670-674.
J.66. Gauthier, G., J.-F. Giroux & L. Rochefort. 2006. The impact of goose grazing on arctic and temperate wetlands. **Acta Zoologica Sinica** 52(supplement):108-111.
J.65. Ellis, C.J. & L. Rochefort. 2006. Long-term sensitivity of a High Arctic wetland to Holocene climate change. **Journal of Ecology** 94:441-454.
J.64. Féret M., J. Bety, G. Gauthier, J.-F. Giroux & G. Picard. 2005. Are abdominal profiles useful to assess body condition of spring staging Greater Snow Geese? **Condor** 107:694-702.
J.63. Gauthier, G., J.-F. Giroux, A. Reed, A. Béchet & L. Bélanger. 2005. Interactions between land use, habitat use, and population increase in greater snow geese: what are the consequences for natural wetlands? **Global Change Biology** 11:856-868.
J.62. Calvert, A.M. & G. Gauthier. 2005. Effects of exceptional conservation measures on survival and seasonal hunting mortality in greater snow geese. **Journal of Applied Ecology** 42:442-452.
J.61. Menu, S., G. Gauthier & A. Reed. 2005. Survival of young greater snow geese during the fall migration. **The Auk** 122:479-496.
J.60. Calvert, A.M., G. Gauthier & A. Reed. 2005. Spatiotemporal heterogeneity of greater snow goose harvest and implications for hunting regulations. **Journal of Wildlife Management** 69:561-573.
J.59. Reed, E.T., G. Gauthier & R. Pradel. 2005. Effects of neck bands on reproduction and survival of female greater snow geese. **Journal of Wildlife Management** 69:91-100.
J.58. Bêty, J., J.-F. Giroux, & G. Gauthier. 2004. Individual variation in timing of migration: causes and reproductive consequences in greater snow geese (*Anser caerulescens atlanticus*). **Behavioural Ecology and Sociobiology** 57:1-8.
J.57. Gauthier, G. & J.-D. Lebreton. 2004. Population models in greater snow geese: a comparison of different approaches. **Animal Biodiversity and Conservation** 27:503-514.
J.56. Reed, E.T., G. Gauthier & J.-F. Giroux. 2004. Effects of spring conditions on breeding propensity of greater snow goose females. **Animal Biodiversity and Conservation** 27:35-46.
J.55. Béchet, A., J.-F. Giroux, & G. Gauthier. 2004. The effects of disturbance on behaviour, habitat use and energy of spring staging snow geese. **Journal of Applied Ecology** 41:689-700.
J.54. Béchet, A., A. Reed, N. Plante, J.-F. Giroux & G. Gauthier. 2004. Estimating the size of large bird populations: the case of the greater snow goose. **Journal of Wildlife Management** 68:639-649.
J.53. Gauthier, G., J.-F. Giroux, J. Bêty & L. Rochefort. 2004. Trophic interactions in a High Arctic Snow Goose colony. **Integrative and Comparative Biology** 44:119-129.
J.52. Ellis, C.J. & L. Rochefort. 2004. Century-scale development of polygon-patterned tundra wetland, Bylot Island (73 degrees N, 80 degrees W). **Ecology** 85:963-978.
J.51. Gauthier, G., J. Bêty & K. Hobson. 2003. Are greater snow geese capital breeders? new evidence from a stable isotope model. **Ecology** 84:3250–3264.
J.50. Demers, F., J.-F. Giroux, G. Gauthier & J. Bêty. 2003. Effects of collar-attached transmitters on behavior, pair bond, and breeding success of snow geese. **Wildlife Biology** 9:161-170.
J.49. Féret, M., G. Gauthier, A. Béchet, J.-F. Giroux & K. Hobson. 2003. Effect of a spring hunt on nutrient storage by greater snow geese in southern Québec. **Journal of Wildlife Management** 67:796-807.
J.48. Béchet, A., J.-F. Giroux, G. Gauthier, J.D. Nichols & J. Hines. 2003. Spring hunting changes the regional movements of migrating greater snow geese. **Journal of Applied Ecology** 40:553-564.
J.47. Bêty, J., G. Gauthier, & J.-F. Giroux. 2003. Body condition, migration and timing of reproduction in snow geese: a test of the condition-dependent model of optimal clutch size. **American Naturalist** 162:110-121.
J.46. Cooch, E.G., G. Gauthier & R. Rockwell. 2003. Apparent differences in stochastic growth rates based on timing of census: a cautionary note. **Ecological Modelling** 159:133-143.
J.45. Reed, E.T., J. Bêty, J. Mainguy, G. Gauthier & J.-F. Giroux. 2003. Molt migration in relation to breeding success in greater snow geese. **Arctic** 56:76-81.

J.44. Reed, E.T., G. Gauthier, R. Pradel, & J.-D. Lebreton. 2003. Age and environmental conditions affect recruitment in greater snow geese. **Ecology** 84:219-230.
J.43. Fournier, F. & G. Gauthier. 2002. The effect of food quality on developmental plasticity and digestive efficiency in greater snow goose goslings. **Integrative and Comparative Biology** 42:1231-1231.
J.42. Reed, A., R.J. Hughes, & H. Boyd. 2002. Patterns of distribution and abundance of Greater Snow Geese on Bylot Island, Nunavut, Canada 1983-1998. **Wildfowl** 53:53-65.
J.41. Righi, M. & G. Gauthier. 2002. Natural infection by intestinal cestodes: variability and effect on growth in greater snow goose goslings. **Canadian Journal of Zoology** 80:1077-1083.
J.40. Bêty, J., G. Gauthier, E. Korpimäki & J.-F. Giroux. 2002. Shared predators and indirect trophic interactions: lemming cycles and arctic-nesting geese. **Journal of Animal Ecology** 71:88-98.
J.39. Mainguy, J., J. Bêty, G. Gauthier & J.-F. Giroux. 2002. Are body condition and reproductive effort of laying greater snow geese affected by the spring hunt? **Condor** 104:156-162.
J.38. Menu, S., G. Gauthier & A. Reed. 2002. Changes in survival rates and population dynamics of greater snow geese over a 30-year period: Implications for hunting regulations. **Journal of Applied Ecology** 39:91-102.
J.37. Gauthier, G., R. Pradel, S. Menu & J.-D. Lebreton. 2001. Seasonal survival of greater snow geese and effect of hunting under dependence in sighting probability. **Ecology** 82:3105-3119.
J.36. Bêty, J. & G. Gauthier. 2001. Effects of nest visits on predators activity and predation rate in a snow goose colony. **Journal of Field Ornithology** 72:573-586.
J.35. Bêty, J., G. Gauthier, J.-F. Giroux & E. Korpimäki. 2001. Is goose nesting success and lemming cycles linked? Interplay between nest density and predators. **Oikos** 93:388-400.
J.34. Poussart, C., G. Gauthier & J. Larochelle. 2001. Incubation behavior of greater snow geese in relation to weather conditions. **Canadian Journal of Zoology** 79:671-678.
J.33. Massé, H., Rochefort, L. & G. Gauthier. 2001. Carrying capacity of wetland habitats used by breeding greater snow geese. **Journal of Wildlife Management** 65:271-281.
J.32. Menu, S., G. Gauthier & A. Reed. 2001. Survival of juvenile greater snow geese immediately after banding. **Journal of Field Ornithology** 72:282-290.
J.31. Morez, V., G. Gauthier & A. Reed. 2000. Effect of body condition on the vulnerability of greater snow geese to hunting and capture. **Journal of Wildlife Management** 64:875-886.
J.30. Fortin, D., & G. Gauthier. 2000. The effect of postural adjustment on the thermal environment of greater snow goose goslings. **Canadian Journal of Zoology** 78:817-821.
J.29. Poussart, C., J. Larochelle & G. Gauthier. 2000. The thermal regime of eggs during laying and incubation in Greater Snow Geese. **Condor** 102:292-300.
J.28. Lepage, D., G. Gauthier & S. Menu. 2000. Reproductive consequences of egg-laying decisions in snow geese. **Journal of Animal Ecology** 69:414-427.
J.27. Menu, S., J.B. Hestbeck, G. Gauthier & A. Reed. 2000. Effects of neck bands on survival of greater snow geese. **Journal of Wildlife Management** 64:544-552.
J.26. Fortin, D., G. Gauthier & J. Larochelle. 2000. Body temperature and resting behavior of greater snow goose goslings in the High Arctic. **Condor** 102:163-171.
J.25. Fortin, D., J. Larochelle & G. Gauthier. 2000. The effect of wind, radiation and body orientation on the thermal environment of greater snow goose goslings. **Journal of Thermal Biology** 25:227-238.
J.24. Piedboeuf, N. & G. Gauthier. 1999. Nutritive quality of forage plants for greater snow goose goslings: when is it advantageous to feed on grazed plants? **Canadian Journal of Zoology** 77:1908-1918.
J.23. Blouin, F., J.-F. Giroux, J. Ferron, G. Gauthier, & J. Doucet. 1999. The use of satellite telemetry to track greater snow geese. **Journal of Field Ornithology** 70:187-199.
J.22. Lepage, D., A. Desrochers & G. Gauthier. 1999. Seasonal decline of growth and fledging success in snow geese *Anser caerulescens*: an effect of date or parental quality? **Journal of Avian Biology** 30:72-78.
J.21. Lepage, D., D. N. Nettleship, and A. Reed. 1998. Birds of Bylot Island and adjacent Baffin Island, Northwest Territories, Canada, 1979 to 1997. **Arctic** 51:125-141.
J.20. Lesage, L. & G. Gauthier. 1998. Effect of hatching date on body and organ development in greater snow goose goslings. **Condor** 100:316-325.

J.19. Lepage, D., G. Gauthier & A. Desrochers. 1998. Larger clutch size increases fledging success and offspring quality in a precocial species. **Journal of Animal Ecology** 67:210-216.
J.18. Lepage, D., G. Gauthier & A. Reed. 1998. Seasonal variation in growth of greater snow goose goslings: the role of food supply. **Oecologia** 114:226-235.
J.17. Tremblay, J.-P., G. Gauthier, D. Lepage, & A. Desrochers. 1997. Factors affecting nesting success in greater snow geese: effects of habitat and association with snowy owls. **Wilson Bulletin** 109:449-461.
J.16. Lesage, L. & G. Gauthier. 1997. Growth and organ development in greater snow goose goslings. **The Auk** 114:229-241.
J.15. Gauthier, G., L. Rochefort & A. Reed. 1996. The exploitation of wetland ecosystems by herbivores on Bylot Island. **Geoscience Canada** 23:253-259.
J.14. Lepage, D., G. Gauthier & A. Reed. 1996. Breeding site infidelity in greater snow goose: a consequence of constraints on laying dates? **Canadian Journal of Zoology** 74:1866-1875.
J.13. Beaulieu, J., G. Gauthier & L. Rochefort. 1996. The growth response of graminoid plants to goose grazing in a High arctic environment. **Journal of Ecology** 84:905-914.
J.12. Reed, A., R.J. Hughes & G. Gauthier. 1995. Incubation behavior and body mass of female greater snow geese. **Condor** 97:993-1001.
J.11. Gauthier, G. & R.J. Hughes. 1995. The palatability of arctic willow for greater snow geese: the role of nutrients and deterring factors. **Oecologia** 103:390-392.
J.10. Choinière, L. & G. Gauthier. 1995. Energetics of reproduction in female and male greater snow geese. **Oecologia** 103:379-389.
J.09. Gauthier, G., R.J. Hughes, A. Reed, J. Beaulieu & L. Rochefort. 1995. Effect of grazing by greater snow geese on the production of graminoids at an arctic site (Bylot Island, NWT, Canada). **Journal of Ecology** 83:653-664.
J.08. Lindholm, A., G. Gauthier & A. Desrochers. 1994. Effects of hatch date and food supply on gosling growth in arctic-nesting greater snow geese. **Condor** 96:898-908.
J.07. Hughes, R.J., G. Gauthier & A. Reed. 1994. Summer habitat use and behaviour of greater snow geese *Anser caerulescens atlanticus.* **Wildfowl** 45:49-64.
J.06. Hughes, R.J., A. Reed & G. Gauthier. 1994. Space and habitat use by greater snow goose broods on Bylot Island, Northwest Territories. **Journal of Wildlife Management** 58:536-545.
J.05. Manseau, M. & G. Gauthier. 1993. Interactions between greater snow geese and their rearing habitat. **Ecology** 74:2045-2055.
J.04. Gauthier, G. 1993. Feeding ecology of nesting greater snow geese. **Journal of Wildlife Management** 57:216-223.
J.03. Gauthier, G., Giroux, J.-F. & J. Bédard. 1992. Dynamics of fat and protein reserves during winter and spring migration in greater snow geese. **Canadian Journal of Zoology** 70:2077-2087.
J.02. Reed, A., H. Boyd, P. Chagnon, and J. Hawkings. 1992. The numbers and distribution of greater snow geese on Bylot Island and near Jungersen Bay, Baffin Island, in 1988 and 1983. **Arctic** 45:115-119.
J.01. Gauthier, G. & J. Tardif. 1991. Female feeding and male vigilance during nesting in greater snow geese. **Condor** 93:701-711.

Reports and other publications

R.30. Gagnon, C.-A., J. Gérin-Lajoie, J. Bêty & P. Legagneux. 2020. Sharing workshop on ecological monitoring (Mittimatalik, Nunavut, February 4-5, 2020). Centre d'études nordiques, Université Laval, Université du Québec à Rimouski and Université du Québec à Trois-Rivières, 24 pp. https://bylot.cen.ulaval.ca/document/report_sharing_workshop_pondinlet_2020_en.pdf
R.29. Simon, A., D. Belanger, D. Berteaux, K. Hueffer, E. E. Rees & P. A. Leighton. 2020. Chapter 26b: Ecology of rabies in the Arctic fox (Vulpes lagopus). Pages 453–465 Taking the Bite out of rabies: The evolution of rabies management in Canada. David Gregory and Rowland Tinline. Univeristy of Toronto Press, Toronto, Canada.

R.28. Kalhor, D., A. Pusenkova, M. Poirier, G. Gauthier, T. Galstian & X. Maldague. 2019. Using near infrared for studying lemming subnival behavior in the High Arctic. Proceedings 27(11) http://dx.doi.org/10.3390/proceedings2019027011

R.27. Cadieux, M.C., G. Gauthier, J.F. Therrien, Y. Seyer & A. Beardsell. 2019. Technical manual for monitoring avian predators of the Arctic tundra – Version 1. Centre d'études nordiques, Université Laval, Québec, 61 pages. https://bylot.cen.ulaval.ca/document/manual_avian_predator_monitoring_v1.pdf

R.26. Lai, S. & D. Berteaux. 2019. Technical manual for monitoring foxes in the Arctic – Version 1. Canada Research Chair on Northern Biodiversity, Université du Québec à Rimouski, Quebec, 25 pages. https://bylot.cen.ulaval.ca/document/manual_fox_monitoring_v1.pdf

R.23. Franke, A., D. Berteaux, S. Ferguson, G. Gauthier, C Hotson, M. Marcoux, Z. Martin, V. Sahatien, S. Statham, G. Szor & R. Tallman. 2018. Chapter 16. Climate change impacts on managed wildlife. Pp. 417-456 in *From* science to policy in the eastern Canadian Arctic: An Integrated Regional Impact Study (IRIS) of climate change and modernization, T. Bell & T.M. Brown eds. ArcticNet, Quebec City, 560 pp.

R.25. Gérin-Lajoie, J., G. Gauthier & J. Bêty. 2018. Consultation on ecological monitoring in the North Baffin region (Pond Inlet, Nunavut, January 22nd to February 9th, 2018). Centre d'études nordiques, Université Laval, Université du Québec à Rimouski and Université du Québec à Trois-Rivières, 38 pp. https://bylot.cen.ulaval.ca/document/report_consultation_pondinlet_en_2018.pdf

R.24. Fauteux, D., G. Gauthier & M.-C. Cadieux. 2018. Estimating small mammal and winter nest densities using capture-recapture and distance sampling with R – Version 1. Centre d'études nordiques, Université Laval, Quebec, 40 pp. https://bylot.cen.ulaval.ca/document/manual_small_mammal_analysis_r_v1.pdf

R.23. Merkel, F.R., A. Franke, F. Ugarte, S. Statham, S. Ferguson, G. Wenzel, C. Hotson, G. Gauthier, D. Lee & D. Berteaux. 2018. Chapter 6.5 Hunting. Pp 177-194 in Adaptation Actions for a Changing Arctic. Baffin Bay & Davis Strait Regional Assessment. Arctic Monitoring and Assessment Programme (AMAP), Oslo, Norway 354pp. ISBN: 978-82-7971-105-6.

R.22. Meltofte, H., C. Cuyler, A. Franke, G. Gauthier, C. Hotson, E. Lévesque & W. Loya. 2018. Chapter 6.3 Terrestrial Ecosystems. Pp 153-162 in Adaptation Actions for a Changing Arctic. Baffin Bay & Davis Strait Regional Assessment. Arctic Monitoring and Assessment Programme (AMAP), Oslo, Norway 354pp. ISBN: 978-82-7971-105-6.

R.21. Cadieux, M.-C., D. Fauteux & G. Gauthier. 2015. Technical manual for sampling small mammals in the Arctic – Version 1. Centre d'études nordiques, Université Laval, Quebec City, QC, 55 pp. https://bylot.cen.ulaval.ca/document/manual_small_mammal_sampling_v1.pdf

R.20. Legagneux, P., G. Gauthier, N. Lecomte, N.M. Schmidt, D. Reid, M.-C. Cadieux, D. Berteaux, J. Bêty, C.J. Krebs, R.A. Ims, N.G. Yoccoz, R.I.G. Morrison, S.J. Leroux, M. Loreau, & D. Gravel. 2014. Climate and herbivore body size determine how arctic terrestrial ecosystems work. Pp. 67-69 in Arctic Report Card: Update for 2014, M. O. Jeffries, J. Richter-Menge & J. E. Overland (eds). NOAA Report Card.

R.19. Reid, D.G., D. Berteaux, K. Laidre, and 32 other co-authors including G. Gauthier. 2013. Chapter 3. Mammals. Pp 78-141 in Arctic Biodiversity Assessment: Status and trends in Arctic biodiversity. Ed by H. Meltofte, Conservation of Arctic Flora and Fauna, Akureyri, Iceland. ISBN: 978-9935-431-22-6.

R.18. Ganter, B., A.J. Gaston, and 12 other co-authors including G. Gauthier. 2013. Chapter 4. Birds. Pp 141-181 in Arctic Biodiversity Assessment: Status and trends in Arctic biodiversity. Ed by H. Meltofte, Conservation of Arctic Flora and Fauna, Akureyri, Iceland. ISBN: 978-9935-431-22-6.

R.17. Ims, R.A., D. Ehrich, and 19 other co-authors including G. Gauthier and D. Berteaux. 2013. Chapter 12. Terrestrial ecosystems. Pp 384-440 in Arctic Biodiversity Assessment: Status and trends in Arctic biodiversity. Ed by H. Meltofte, Conservation of Arctic Flora and Fauna, Akureyri, Iceland. ISBN: 978-9935-431-22-6.

R.16. Gauthier, G. & D. Berteaux (editors). 2011. ArcticWOLVES: Arctic Wildlife Observatories Linking Vulnerable EcoSystems. Final synthesis report. Centre d'études nordiques, Université Laval, Quebec City, QC, 133 pp. https://bylot.cen.ulaval.ca/document/report_arcticwolves_2011.pdf

R.15. Therrien, J.-F., G. Gauthier, J. Bêty & G. Mouland. 2008. Long-distance migratory movements and habitat selection of Snowy Owls in Nunavut. Unpublished report, Centre d'études nordiques, Université Laval, Quebec City, QC, 47 pp.

R.14. Cadieux, M.-C, G. Gauthier, C. Gagnon, E. Lévesque, J. Bêty, & D. Berteaux. 2008. Monitoring the environmental and ecological impacts of climate change on Bylot Island, Sirmilik National Park – 2004-2008 final report). Unpublished report, Centre d'études nordiques, Université Laval, Quebec City, QC, 113 pp.

R.13. Calvert, A.M., G. Gauthier, E.T. Reed, L. Bélanger, J.-F. Giroux, J.-F. Gobeil, M. Huang, J. Lefebvre & A. Reed. 2007. Section I. Present status of the population and evaluation of the effects of the special conservation measures. Pp. 5-64 *in* Reed, E.T. and A.M. Calvert, eds. An evaluation of the special conservation measures for Greater snow geese: report of the Greater Snow Goose Working Group. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington D.C. and Canadian Wildlife Service, Ottawa, ON.

R.12. Gauthier, G. & E.T. Reed. 2007. Section II. Projected growth rate of the Greater Snow Goose population under alternative harvest scenario. Pp. 65-74 *in* Reed, E.T. and A.M. Calvert, eds. An evaluation of the special conservation measures for Greater snow geese: report of the Greater Snow Goose Working Group. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington D.C. and Canadian Wildlife Service, Ottawa, ON.

R.11. Bélanger, L., G. Gauthier, J.-F. Giroux, J. Lefebvre, A. Reed & E.T. Reed. 2007. Conclusion. Pp. 75-78 *in* Reed, E.T. and A.M. Calvert, eds. An evaluation of the special conservation measures for Greater snow geese: report of the Greater Snow Goose Working Group. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington D.C. and Canadian Wildlife Service, Ottawa, ON.

R.10. Gagnon, C.-A. & D. Berteaux. 2006. Integrating Traditional and Scientific Knowledge: Management of Canada's National Parks. Pages 209–221 Climate Change: LinkingTraditional and Scientific Knowledge. University of Manitoba, Winnipeg Aboriginal Issues Press. Riewe, R. and Oakes, J.

R.09. Duclos, I., E. Lévesque, D. Gratton & P.A. Bordelau. 2006. Vegetation mapping of Bylot Island and Sirmilik National Park: Final report. Unpublished report, Parks Canada, Iqaluit, Nunavut.

R.08. Sahanatien, V. & D. Berteaux. 2005. Arctic and red foxes in a warming North: Current status of populations and development of a monitoring program on Bylot Island, Sirmilik National Park of Canada. Page 7. Final Scientific Report 2004 to Nunavut Wildlife Management Board.

R.06. Gagnon, C., M.-C. Cadieux, G. Gauthier, E. Lévesque, A. Reed & D. Berteaux. 2004. Analyses and reporting on 15 years of biological monitoring data from Bylot Island, Sirmilik National Park of Canada. Unpublished report, Centre d'études nordiques, Université Laval, Quebec City, QC, 115 pp.

R.05. Gauthier, G. & S. Brault. 1998. Population model of the greater snow goose: projected impacts of reduction in survival on population growth rate. Pp 65-80 *in* The Greater Snow Goose: report of the Arctic Goose Habitat Working Group, B.D.J. Batt ed. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington D.C. and Canadian Wildlife Service, Ottawa, Ont.

R.04. Giroux, J.-F., G. Gauthier, G. Costanzo & A. Reed. 1998. Impact of geese on natural habitats. Pp. 32-57 *in* The Greater Snow Goose: report of the Arctic Goose Habitat Working Group, B.D.J. Batt ed. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington D.C. and Canadian Wildlife Service, Ottawa, Ont.

R.03. Reed, A., J.-F. Giroux & G. Gauthier. 1998. Population size, productivity, harvest and distribution. Pp. 5-31 *in* The Greater Snow Goose: report of the Arctic Goose Habitat Working Group, B.D.J. Batt ed. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington D.C. and Canadian Wildlife Service, Ottawa, Ont.

R.02. Giroux, J.-F., B. Batt, S. Brault, G. Costanzo, B. Filion, G. Gauthier, D. Luszcz, & A. Reed. 1998. Conclusions and management recommendations. Pp 81-88 *in* The Greater Snow Goose: report of the Arctic Goose Habitat Working Group, B.D.J. Batt ed. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington D.C. and Canadian Wildlife Service, Ottawa, Ont.

R.01. Gauthier, G. and Menu, S. 1997. The use of capture-recapture models in greater snow geese: is there a transient effect of capture and marking on survival? Proceedings of the Survey Methods Section, 24th Annual Meeting of the Statistical Society of Canada, Fredericton, NB.

Presentations at national/international conferences

C.246. LeTourneux, F., T. Grandmont, F. Dulude-de Broin, M.-C. Martin, J. Lefebvre, A. Kato. J. Bêty, G. Gauthier & P. Legagneux. 2022. Impacts of spring hunting on body condition and production of young in greater snow geese: insights from the COVID lockdown. *15th North American Arctic Goose Conference*, Corpus Christi, TX.

C.245. LeTourneux, F., G. Gauthier, J. Lefebvre, R. Pradel & P. Legagneux. 2022. Combined effects of collar-marking and hunting result in a synergistic interaction and reduce greater snow goose survival. *15th North American Arctic Goose Conference*, Corpus Christi, TX.

C.244. Grandmont T., F. Dulude-de Broin, F. LeTourneux, G. Gauthier, J. Bêty & P. Legagneux. 2022. Phenological adjustments of migration and reproduction under climate change: can greater snow geese "wind the clock"? *15th North American Arctic Goose Conference*, Corpus Christi, TX.

C.243. Bolduc, D., D. Fauteux & P. Legagneux. 2022. The role of a specialist predator on a cyclic population. *Gordon Research Conference: Predator-prey Interactions*, Lucca, Italy.

C.242. Dulude-de Broin, F., C. Villeneuve, P. Legagneux, D. Berteaux, J. Bêty & A. Durand. 2022. Influence of fox predation on prey distribution in the arctic tundra: approaching ecosystemic data with new modelling approaches. *Gordon Research Conference: Predator-prey Interactions*, Lucca, Italy.

C.241. Dulude-de Broin, F., J. Clermont, A. Beardsell, L-P Ouellet, D. Berteaux, J. Bêty, A. Durand & P. Legagneux. 2022. How does prey availability shape predator territories? *International Arctic fox conference*. Longyearbyen, Svalbard.

C.240. Landry-Ducharme, L., S. Lai, F. Vézina, A. Tam & D. Berteaux. 2021. Seasonal habitat selection in Arctic hares: explaining mass movements on Ellesmere Island. *ArcticNet Annual Scientific Meeting* (virtual).

C.239. Moisan, L., D. Gravel, D.-J. Léandri-Breton, J.-F. Lamarre & J. Bêty. 2021. Far, but highly connected: linking a tundra food web to other regions of the globe by migration. *ArcticNet Annual Scientific Meeting* (virtual).

C.238. Corbeil-Robitaille, M.-Z., É. Duchesne, J. Bêty, D. Fortier & C. Kinnard. 2021. Settling in a countless islets scenery: permafrost processes generate antipredation refuges selected by avian biodiversity. *ArcticNet Annual Scientific Meeting* (virtual).

C.237. Villeneuve, C., F. Dulude-de Broin, P. Legagneux, D. Berteaux & A. Durand. 2021. Arctic foxes movement modeling through the lens of reinforcement learning. *ArcticNet Annual Scientific Meeting* (virtual).

C.236. Dulude-de Broin, F., C. Villeneuve, P. Legagneux, D. Berteaux, J. Bêty & A. Durand. 2021. What drives bird distribution in the Arctic? Investigating the role of predation and the physical environment. *ArcticNet Annual Scientific Meeting* (virtual).

C.235. Poirier, M., D. Fauteux, G. Gauthier, F. Dominé & J.F. Lamarre. 2021. Into the snow: a lemming's journey through the snowpack. *ArcticNet Annual Scientific Meeting* (virtual).

C.234. Grentzmann, I, F. Angelier, C. Silvestri, G. Gauthier & P. Legagneux. 2021. Understanding senescence of the greater snow goose. *ArcticNet Annual Scientific Meeting* (virtual).

C.233. Moisan, L., D. Gravel, D.-J. Léandri-Breton, J.-F. Lamarre & J. Bêty. 2021. Identifying spatial pathways in an Arctic food web through a global migration network. *5th Symposium on ecological networks*, Palma, Spain.

C.232. Clermont, J., A. Woodward-Gagné & D. Berteaux. 2021. Using accelerometry to dig into the behavior of an active hunting predator. *7th International Bio-logging Symposium* (virtual).

C.231. Gravel, R., S. Lai & D. Berteaux. 2021. Variabilité entre la dispersion natale et adulte chez le renard arctique. *Conférence AUCEN des étudiants en études nordiques* (virtual).

C.230. Clermont, J. & D. Berteaux. 2021. Arctic fox movements and foraging behaviours *Arctic Fox Conference* (virtual).

C.229. Berteaux, D. 2021. Arctic fox research: the Bylot Island study area. *Arctic Fox Conference* (virtual).

C.228. Dulude-de Broin, F., C. Villeneuve, A. Durand, J. Bêty, P. Legagneux. 2021. Influence of fox predation on prey distribution in the arctic tundra: approaching ecosystemic data with new modelling approaches. *Arctic Fox Conference* (virtual).

C.227. Clermont, J., A. Grenier-Potvin, E. Duchesne, C. Couchoux, F. Dulude-De Broin, A. Beardsell, J. Bêty & D. Berteaux. 2021. The predator activity landscape predicts the anti-predator behavior and distribution of prey in a tundra community. *21st Annual Interdisciplinary Graduate Student Conference* (virtual).

C.226. Villeneuve, C., F. Dulude-de Broin, P. Legagneux, D. Berteaux & A. Durand. 2021. Preserving the integrity of the Canadian northern ecosystems through reinforcement learning-based arctic fox movement models. *International Conference on Machine Learning - Workshop on Tackling Climate Change With Machine Learning* (virtual).

C.225. Beardsell, A., D. Gravel, D. Berteaux, G. Gauthier, V. Careau, J. Clermont, C.-C. Juhasz, N. Lecomte, P. Royer-Boutin & J. Bêty. 2021. Mechanistic insights into the role of functional response in apparent mutualism observed in tundra ecosystems. *Ecological Society of America Annual Meeting* (virtual).

C.224. Brown, A., R. McCabe, J.-F. Therrien, K. Wiebe, S. Weidensaul, D. Brinker, G. Gauthier & K.H. Elliott. 2021. Nomadic breeders Snowy Owls (*Bubo scandiacus*) do not use stopovers to sample the summer environment. *60th meeting of the Canadian Society of Zoologists*, Vancouver, BC.

C.223. Moisan, L., D. Gravel & J. Bêty. 2020. When Arctic migratory species connect tundra with the rest of the globe: the case of Bylot Island. *Arctic Change 2020 Conference*, Quebec City, QC.

C.222. LeTourneux, F., T. Grandmont, F. Dulude de-Broin, M.C. Martin, J. Lefebvre, A. Kato, J. Bêty, G. Gauthier & P. Legagneux. 2020. Implications of a COVID-19-induced cease-fire for the management of a harvested overabundant species. *Arctic Change 2020 Conference*, Quebec City, QC.

C.221. Hutchison, C., P. Legagneux, F. Guichard, J. Bety, D. Berteaux, G. Gauthier, D. Fauteux, A, Allard & D. Gravel. 2020. Arctic seasonal models: evidence for hierarchical temporal processes in food-webs. *Arctic Change 2020 Conference*, Quebec City, QC.

C.220. Godin, E., W.F. Vincent, G. Gauthier & C. Barrette. 2020. Merged Observatory Data for Arctic Air Temperature (MODAAT) in action: Comparison of temperature data from a High Arctic automated weather station with reanalysis estimates from the ERA5-Land model. *Arctic Change 2020 Conference*, Quebec City, QC.

C.219. Gauthier, G. & J.F. Therrien. 2020. Recent rends in snowy owl breeding and lemming populations on Bylot Island, Nunavut, Canada. *5th meeting of the International Snowy Owl Working Group*, Pasvik, Norway.

C.218. Curk, T., I. Pokrovsky, N. Lecomte, O. Kulikova, T. Aarvak, G. Gauthier, K.O. Jacobsen, I.J. Øien, R. Solheim, K. Wiebe, M. Wikelski, J.F. Therrien & K. Safi. 2020. Snowy owls with contrasting migration patterns exhibit different proximate responses to food resources. *5th meeting of the International Snowy Owl Working Group*, Pasvik, Norway.

C.217. Therrien, J.F., K. Wiebe, K.O. Jacobsen, I.J. Øien, R. Solheim, T. Aarvak, S. Weidensaul, D. Brinker, B. Sittler, O. Gilg, A. Aebischer, J. Lang, D. Holt & G. Gauthier. 2020. Fledging dispersal and survival in snowy owls. *5th meeting of the International Snowy Owl Working Group*, Pasvik, Norway.

C.216. Beardsell, A., D. Gravel, D. Berteaux, G. Gauthier, V. Careau, J. Clermont, C.C. Juhasz, N. Lecomte, P. Royer-Boutin & J. Bêty. 2020. Assessment of functional responses using a mechanistic

approach in a generalist predator of the arctic tundra. *Predator-Prey Interactions meeting*, Ventura CA.

C.215. Gousy-Leblanc, M, G. Yannic, J.F. Therrien, G. Gauthier, S. Weidensaul, D. Brinker & N. Lecomte 2019. Population genetic structure of an arctic breeder, the snowy owl. *ArcticNet Scientific Meeting*, Halifax, NS.

C.214. Lamarre J.-F., G. Gauthier, O. Love, E.T. Reed, O.W. Johnson, K. Overdujin, R. Lanctot, S.T. Saalfeld, J. Liebezeit, R. McGuire, M. Russell, L. McKinnon, L. Kolosky, P.A. Smith, S. Flemming, N. Lecomte, M.-A. Giroux, S.Bauer, T. Emmenegger & J. Bêty. 2019. Timing of breeding site availability drives migration schedule in a long distance trans-hemispheric migrant. *ArcticNet Scientific Meeting*, Halifax, NS.

C.213. Gauthier, G. & J.-F. Therrien. 2019. Long-term ecological monitoring of the tundra ecosystem: role and conservation perspectives for birds of prey. *Raptor Research Foundation annual scientific conference*, Fort Collins, CO.

C.212. Lamarre, J.-F., G. Gauthier, O. Love, E. Reed, O.W. Johnson, K. Overdujin, R. Lanctot, S.T. Saalfeld, J. Liebezeit, R. Bentzen, M. Russell, L. McKinnon, L. Kolosky, P. Smith, S. Flemming, N. Lecomte, M.-A. Giroux, S. Bauer & T.J. Emmenegger. 2019. Timing of breeding site availability drives migration schedule in a long distance trans-hemispheric migrant. *8th Western Hemisphere Shorebird Group meeting*, Panama City, Panama.

C.211. Kalhor, D., A. Pusenkova, M. Poirier, G. Gauthier, T. Galstian & X. Maldague. 2019. Using near infrared for studying lemming subnival behavior in the arctic. *15th International Workshop on Advanced Infrared Technology and Applications*, Firenze, Italy.

C.210. Fauteux, D., G. Gauthier, J. Bêty, D. Berteaux, M.J. Mazerolle, N. Coallier & M.-C. Cadieux. 2019. Evaluation of invasive and non-invasive methods to monitor lemming abundance in the Canadian Arctic. *Arctic Science Summit Week*, Arkhangelsk, Russia.

C.209. Chagnon-Lafortune A, N. Casajus, R.I.G. Morrison, P.A. Smith, N. Lecomte, I. Tulp, M.C.Y. Leung, L. McKinnon, D. Berteaux & J. Bêty. 2018. Large-scale effect of temperature on arthropod availability for birds. *ArcticNet Scientific Meeting*, Ottawa, ON.

C.208. Léandri-Breton, D.-J., J.-F. Lamarre, & J. Bêty. 2018. Daring crossing or cautious detour? Contrasting transatlantic migration strategies in a small migratory bird breeding in the Canadian Arctic and wintering in Africa. *ArcticNet Scientific Meeting*, Ottawa, ON.

C.207. Fauteux, D., E. Schmidt, J.-F. Therrien, G. Gauthier & Y. Seyer. 2018. Enhancing terrestrial predators' diet assessments with rodent mandibles. *ArcticNet Scientific Meeting*, Ottawa, ON.

C.206. Gérin-Lajoie J, G. Gauthier, J. Bêty & G. MacMillan. 2018. A visual tool in Participatory Action Research for consulting Inuit communities about their environmental concerns and research interests. *ArcticNet Scientific Meeting*, Ottawa, ON.

C.205. Berner, L. P. Jantz, R. Massey, P. Burns, G. Gauthier, B. Forbes, M. Macias-Fauria, B. Gagliote, L. Andreu-Hayles, R. D'Arrigo & S. Goetz. 2018. Rapid warming leads to greening of the tundra biome. *American Geophysical Union annual meeting*, Washington DC, USA.

C.204. Gauthier G. & J. Lefebvre. 2018. Projecting the population dynamic of greater snow geese into an uncertain future: the interplay between management actions and climate change. *Fourteenth North American Arctic Goose Conference and Workshop*, Lincoln, Nebraska, USA.

C.203. LeTourneux, F., G. Gauthier, R. Pradel & J. Lefebvre. 2018. Impact of recent changes in hunting regulation on seasonal survival of male and female greater snow geese. *Fourteenth North American Arctic Goose Conference and Workshop*, Lincoln, Nebraska, USA.

C.202. Berteaux, D. 2017. Effects of climate shifts on arctic biodiversity. *37th Annual Conference of the International Association for Impact Assessment*, Montreal, QC.

C.201. Berteaux, D. 2017. Satellite tracking of arctic foxes on the Canadian Arctic sea ice: fine-scale genetic structure of the arctic fox population of Bylot Island (Nunavut, Canada). *Arctic Change 2017 conference*, Quebec, QC.

C.200. Legagneux, P., M-A. Giroux, P. Archambault, F. Barraquand, D. Berteaux, J. Bêty, G. Gauthier, D. Ehrich, T. Hoye, R. Ims, N. Lecomte, M-J. Naud, T. Roslin, N.M. Schmidt, P. Smith, S. Sokolov,

N.G. Yoccoz & D. Gravel. 2017. ArcticWEB, a pan-Arctic network to monitor and model Arctic trophic interactions. *Arctic Change 2017 conference,* Quebec, QC.

C.199. Juhasz, C.C., N. Lecomte, G. Gauthier. 2017. Direct and indirect effects of climate on a simplified trophic network in the Arctic tundra. *Arctic Change 2017 conference,* Quebec, QC.

C.198. Fauteux, D., G. Gauthier, N. Coallier, J. Bêty & D. Berteaux, 2017. Evaluation of iseveralmethods to monitor lemming abundance: simple can also be good. *Arctic Change 2017 conference*, Quebec, QC.

C.197. Chevalier, C., G. Gauthier & D. Berteaux. 2017. Weather variability has no direct impact on adult survival in a High Arctic carnivore *Arctic Change 2017 conference*, Quebec, QC.

C.196. Lamarre, J.-F., J. Bêty. E. Reed, R. Lanctot, O. Love, G. Gauthier, O.W. Johnson, J. Liebezeit, R. Bentzen, M. Russell, L. McKinnon, L. Kolosky, P. Smith, S. Flemming, N. Lecomte, M.-A. Giroux, S. Bauer & T. Emmeneger. 2017. Year-round variation in migratory connectivity in American Golden-Plover (*Pluvialis dominica). Arctic Change 2017 conference,* Quebec, QC.

C.195. Poirier, M., G. Gauthier, F. Dominé & M. Barrère. 2017. Physical properties of snow guide the movements of lemmings under the snowpack. *Arctic Change Conference*, Quebec, QC.

C.194. Seyer, Yannick, G. Gauthier, J. Bêty & N. Lecomte. 2017. Connectivity between the Canadian Arctic and the west coast of Africa: the journey of the Long-tailed jaeger. *Arctic Change Conference*, Quebec, QC.

C.193. Slevan-Tremblay, G., G. Gauthier & E. Lévesque. 2017. Impact of lemming grazing on Arctic willows under experimentally reduced predation. *Arctic Change Conference*, Quebec, QC.

C.192. Juhasz, C.C., A. Lycke, V. Carreau, G. Gauthier, J.-F. Giroux & N. Lecomte. 2017. Picking the right cache: hoarding-site selection for egg predators in the Arctic. *5th International Conference in Arctic Fox Biology*. Rimouski, QC.

C.191. Therrien J.F., A. Beardsell, G. Gauthier, N. Lecomte & J Bêty. 2017. Reproductive and movement ecology of rough-legged hawks breeding in the high arctic. *Raptor Research Foundation Annual Conference*. Salt Lake City, Utah, USA.

C.190. Couchoux, C., J. Clermont, S. Lai, F. Lapierre-Poulin, C. Chevallier & D. Berteaux. 2017. Implementing measures of individual behavioural variation in the Arctic ecosystem: can we assess personality in arctic foxes? *5th International Conference in Arctic Fox Biology*. Rimouski, QC.

C.189. Darbon, C., S. Lai & D. Berteaux. 2017. Influence of the distribution of medium-sized prey species on the presence of red foxes in the south plain of Bylot Island, Nunavut, Canada. *5th International Conference in Arctic Fox Biology*. Rimouski, QC.

C.188. Thierry, A.-M., J. Bêty & D. Berteaux. 2017. Competition between Arctic and red foxes at the expanding front of the red fox in the Canadian Arctic. *5th International Conference in Arctic Fox Biology*. Rimouski, QC.

C.187. Lapierre-Poulin, F., D. Fortier & D. Berteaux. 2017. Developing a vulnerability index to climate change for arctic fox dens. *5th International Conference in Arctic Fox Biology*. Rimouski, QC.

C.186. Chevallier, C., G. Gauthier & D. Berteaux. 2017. Weather variability has no direct impact on adult survival in Arctic foxes. *5th International Conference in Arctic Fox Biology*. Rimouski, QC.

C.185. Devost, E, N. Casajus, S. Lai & D. Berteaux. 2017. FoxMask image analysis software, assisting ecologists in facing big data challenges. *5th International Conference in Arctic Fox Biology*. Rimouski, QC.

C.184. Berteaux. D. 2017. Satellite tracking of Arctic foxes on the Canadian Arctic sea ice. *5th International Conference in Arctic Fox Biology*. Rimouski, QC.

C.183. Lapierre-Poulin, F., D. Fortier & D. Berteaux. 2017. Are arctic fox reproductive dens vulnerable to climate change in the Canadian High Arctic? *5th International Conference in Arctic Fox Biology*. Rimouski, QC.

C.182. Lai, S., A. Quiles, J. Lambourdière, D. Berteaux & A. Lalis. 2017. Fine-scale genetic structure of the arctic fox population of Bylot Island (Nunavut, Canada). *5th International Conference in Arctic Fox Biology*. Rimouski, QC.

C.181. Chevallier, C., D. Berteaux & G. Gauthier. 2017. Are demographic parameters of adult Arctic foxes resource-dependent? *5th International Conference in Arctic Fox Biology*. Rimouski, QC.

C.180. Fauteux, D., G. Gauthier, R. Boonstra, R. Palme & D. Berteaux. 2017. Top-down regulation of lemmings by Arctic foxes and other predators: observations and experiments on Bylot Island. *5th International Conference in Arctic Fox Biology*. Rimouski, QC.

C.179. Gauthier G., D. Fauteux, J. Bêty, D. Berteaux, M. Mazerolle & M.-C. Cadieux. 2017. Evaluation of invasive and non-invasive methods to monitor lemming abundance in the Canadian Arctic. *5th International Conference in Arctic Fox Biology*. Rimouski, QC.

C.178. Therrien J.-F., G. Gauthier, A. Robillard, T. McDonald, N. Smith, S. Weidensaul, D. Brinker, J. Bêty & N. Lecomte. 2017. The irruptive nature of snowy owls: going full cycle. *World Owl Conference*. Évora, Portugal.

C.177. Lefebvre, J., G. Gauthier, J.-F. Giroux, A. Reed, A. Béchet & E. Reed. 2017. Managing an overabundant population: the Greater Snow Goose in North America. *Dutch scientific goose meeting*. Leeurwarden, Netherlands.

C.176. Gauthier, G. A. Robillard, J.-F. Therrien & J. Bêty. 2017. What can we learn from isotopic analyses of snowy owl feathers? *4th meeting of the International Snowy Owl Working Group*, Milton, Massachussetts, USA.

C.175. Robillard A., G. Gauthier, J.-F. Therrien & J. Bêty. 2017. Wintering strategies, habitat use and site fidelity of snowy owls in eastern North America. *4th meeting of the International Snowy Owl Working Group*. Milton, Massachussetts, USA.

C.174. Juhasz, C.-C., N. Lecomte & G. Gauthier. 2016. How predator-prey interactions can mediate effects of climate on prey nesting success: the case of an Arctic nesting bird. *ArcticNet Scientific Meeting*, Winnipeg, MB.

C.173. Resendiz, C. & G. Gauthier. 2016. Heterogeneous long-term effects of a changing environment on the reproductive success of greater snow geese. *ArcticNet Scientific Meeting*, Winnipeg, MB.

C.172. Fauteux, D., G. Gauthier, D. Berteaux, R. Palme, C. Bosson & R. Boonstra. 2016. Lethal and non-lethal effects of predation on arctic lemmings. *Fifeteenth International Conference on Rodent Biology*, Olomouc, Czech Republic.

C.171. Giroux, M.-A., N. Lecomte, D. Gravel, D. Berteaux, G. Gauthier, P. Legagneux & J. Bêty. 2015. Bridging the gap between monitoring and modeling approaches to better understand arctic food webs under global pressures. *ArcticNet Scientific Meeting*, Vancouver, BC.

C.170. Seyer, Y., G. Gauthier & J. Bêty. 2015. From the Canadian Arctic to the western coast of Africa: The trans-equatorial migration of the Long-tailed jaeger. *ArcticNet Scientific Meeting*, Vancouver, BC.

C.169. Slevan-Tremblay, G., G. Gauthier & E. Lévesque 2015. Validation of a non-destructive method to estimate grazing impact of lemmings in the Arctic tundra. *ArcticNet Scientific Meeting*, Vancouver, BC.

C.168. Resendiz, C. & G. Gauthier. 2015. To change or not to change? Variations in components of the Greater Snow Goose reproductive success over a 26-year period. *ArcticNet Scientific Meeting*, Vancouver, BC.

C.167. Giroux, M.-A., N. Lecomte, D. Gravel, J. Bêty, G. Gauthier & D. Berteaux. 2015. Can animal migration explain the dominance of top-down forces in many Arctic food webs? Insights from empirical and theoretical approaches. *100th Ecological Society of America Annual Meeting*, Baltimore, MD.

C.166. Fauteux, D., G. Gauthier & D. Berteaux. 2015. Socio-economic relationships between Inuit and lemmings and the scientific methods employed to monitor lemmings. *International workshop on small mammal population outbreaks and their consequences*, Frasne, France.

C.165. Gauthier, G. 2015. Goose, plant and predator interactions in arctic systems: how will climate change things? *Thirteenth North American Arctic Goose Conference and Workshop*, Winnipeg, MB.

C.164. Lamarre, J.-F., G. Gauthier, P. Legagneux, E.T. Reed & J. Bêty. 2015. Snow goose colony: a risky nesting area for shorebirds. *Thirteenth North American Arctic Goose Conference and Workshop*, Winnipeg, MB.

C.163. Marmillot, V., G. Gauthier, M.-C. Cadieux & P. Legagneux. 2015. Plasticity in speed and timing of flight feather molt in the greater snow goose, a high-arctic-nesting species. *Thirteenth North American Arctic Goose Conference and Workshop*, Winnipeg, MB.

C.162. Resendiz, C. & G. Gauthier. 2015. Temporal trends and spatial variation in components of reproductive success of Greater Snow Geese on Bylot Island. *Thirteenth North American Arctic Goose Conference and Workshop*, Winnipeg, MB.

C.161. Gauthier, G. & D. Berteaux. 2014. Monitoring of terrestrial wildlife on Bylot Island in a global warming context: what did we learn after 20 years? *Arctic Change 2014 conference*, Ottawa, ON.

C.160. Robillard, A., J.-F. Therrien, G. Gauthier & J. Bêty. 2014. Fall migration and winter habitat use of an Arctic top predator: the Snowy Owl. *Arctic Change 2014 Conference*, Ottawa, ON.

C.159. Fauteux, D., G. Gauthier & D. Berteaux. 2014. Seasonal demography of a cyclic lemming population in the Canadian Arctic. *Arctic Change 2014 Conference*, Ottawa, ON.

C.158. Royer-Boutin, P., D. Berteaux, G. Gauthier & J. Bêty. 2014. Effects of lemming cycles on reproductive success of arctic-nesting birds using different antipredator strategies. *Arctic Change 2014 conference*, Ottawa, ON.

C.157. Beardsell, A., G. Gauthier, D. Fortier, J.-F. Therrien & J. Bêty. 2014. Factors affecting nest occupancy and reproductive success of rough-legged hawks: a trade-off between predation risk, microclimatic conditions and nest stability? *Arctic Change 2014 conference*, Ottawa, ON.

C.156. Seyer, Y., G. Gauthier, J. Bêty & J.-F Therrien 2014. Migratory strategies and reproduction of the Long-tailed Jaeger in the Canadian Arctic. *Arctic Change 2014 conference*, Ottawa, ON.

C.155. Lapierre-Poulin, F., D. Fortier & D. Berteaux. 2014. Are arctic fox reproductive dens vulnerable to permafrost degradation? *Arctic Change 2014 conference*, Ottawa, ON.

C.154. Morin, C. & D. Berteaux. 2014. Seasonal migratory prey and cyclic variation in small mammal abundance affect Arctic fox litter size. *Arctic Change 2014 conference*, Ottawa, ON.

C.153. Chevallier, C., D. Berteaux & G. Gauthier. 2014. Estimating the age structure of an arctic carnivore population by comparing tooth wear and cementum line. *Arctic Change 2014 conference*, Ottawa, ON.

C.152. Berteaux, D. & G. Gauthier. 2014. Long-term monitoring of the Bylot Island tundra ecosystem: what did we learn? *Arctic Biodiversity Congress*, Trondheim, Norway.

C.151. Gauthier, G. 2014. Population dynamic and management of the greater snow goose population in North America. Symposium *The Changing World of the Goose*. Wageningen, Netherlands.

C.150. Gauthier, G., J.-F. Therrien & J. Bêty. 2014. Movements and breeding dispersal of Snowy Owls in eastern North America: a specialized predator exploiting a pulsed resource. *Third meeting of the International Snowy Owl Working Group*, Salekhard, Russia.

C.149. Robillard, A., J.-F. Therrien, G. Gauthier & J. Bêty. 2014. Winter ecology of Snowy Owls: post-reproductive movements and determinants of winter irruptions in North America. *Third meeting of the International Snowy Owl Working Group*, Salekhard, Russia.

C.148. Gauthier, G. 2013. Lemming population ecology on Bylot Island: Interaction between snow and predation. *Lemming and Snow Workshop*, University of Tromsø, Tromsø, Norway.

C.147. Beardsell A., G. Gauthier G., D. Fortier D. & J. Bêty. 2013. Breeding ecology of rough-legged hawks (*Buteo lagopus*) in the High Arctic: are nesting structures vulnerable to climate change? *Ninth ArcticNet Scientific Meeting*, Halifax, NS.

C.146. Robillard, A., J.-F. Therrien, G. Gauthier & J. Bêty. 2013. Multi-scale influence of small mammal summer densities on snowy owl winter irruptions in North America. *Ninth ArcticNet Scientific Meeting*, Halifax, NS.

C.145. Fauteux, D., G. Gauthier & D. Berteaux. 2013. Ten years of monitoring lemming demography in the Canadian High Arctic. *Ninth ArcticNet Scientific Meeting*, Halifax, NS.

C.144. Lamarre, J.-F., J. Bêty & G. Gauthier. 2013. Predator-mediated interactions between shorebirds and colony-nesting snow geese on Bylot Island, Nunavut. *5th Western Hemisphere Shorebird Group conference*, Santa Marta, Colombia.

C.143. Perkins, M., L. Ferguson, R.B. Lanctot, I.J. Stenhouse, D.C. Evers, N. Basu, J. Bêty, S. Brown, R. Gates, S. Kendall, J.-F. Lamarre, J. Liebezeit & B. Sandercock. 2013. Quantifying mercury exposure

for multiple shorebird species across the North American Arctic using blood and feather samples. *34th Annual Meeting of the Society of Environmental Toxicology and Chemistry*, Nashville, TN.

C.142. Lai, S., J. Bêty & D. Berteaux. 2013. Where do arctic foxes go in winter? A 6-year study using satellite telemetry on Bylot Island, Canada. *Fourth International Conference in Arctic Fox Biology*. Westfjords, Iceland.

C.141. Rioux, M.-J., S. Lai, J. Bêty & D. Berteaux. 2013. Spatial winter dynamics in arctic fox pairs at Bylot Island. *Fourth International Conference in Arctic Fox Biology*, Westfjords, Iceland.

C.140. Berteaux, D. 2013. Range margins of Arctic and Red fox in a rapidly changing Arctic, *8th Annual Meeting of the Canadian Society of Ecology and Evolution*, Kelowna, BC.

C.139. Berteaux, D. 2013. État et tendances de la biodiversité arctique. *Chantier arctique français*, Paris, France.

C.138. Legagneux, P., G. Gauthier, P.L.F. Fast, N. J. Harms, H. G. Gilchrist, C. Soos & J. Bêty. 2013. Empirical and experimental evidence of carry-over effects on waterfowl reproduction. *Canadian Society of Zoologists Annual Meeting*, Guelph, ON.

C.137. Souchay, G., G. Gauthier & R. Pradel. 2013. A new approach to account for temporary emigration using a multi-event framework. *EURING analytical conference*, Athens, GA.

C.136. Van Oudenhove, L., G. Gauthier, & J.D. Lebreton. 2013 Modelling climatic effects on the population dynamic of a long-distance, arctic-nesting migrant. *EURING analytical conference*, Athens, GA.

C.135. Legagneux, P., C. Juillet, P.L.F. Fast, G. Gauthier & J. Bêty. 2013. Experimental evidence of carry-over effects on greater snow goose reproduction and its management implications. *6th North American Duck Symposium and Workshop*, Memphis, TN.

C.134. Bêty, J. 2013. Understanding individual variation in reproductive strategies: the challenge of integrating physiology, optimization model and environmental stressors. *6th North American Duck Symposium and Workshop*, Memphis, TN.

C.133. Lefebvre, J., M. Huang, J.-F. Giroux, M. Bélisle, J. Bêty & C. Dwyer. 2013. Satellite telemetry improves our understanding of habitat use patterns and population estimates of greater snow geese. *6th North American Duck Symposium and Workshop*, Memphis, TN.

C.132. Bilodeau, F., S. Lai, G. Gauthier & D. Berteaux. 2012. Are tundra lemming populations controlled from the bottom-up or the top-down? *Eighth ArcticNet Scientific Meeting*, Vancouver, BC.

C.131. Fauteux, D., G. Gauthier, D. Berteaux & R. Boonstra. 2012. Direct and indirect effects of predation on lemmings in the High Arctic. *Eighth ArcticNet Scientific Meeting*, Vancouver, BC.

C.130. Doucet, C., G. Gauthier & J. Bêty. 2012. Synchrony between breeding phenology of an arctic-nesting insectivore and its food resources: investigating the effect of mismatch on juvenile growth rate. *Eighth ArcticNet Scientific Meeting*, Vancouver, BC.

C.129. Gauthier, G. 2012. Long-term changes in the Bylot Island tundra food web: a 20-year case study in the Canadian High Arctic. *Conference Tundra Change – The ecological dimension*. Aarhus, Denmark.

C.128. Fauchald, P., D. Ehrich, J. Schmidt, K. Klokov, F. S. I. Chapin, D. Berteaux & V. Hausner. 2012. The importance, management and status of harvested animals in the Arctic tundra ecosystems. *4th International Conference EcoSummit*, Columbus, OH.

C.127. Gauthier, G., D. Berteaux, P. Legagneux, D.G. Reid, C.J. Krebs & J. Bêty. 2012. The role of predators in controlling the tundra food web: New evidence from the ArcticWOLVES project. *International Polar Year Conference: From Knowledge to Action*. Montréal, QC.

C.126. Fast, P.L.F., M. Doiron, G. Gauthier, J.A. Schmutz, D.C. Douglas, J. Madsen, J.Y. Takekawa, J. Yee & J. Bêty. 2012. Linking animal migration, spring weather and timing of breeding in an arctic herbivore. *International Polar Year Conference: From Knowledge to Action*. Montréal, QC.

C.125. McKinnon, L., C.A. Corkery, E. Bolduc, C. Juillet, J. Bêty & E. Nol. 2012. Assessing the vulnerability of Arctic-nesting shorebirds to climate induced changes in food resource peaks. *International Polar Year Conference: From Knowledge to Action*. Montréal, QC.

C.124. Juillet, C., R. Choquet, G. Gauthier, R. Pradel & J. Lefebvre. 2012. Carry-over effects of spring hunt and climate on recruitment to the natal colony in a migratory species. *International Polar Year Conference: From Knowledge to Action*. Montréal, QC.

C.123. Lai, S., D. Berteaux and J. Bêty 2012. Movement tactics and habitat selection of overwintering arctic foxes in the Canadian high Arctic. *International Polar Year Conference: From Knowledge to Action*. Montréal, QC.

C.122. Lamarre, J.-F., J. Bêty & G. Gauthier. 2012. Shorebird predation risk in the high-Arctic, do geese have a role to play? *International Polar Year Conference: From Knowledge to Action*. Montréal, QC.

C.121. Berteaux, D., G. Gauthier, J. Bêty, A. Franke & G. Gilchrist. 2012. Effects of climate change on the canadian arctic wildlife. *International Polar Year Conference: From Knowledge to Action*. Montréal, QC.

C.120. Therrien, J.-F., G. Gauthier & J. Bêty. 2011. Avian predators play a key role in population regulation and energy flux of the Arctic tundra food web. *Annual Meeting of the Raptor Research Foundation*, Duluth, MN.

C.119. Bêty, J. 2011. Sensitive Arctic birds under the spotlights: global change and recent discoveries. *Society of Canadian Ornithologists Annual Meeting*, Moncton, NB.

C.118. Legagneux, P., P. Fast, G. Gauthier & J. Bêty. 2011. Manipulating individual state during migration provides evidence for carry-over effects modulated by environmental conditions. *Society of Canadian Ornithologists Annual Meeting*, Moncton, NB.

C.117. Bêty, J. 2011. Ecology and evolution of arctic migrants: fundamental questions and recent results. *Royal Swedish Academy of Sciences and Wenner-Gren Foundations*, Sweden.

C.116. Gauthier, G. 2011. Lemmings: a keystone species of the tundra food web vulnerable to climate change. *6th Annual Meeting of the Canadian Society of Ecology and Evolution*, Banff, AB.

C.115. Tarroux, A., D. Berteaux & J. Bêty. 2011. The marine side of a terrestrial mammal: trophic niche and diet specialization of arctic foxes. *Estación Biológica de Doñana – CSIC*, Sevilla, Spain.

C.114. Gauthier, G. & M.-C. Cadieux. 2011. Goose-plant interactions on Bylot Island in the context of global warming. *Twelfth North American Arctic Goose Conference*, Portland, OR.

C.113. Legagneux, P., P. Fast, G. Gauthier & J. Bêty. 2011. Migratory connectivity in Greater Snow Geese: carry-over effects of a manipulation of spring body condition. *Twelfth North American Arctic Goose Conference*, Portland, OR.

C.112. Fast, P., C. Redjadj, G. Gauthier & J. Bêty. 2011. Using isotopes to assess the importance of stopover sites to fuel migration and reproduction in Snow Geese. *Twelfth North American Arctic Goose Conference*, Portland, OR.

C.111. Doiron, M., G. Gauthier & E. Lévesque. 2011. Climate change and the ecological mismatch between Greater Snow Goose breeding and plant phenology. *Twelfth North American Arctic Goose Conference*, Portland, OR.

C.110. Desnoyers, M. & G. Gauthier. 2011. Travelling in greater snow goose flocks: do you know with whom you're travelling? *Twelfth North American Arctic Goose Conference*, Portland, OR.

C.109. Horrigan, E., R.L. Jefferies & G. Gauthier. 2011. Vegetation responses to simulated snow goose herbivory in two arctic ecosystems. *Twelfth North American Arctic Goose Conference*, Portland, OR.

C.108. Gauthier, G. & D. Berteaux. 2010. Is the tundra food web controlled by top predators? New evidence from the ArcticWOLVES project. *Seventh ArcticNet Scientific Meeting*, Ottawa, ON.

C.107. Bilodeau, F., G. Gauthier & D. Berteaux. 2010. Life under the snow: the effect of the snow cover on lemming population dynamics. *Seventh ArcticNet Scientific Meeting*, Ottawa, ON.

C.106. Chalifour, E., J. Bêty, M. Bélisle, J. Lefebvre & J.-F. Giroux. 2010. Molt migration of Greater Snow Geese. *Seventh ArcticNet Scientific Meeting*, Ottawa, ON.

C.105. Tarroux, A., D. Berteaux & J. Bêty. 2010. Surviving the arctic winter: insights into the foraging tactics of an arctic terrestrial predator. *Seventh ArcticNet Scientific Meeting*, Ottawa, ON.

C.104. Fast, P. 2010. Studies of migratory connectivity and nest choice in Arctic waterfowl. *Max Planck Institute for Ornithology*, Seewiesen, Germany.

C.103. Gauthier, G., J.-F. Therrien, J. Bêty, F. Doyle & D. Reid. 2010. Surprising migratory movements and site fidelity unraveled by satellite-tracking of snowy owls. *25th International Ornithological Conference*, Sao Paulo, Brazil.

C.102. Legagneux, P., G. Gauthier, D. Berteaux, J. Bêty, M.-C. Cadieux, G. Szor, F. Bilodeau, E. Bolduc, L. McKinnon, A. Tarroux, J.-F. Therrien, M.-A. Valiquette, L. Morissette & C.J. Krebs. 2010. Modeling temporal trophic dynamics of a terrestrial arctic ecosystem. *IPY Oslo Conference*, Oslo, Norway.

C.101. Doiron, M., G. Gauthier & E. Lévesque. 2010. Plant-herbivore interactions and climate change: the case of the Greater Snow Goose. *IPY Oslo Conference*, Oslo, Norway.

C.100. Legagneux, P., P. Fast, G. Gauthier & J. Bêty 2010. Effect of spring condition manipulation on reproductive success in the greater snow geese *Chen caerulescens*. *5th annual meeting of the Canadian Society of Ecology and Evolution*, Quebec, QC.

C.99. Therrien, J.-F., G. Gauthier & J. Bêty. 2010. The lemming buffet: is there anything left after owls and jaegers have eaten? *5th annual meeting of the Canadian Society of Ecology and Evolution*, Quebec, QC.

C.98. Desnoyers, M. & G. Gauthier. 2010. Le voyage organisé, un aspect inconnu du comportement grégaire de la grande oie des neiges *Chen caerulescens*. *5th annual meeting of the Canadian Society of Ecology and Evolution*, Quebec, QC.

C.97. Gauthier, G., D. Berteaux, J. Bêty, P. Legagneux, L. McKinnon, J.-F. Therrien, A. Tarroux, M.-C. Cadieux, C.J. Krebs, D. Reid, & D. Morris. 2010. The role of predators in structuring the Arctic terrestrial food web: preliminary results from the ArcticWOLVES project. *IPY Canada Early Results Workshop*, Ottawa, ON.

C.96. Doiron, M., G. Gauthier, & E. Lévesque. 2010. Impacts of climate change on a High Arctic herbivore: The case of the Greater Snow Goose. *IPY Canada Early Results Workshop*, Ottawa, ON.

C.95. Therrien, J.-F., G. Gauthier, J. Bêty D. Reid and F. Doyle. 2010. Long-distance movements of two avian predators, the Snowy Owl and Long-tailed Jaeger, tracked via satellite. *IPY Canada Early Results Workshop*, Ottawa, ON.

C.94. Reid, D., C.J. Krebs, G. Gauthier, A. Kenney, S. Gilbert, E. Hofer, D. Duchesne, M. Leung & F. Bilodeau. 2010. Snow depth and small mammal winter habitat choice: a tundra fencing experiment. *IPY Canada Early Results Workshop*, Ottawa, ON.

C.93. Lai, S., D. Berteaux & J. Bêty. 2009. From land to sea ice with the arctic fox, following the movements of a terrestrial mammal in the Canadian High Arctic. *Sixth ArcticNet Scientific Meeting*, Victoria, BC.

C.92. Tarroux, A., D. Berteaux & J. Bêty. 2009. Nomades de l'Arctique: Capacité de déplacement à grande échelle chez le renard polaire. *Sixth ArcticNet Scientific Meeting*, Victoria, BC.

C.91. Tarroux, A., D. Berteaux & J. Bêty. 2009. The marine side of a terrestrial mammal: trophic niche and diet specialization in arctic foxes. *Sixth ArcticNet Scientific Meeting*, Victoria, BC.

C.90. Therrien, J.-F., G. Gauthier & J. Bêty. 2009. The lemming buffet: is there anything left after owls and jaegers have eaten? *Sixth ArcticNet Scientific Meeting*, Victoria, BC.

C.89. Fast, P., C. Redjadj, G. Gauthier & J. Bêty. 2009. Fuelling up before the flight: Assessing the importance of stopover sites in an Arctic migrant using stable isotopes. *Sixth ArcticNet Scientific Meeting*, Victoria, BC.

C.88. Gauthier, G., C. Juillet, J. Bêty & M. Morrissette. 2009. Annual productivity in Greater Snow Geese: which fecundity parameter is the best predictor and why? *Meeting of the International Society of Ecological Modelling*, Quebec City, QC.

C.87. Legagneux, P., G. Gauthier & C.J. Krebs. 2009. Spatial and temporal trophic dynamics of terrestrial arctic ecosystems. *ECOPATH conference*, Vancouver, BC.

C.86. Gauthier, G. 2009. Impact of climate change on arctic terrestrial food webs: examples from the Bylot Island long term study. *Canadian Society of Ecology and Evolution Annual Meeting*, Halifax, NS.

C.85. Gauthier, G. & D. Berteaux. 2008. Arctic Wildlife Observatories Linking Vulnerable EcoSystems (ArcticWOLVES): A study of the impact of climate change on tundra food webs. *Arctic Change Conference*, Quebec City, QC.

C.84. Gauthier, G. & M.C. Cadieux. 2008. Impact of climate change on arctic terrestrial food webs: examples from the Bylot Island long term study. *Arctic Change Conference*, Quebec City, QC.

C.83. Doiron, M., G. Gauthier & E. Lévesque. 2008. Plant-herbivore interactions and climate change: The Case of the Greater Snow Goose. *Arctic Change Conference*, Quebec City, QC.

C.82. Therrien, J.-F., G. Gauthier & J. Bêty. 2008. Reproductive success and long-distance movements of Snowy Owls: is this top arctic predator vulnerable to climate change? *Arctic Change Conference*, Quebec City, QC.

C.81. Valiquette, M.A. & G. Gauthier. 2008. Numerical and functional responses of a generalist avian predator, the glaucous gull, to variations in lemming abundance in the Arctic. *Arctic Change Conference*, Quebec City, QC.

C.80. Juillet, C., M. Doiron, G. Gauthier & M.C. Cadieux. 2008. Importance of local and regional climatic effects on the reproduction of a migratory species, the Greater Snow Goose. *Arctic Change Conference*, Quebec City, QC.

C.79. Côté, G., R. Pienitz, G. Gauthier, D. Muir & B. Wolfe. 2008. Impacts of present-day and past animal populations on the nutrient and contamination status of freshwater lakes on Bylot Island, Nunavut (Canada). *Arctic Change Conference*, Quebec City, QC.

C.78. Pouliot, R., L. Rochefort, M. Marchand-Roy & G. Gauthier. 2008. Polygon fens and trophic interactions: 15 years of research on Bylot Island. 4th International Meeting on the Biology of Sphagnum, Juneau, Alaska.

C.77. Gauthier, G. & D. Berteaux. 2008. ArcticWOLVES: a study of the tundra food web. *International IPY conference on the Dynamics of Lemmings and Arctic foxes in the Circumpolar Tundra*, Salekhard, Russie.

C.76. Berteaux, D. & Gauthier, G. 2008. Dynamics of lemmings and arctic foxes on Bylot Island, Nunavut, Canada. *International IPY conference on the Dynamics of Lemmings and Arctic foxes in the Circumpolar Tundra*, Salekhard, Russie.

C.75. Duchesne, D., G. Gauthier & D. Berteaux. 2007. Characterization of the winter environment of lemmings in relation to the snow cover in the Arctic. *Fourth ArcticNet Scientific Meeting*, Collingwood, ON.

C.74. Doiron, M., G. Gauthier & E. Lévesque. 2007. Impacts of climate change on plant-herbivore interactions in the High Arctic. *Fourth ArcticNet Scientific Meeting*, Collingwood, ON.

C.73. Juillet, C., G. Gauthier, R. Pradel & Rémi Choquet. 2007. Use of mixture of information models to evaluate the effect of special conservation measures on survival in a hunted species, the Greater Snow Goose. *EURING-2007 meeting*, Otago, New Zealand.

C.72. Gauthier, G., K. Hobson & J. Bêty. 2006. Diet change inferred from stable-isotopes in spring-staging Greater Snow Geese. *XXIVth International Ornithological Congress*, Hamburg, Germany.

C.71. Gauthier, G. 2006. Application of capture-recapture methods to demographic analyses of bird populations: case studies with an emphasis on multistate models. Colloque *Capture 2006*, Université Laval, Québec, QC.

C.70. Dickey, M.-H. & G. Gauthier. 2005. Effect of climate variables on the phenology and reproductive success of Greater Snow Geese (*Chen caerulescens atlantica*). *Eleventh North American Arctic Goose Conference*, Reno, NV.

C.69. Lecomte, N., G. Gauthier, L. Bernatchez & J.-F. Giroux. 2005. Population structure of a Greater Snow Goose colony. *Eleventh North American Arctic Goose Conference*, Reno, NV.

C.68. Gauthier, G., A.M. Calvert & E.T. Reed. 2005. Impacts of special conservation measures on demographic parameters in Greater Snow Geese (*Chen caerulescens atlantica*). *Eleventh North American Arctic Goose Conference*, Reno, NV.

C.67. Mainguy, J., G. Gauthier, J.-F. Giroux & J. Bêty. 2005. Long distance brood movements in Greater Snow Geese: effects on goslings growth and survival. *Eleventh North American Arctic Goose Conference*, Reno, NV.

C.66. Ouellet, N., J. Larochelle & G. Gauthier. 2005. Effect of locomotion on growth in Greater Snow Goose goslings (*Chen caerulescens atlantica*). *Eleventh North American Arctic Goose Conference*, Reno, NV.

C.65. Lecomte, N., G. Gauthier & J.-F. Giroux. 2005. Habitat effects on nest predation risks: the case of the Greater Snow Goose. *Eleventh North American Arctic Goose Conference*, Reno, NV.

C.64. Audet, B., G. Gauthier & E. Lévesque. 2005. Feeding ecology of Greater Snow Goose (*Chen caerulescens atlantica*) goslings in upland tundra on Bylot Island, Nunavut. *Eleventh North American Arctic Goose Conference*, Reno, Nevada.

C.63. Bêty, J., J.-F. Giroux, & G. Gauthier. 2004 Individual variation in timing of migration: causes and reproductive consequences in greater snow geese. *122nd American Ornithologist Union Meeting*, Québec, Canada.

C.62. Calvert, A.M. & G. Gauthier. 2004. Exceptional conservation measures: how have they affected survival and hunting mortality in greater snow geese. *122nd American Ornithologist Union Meeting*, Québec, Canada.

C.61. Audet, B., G. Gauthier & E. Lévesque. 2004. Feeding ecology of Greater Snow Goose (*Chen caerulescens atlantica*) goslings in upland tundra on Bylot Island, Nunavut. *122nd American Ornithologist Union Meeting*, Québec, Canada.

C.60. Lecomte, N., G. Gauthier & J.F. Giroux. 2004. Habitat effects on nest predation risks: the case of the Greater Snow Goose. *122nd American Ornithologist Union Meeting*, Québec, Canada.

C.59. Gauthier, G., J.-F. Giroux, A. Reed, A. Béchet & L. Bélanger. 2004. Interactions between land use, habitat use and population increase in greater snow geese: what are the consequences for natural wetlands? Intecol 7th Interational Wetlands conference, Utrecth, Netherlands.

C.58. Giroux, J.-F., G. Gauthier, A. Béchet, M. Féret, J. Mainguy, J. Bêty & V. Lemoine. 2003. Controling overabundant bird populations: the case of the greater snow goose. Third International Wildlife Management Congress, 1-5 December 2003, Christchurch, New Zealand.

C.57. Gauthier, G. & J.D. Lebreton. 2003. Population models in Greater Snow Geese: a comparison of different approaches. *EURING-2003 meeting*, Radolfzell, Germany.

C.56. Reed, E., G. Gauthier & J.-F. Giroux. 2003. Effects of spring conditions on breeding propensity of greater snow goose females. *EURING-2003 meeting*, Radolfzell, Germany.

C.55. Calvert, A.M. & G. Gauthier. 2003. Applying band recovery models to an evaluation of the demographic impacts of exceptional conservation measures. *EURING-2003 meeting*, Radolfzell, Germany.

C.54. Gauthier, G., J. Bêty, J.-F. Giroux & L. Rochefort. 2003. Trophic interactions in a High Arctic Snow Goose colony. *Annual Meeting of the Society for Integrative and Comparative Biology*, Toronto, ON.

C.53. Fournier, F., G. Gauthier & J. Larochelle. 2003. The effect of food quality on developmental plasticity and digestive efficiency in Greater Snow Goose goslings. *Annual Meeting of the Society of integrative and comparative biology*, Toronto, ON.

C.52. Gauthier, G. 2002. Are Greater Snow Geese overabundant? A review of population Dynamics and management actions on this population in North America. *7th Annual Meeting of the Goose Specialist Group of Wetlands International*, El Rocio, Spain.

C.51. Gauthier, G., F. Fournier & J. Larochelle. 2002. The effect of environmental conditions on early growth in geese. *XXIIIrd International Ornithological Congress*, Beijing, China

C.50. Gauthier, G., J.-F. Giroux & L. Rochefort. 2002. The impact of goose grazing on Arctic and temperate wetlands. *XXIIIrd International Ornithological Congress*, Beijing, China.

C.49. Bêty, J., G. Gauthier, E. Korpimäki & J.-F. Giroux. 2001. Shared predators and indirect trophic interactions: lemming cycles and arctic-nesting geese. *119th American Ornithologist Union Meeting*, Seattle, WA.

C.48. Bourguelat, G., G. Gauthier & R. Pradel. 2001. New analytical tools to study stopover length in birds: what can we learn from the greater snow goose example? *119th American Ornithologist Union Meeting*, Seattle, WA.

C.47. Gauthier, G. 2001. The effects of management actions on populations: greater snow goose. *Tenth North American Arctic Goose Conference*, Québec, QC.

C.46. Gauthier, G. & J.D. Lebreton. 2001. Population models in greater snow geese: a comparison of different approaches. *Tenth North American Arctic Goose Conference*, Québec, QC.

C.45. Gauthier, G., K. Hobson & J. Bêty. 2001. The role of nutrient reserves in egg formation in greater snow geese: a reply to Ankney (1995). *Tenth North American Arctic Goose Conference*, Québec, QC.

C.44. Mainguy, J., J. Bêty & G. Gauthier. 2001. Is body condition of laying greater snow geese affected by the Québec spring conservation hunt? *Tenth North American Arctic Goose Conference*, Québec, QC.

C.43. Bêty, J., G. Gauthier, E. Korpimäki & J.-F. Giroux. 2001. Cyclic lemmings and greater snow geese: direct observations of an indirect trophic interaction. *Tenth North American Arctic Goose Conference*, Québec, QC.

C.42. Reed, E. & G. Gauthier. 2001. The costs of raising a family in greater snow geese *Chen caerulescens atlantica*. *Tenth North American Arctic Goose Conference*, Québec, QC.

C.41. Righi, M. & G. Gauthier. 2001. Abundance and distribution of intestinal helminths in greater snow geese on the breeding colony, and during their fall and spring migration. *Tenth North American Arctic Goose Conference*, Québec, QC.

C.40. Renaud, M., G. Gauthier & J. Larochelle. 2001. Energetic cost of thermoregulation for greater snow goose goslings growing in a natural environment. *Tenth North American Arctic Goose Conference*, Québec, QC.

C.39. Féret M., G. Gauthier, J.-F. Giroux & K. Hobson. 2001. Impact of spring conservation hunt on nutrient storage of greater snow geese staging in Québec. *Tenth North American Arctic Goose Conference*, Québec, QC.

C.38. Bourguelat, G., G. Gauthier & R. Pradel. 2001. Estimation of the fall stopover length of the greater snow goose in the St. Lawrence estuary using capture-recapture methods. *Tenth North American Arctic Goose Conference*, Québec, QC.

C.37. Béchet, A. J.-F. Giroux & G. Gauthier. 2001. Impact of a spring hunt on the regional movements of staging greater snow geese. *Tenth North American Arctic Goose Conference*, Québec, QC.

C.36. Demers, F. J.-F. Giroux, G. Gauthier & J. Bêty. 2001. Effect of collar-attached transmitters on pair bond, breeding success and behavior of greater snow geese. *Tenth North American Arctic Goose Conference*, Québec, QC.

C.35. Otis, P., J. Larochelle & G. Gauthier. 2001. Energy cost of locomotion in greater snow goose goslings. *Tenth North American Arctic Goose Conference*, Québec, QC.

C.34. Duclos, I., E. Lévesque & L. Rochefort. 2001. Mesic habitats of the Greater Snow Goose (*Chen caerulescens atlantica*) on Bylot Island (Nunavut): characterization and feeding potential. *Tenth North American Arctic Goose Conference*, Québec, QC.

C.33. Gauthier, G., R. Pradel, S. Menu & J.D. Lebreton. 2000. Modelling seasonal survival rate of greater snow geese in presence of trap-dependence. *EURING-2000 meeting*, Point Reyes, CA.

C.32. Gauthier, G., R. Pradel, S. Menu & J.D. Lebreton. 2000. Seasonal variations in survival rate of a migratory and hunted species, the greater snow goose. *118th American Ornithologist Union Meeting*, St. John's, NF.

C.31. Gauthier, G., L. Rochefort, & A. Reed. 2000. Short- and long-term impact of snow goose herbivory on wetland ecosystems of Bylot Island. *Weltand-2000 international meeting*, Quebec City, QC.

C.30. Lévesque, E., C. Pineau, L. Rochefort & G. Gauthier. 1999. Combined influence of grazing and warming in a high arctic wet meadow. Abstract in *Plant response to climate change*, R.D. Hollister (ed), Proceedings from the *9th International Tundra Experiment Meeting*, East Lansing, MI.

C.29. Bêty, J, G. Gauthier & J.-F. Giroux. 1998. Factors affecting nesting success in greater snow geese: the interplay between nest density, lemming abundance and association with snowy owls. *Ninth North American Arctic Goose Conference*, Victoria, BC.

C.28. Massé, H., L. Rochefort & G. Gauthier. 1998. Estimating the carrying capacity of wetland habitats used by breeding greater snow geese on Bylot island (N.W.T, Canada). *Ninth North American Arctic Goose Conference*, Victoria, BC.

C.27. Demers, F., J.-F. Giroux & G. Gauthier. 1998. How faithful to their mate are radio-marked greater snow geese? *Ninth North American Arctic Goose Conference*, Victoria, BC.

C.26. Giroux, J.-F., F. Blouin, J. Ferron, G. Gauthier & J. Doucet. 1998. The fall migration of greater snow geese tracked by satellite. *Ninth North American Arctic Goose Conference*, Victoria, BC.

C.25. Menu S., G. Gauthier & A. Reed. 1998. Survival of young greater snow geese during the fall migration. *Ninth North American Arctic Goose Conference*, Victoria, BC.

C.24. Poussart, C., G. Gauthier & J. Larochelle. 1998. Incubation behavior of greater snow geese in relation to weather conditions. *Ninth North American Arctic Goose Conference*, Victoria, BC.

C.23. Gauthier, G. 1998. The role of food and timing of nesting in greater snow goose reproduction. *Ninth North American Arctic Goose Conference*, Victoria, BC.

C.22. Gauthier, G. 1997. Population regulation in Greater Snow Geese. *Symposium on how to manage thriving goose populations*, Zwolle, Netherlands.

C.21. Reed, A. & G. Gauthier. 1997. Changes in demographic and physical parameters of greater snow geese during an extended population growth phase. *Symposium on Over-abundant goose population: an emerging challenge in wildlife conservation, Wildlife Society 4th annual conference*, Snowmass, Colorado.

C.20. Gauthier, G. 1997. The use of capture-recapture models to estimate survival and movements in Greater Snow Geese *Session on biostatistics and survey methods in wildlife management, Annual meeting of the statistical society of Canada*, Fredericton, New-Brunswick.

C.19. Menu, S., G. Gauthier, A. Reed & J. Hestbeck. 1997. Effects of neck band on the survival of adult female greater snow geese. *Large-scale studies of marked birds, EURING 97*, Norwich, United Kingdom.

C.18. Gauthier, G. 1996. Energetics of reproduction in greater snow geese: the female condition model revisited. *International workshop on energetics of reproduction in birds, mammals and reptiles: exploring new technologies*, Chizé, France.

C.17. Giroux, J.-F., F. Blouin, J. Ferron, G. Gauthier, & J. Doucet. 1996. The use of satellite telemetry to track the fall migration of greater snow geese. *5th European conference on wildlife telemetry*, Strasbourg, France.

C.16. Piedboeuf, N. & G. Gauthier, G. 1996. Nutritional quality of feeding sites in Greater Snow Goose goslings: is it advantageous to use grazed sites? *Comparative Nutrition Society Symposium*, Washington, DC.

C.15. Lepage, D., G. Gauthier, & A. Desrochers. 1996. Le rôle des parents dans la variation de croissance et de survie chez la Grande Oie des neiges (*Chen caerulescens atlantica*). *Congrès international francophone sur le comportement animal*, Québec, QC.

C.14. Gauthier, G., R. J. Hughes, A. Reed, J. Beaulieu & L. Rochefort. 1995. Effect of grazing by greater snow geese on the production of graminoids at an arctic site (Bylot Island, NWT, Canada). *25th Arctic Workshop*, Québec, QC.

C.13. Gauthier, G., D. Lepage & A. Reed. 1995. Site infidelity in nesting Greater Snow Geese (*Chen caerulescens atlantica*). *Eighth North American Arctic Goose Conference*, Albuquerque, NM.

C.12. Beaulieu, J., G. Gauthier & L. Rochefort. 1995. Growth responses of plants to goose grazing in a High Arctic environment. *Eighth North American Arctic Goose Conference*, Albuquerque, NM.

C.11. Lepage, D., A. Desrochers & G. Gauthier. 1995. Clutch manipulation in Greater Snow Geese: the causal relationship between hatch date, brood size and pre-fledging growth. *Eighth North American Arctic Goose Conference*, Albuquerque, NM.

C.10. Lesage, L. & G. Gauthier. 1995. Effect of hatch date and brood-rearing site on growth pattern and organ development in Greater Snow Geese. *Eighth North American Arctic Goose Conference*, Albuquerque, NM.

C.09. Tremblay, J.-P., G. Gauthier, D. Lepage, A. Desrochers. 1995. Relationship between nest site characteristics and nesting success in greater snow geese. *Eighth North American Arctic Goose Conference*, Albuquerque, NM.

C.08. Blouin, F., J.-F. Giroux, J. Ferron, G. Gauthier & J. Doucet. 1995. Tracking the fall migration of greater snow geese using satellite telemetry. *Eighth North American Arctic Goose Conference*, Albuquerque, NM.

C.07. Gauthier, G. & D. Lepage. 1994. The interaction between food supply and gosling growth in greater snow geese. *XXIst Interational Ornithological Congress*, Vienna, Austria.
C.06. Gauthier, G. 1992. Diet, food quality and food intake of pre-laying and laying greater snow geese. *Seventh North American Arctic Goose Conference*, Vallejo, CA.
C.05. Choinière, L. & G. Gauthier. 1992. Reproductive energetics of female greater snow geese on Bylot Island (NWT), Canada. *Seventh North American Arctic Goose Conference*, Vallejo, CA.
C.04. Hughes, J., A. Reed & G. Gauthier. 1992. Habitat use by brood-rearing greater snow geese. *Seventh North American Arctic Goose Conference*, Vallejo, CA.
C.03. Lindholm, A. & G. Gauthier. 1992. Hatch date, food quality and growth of juvenile greater snow geese. *Seventh North American Arctic Goose Conference*, Vallejo, CA.
C.02. Manseau, M. & G. Gauthier. 1992. Brood-rearing habitats in greater snow geese: a comparative study based on the animal perception of its environment. *Seventh North American Arctic Goose Conference*, Vallejo, CA.
C.01. Reed, A. 1992. Incubation behavior and body mass of female greater snow geese. *Seventh North American Arctic Goose Conference*, Vallejo, CA.

Graduate student theses

T.85. Poirier, M. 2023. Impact des propriétés physiques de la neige sur les populations de lemmings en Arctique. PhD thesis, Département de biologie, Université Laval.
T.84. Bolduc, D. 2023. Rôle de l'hermine dans les cycles de lemmings du Haut-Arctique. MSc thesis, Département de biologie, Université Laval.
T.83. Corbeil-Robitaille, M.-Z. 2023. Refuges anti-prédation dans le paysage: processus de formation et sélection des îlots par les oiseaux nicheurs de l'île Bylot. MSc thesis, Département de biologie, Université du Québec à Rimouski.
T.82. Lamarre, J.-F. 2023. Écologie de la reproduction et de la migration du pluvier bronzé (*Pluvialis dominica*) nichant en arctique. PhD thesis, Département de biologie, Université du Québec à Rimouski.
T.81. Beardsell, A. 2023. Vers une compréhension mécanistique des interactions indirectes entre les proies de la toundra arctique. PhD thesis, Département de biologie, Université du Québec à Rimouski.
T.80. Clermont-Beaudoin, J. 2023. Effets des mouvements, des comportements alimentaires et de la témérité d'un prédateur territorial sur une communauté de proies. PhD thesis, Département de biologie, Université du Québec à Rimouski.
T.79. Gravel, R. 2022. Dispersion natale et adulte chez un prédateur terrestre : le renard arctique (*Vulpes lagopus*) à l'Île Bylot au Nunavut. MSc thesis, Département de biologie, Université du Québec à Rimouski.
T.78. Grandmont, T. 2022. Effets reportés de multiples perturbations rencontrées en migration sur la reproduction de la grande oie des neiges. MSc thesis, Département de biologie, Université Laval, Québec.
T.77. Bergeron, G. 2022. Approche simplifiée par états et transitions saisonniers pour modéliser un système prédateurs-proies complexe de l'Arctique. MSc thesis, Département de biologie, Université de Sherbrooke.
T.76. Gignac, C. 2022. Réponse à long terme des communautés végétales aux changements climatiques et à l'herbivorisme par la Grande Oie des neiges dans les milieux humides de la toundra du Haut-Arctique canadien. MSc thesis, Département de phytologie, Université Laval.
T.75. Valcourt, M. 2022. Influence multi-échelles de l'habitat sur la répartition des lemmings dans le Haut Arctique canadien. MSc thesis, Département de biologie, Université Laval, Québec.
T.74. Seyer, Y. 2022. Mouvements annuels, reproduction et compétition alimentaire chez un prédateur aviaire de la toundra, le labbe à longue queue. PhD thesis, Département de biologie, Université Laval, Québec.
T.73. Grenier-Potvin, A. 2021. Sélection fine de l'habitat chez le renard arctique à l'Ile Bylot. MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.72. Duchesne, E. 2020. Effet des interactions indirectes engendrées par un prédateur commun sur les variations spatio-temporelles d'abondance des espèces dans une communauté de vertébrés. MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.71. Chagnon-Lafortune, A. 2020. Étude à large échelle spatiale pour évaluer l'effet de la température sur la disponibilité des arthropodes pour les oiseaux insectivores en Arctique. MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.70. Reséndiz, C. 2020. Phénologie de la reproduction chez l'oie des neiges et changements climatiques. PhD thesis, Département de biologie, Université Laval, Québec.

T.69. Juhasz, C.-C. 2020. Impacts de la variabilité climatique sur les interactions prédateur-proie en Arctique. PhD thesis, Département de biologie, Université de Moncton.

T.68. Lapierre-Poulin, F. 2018. Vulnérabilité des tanières du renard arctique aux risques géologiques reliés aux changements climatiques. MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.67. Léandri-Breton, D.-J. 2018. Stratégies migratoires et vulnérabilité à la prédation chez des pluviers nichant dans l'Arctique. MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.66. Chevallier, C. 2018. Démographie et dynamique de la population de renards arctiques (*Vulpes lagopus*) de l'Île Bylot, Nunavut, Canada. PhD thesis, Département de biologie, Université du Québec à Rimouski.

T.65. Lai, S. 2017. Écologie spatiale du renard arctique sur l'Île Bylot, Nunavut, Canada. PhD thesis, Département de biologie, Université du Québec à Rimouski.

T.64. Robillard, A. 2017. Mouvements et utilisation de l'habitat en hiver chez un prédateur nomade: le harfang des neiges. PhD thesis, Département de biologie, Université Laval, Québec.

T.63. Fauteux, D. 2016. Effets directs et indirects de la prédation sur les lemmings dans l'Arctique canadien. PhD thesis, Département de biologie, Université Laval, Québec.

T.62. Beardsell, A. 2016. Écologie de la nidification de la buse pattue dans le Haut-Arctique et vulnérabilité des nids aux risques géomorphologiques. MSc thesis, Département de biologie, Université Laval, Québec.

T.61. Morin, C. 2015. Effets des ressources alimentaires sur la date d'émergence et la taille de portée du renard arctique à l'île Bylot, Nunavut. Mémoire, Université du Québec à Rimouski., Rimouski, Québec, Canada.

T.60. Royer-Boutin, P. 2015. Effets des cycles de lemmings sur le succès de nidification d'oiseaux différant par leur taille corporelle et leur comportement. MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.59. Marmillot, V. 2015. Effets des conditions environnementales, de la condition corporelle et du statut hormonal sur la mue de la grande oie des neiges (*Chen caerulescens atlantica*). MSc thesis, Département de biologie, Université Laval, Québec.

T.56. Doiron, M. 2014. Impacts des changements climatiques sur les relations plantes-herbivores dans l'Arctique. PhD thesis, Département de biologie, Université Laval, Québec.

T.55. Tremblay, E. 2014. Évaluation d'une méthode photographique pour l'étude d'une population de renards arctiques à l'île Bylot. Mémoire, Université du Québec à Rimouski, Rimouski, Québec, Canada.

T.54. Doucet, C. 2014. Synchronie entre la reproduction et l'abondance des ressources: effet sur le succès reproducteur d'un insectivore nichant dans l'Arctique. MSc thesis. Département de biologie, Université du Québec à Rimouski.

T.53. Christin, S. 2014. Évaluation empirique de la précision du suivi télémétrique Argos dans le Haut-Arctique et implications pour l'estimation des domaines vitaux. MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.52. Rioux, M.-J. 2014. La dynamique socio-spatiale hivernale chez les couples de renard arctique (*Vulpes lagopus*) dans le haut-arctique canadien. MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.51. Bilodeau, F. 2013. Effet du couvert nival, de la nourriture et de la prédation hivernale sur la dynamique de population des lemmings. PhD thesis, Département de biologie, Université Laval, Québec.

T.50. Souchay, G. 2013. Aspects non-canalisés de la dynamique de population de la grande oie des neiges. Probabilités de reproduction et de survie juvénile. PhD thesis, Département de biologie, Université Laval, Québec & Université de Montpellier 2, Montpellier, France.

T.49. Bolduc, E. 2013. Abondance et phénologie des arthropodes terrestres de l'Arctique canadien: modélisation de la disponibilité des ressources alimentaires pour les oiseaux insectivores. MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.48. Chalifour, E. 2013. Écologie de la mue chez la grande oie des neiges (*Chen caerulescens atlantica*). MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.47. Perreault, N. 2012. Impact de la formation de ravins de thermo-erosion sur les milieux humides, Ile Bylot, Nunavut, Canada. MSc thesis, Département de chimie-biologie, Université du Québec à Trois-Rivières.

T.46. Therrien, J.-F. 2012. Réponses des prédateurs aviaires aux fluctuations d'abondance de proies dans la toundra. PhD thesis, Département of biologie, Université Laval.

T.45. Desnoyers, M. 2011. Le comportement social de la grande oie des neiges (*Chen caerulescens atlantica*) : existe-t-il des associations stables au sein des volées? MSc thesis, Département de biologie, Université Laval.

T.44. Juillet, C. 2011. Impact de la chasse sur la dynamique d'une population migratrice : le cas de la Grande Oie des neiges. PhD thesis, Département de biologie, Université Laval.

T.43. Côté, G. 2011. Impacts de la population de la grande oie des neiges sur l'état trophique des lacs et étangs de l'île Bylot, Nunavut. MSc thesis, Département de géographie, Université Laval.

T.42. McKinnon, L. 2011. Écologie de la reproduction et migration des bécasseaux dans le Haut-Arctique. PhD thesis, Département de biologie, Université du Québec à Rimouski.

T.41. Tarroux, A. 2011. Utilisation de l'espace et des ressources chez un carnivore terrestre de l'Arctique : le renard polaire. PhD thesis, Département de biologie, Université du Québec à Rimouski.

T.40. Duchesne, D. 2009. Sélection de l'habitat, reproduction et prédation hivernales chez les lemmings de l'Arctique. MSc thesis, Département de biologie, Université Laval.

T.39. Marchand-Roy, M. 2009. L'effet fertilisant de la Grande Oie des neiges: cinq ans de suivi de l'azote et du phosphore dans les polygones de tourbe de l'Île Bylot au Nunavut. MSc thesis, Département de phytologie, Université Laval.

T.38. Cameron, C. 2009. Régimes d'appariement du Renard Arctique (*Vulpes lagopus*). MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.37. Graham-Sauvé, M. 2008. Effets en cascade du climat et des interactions trophiques indirectes sur les plantes de la toundra par l'oie des neiges. MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.36. Morrissette, M. 2008. L'influence respective du climat, des interactions trophiques indirectes et de la densité sur la productivité annuelle de la Grande Oie des neiges (*Chen caerulescens atlantica*). MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.35. Giroux, M.-A. 2007. Effets des ressources allochtones sur une population de renards arctiques à l'Île Bylot, Nunavut, Canada. MSc thesis, Département de biologie, Université du Québec à Rimouski.

T.34. Lecomte, N. 2007. Risque de prédation, hétérogénété de l'habitat et fidélité au site de reproduction: Le cas de la Grande Oie des neiges dans le Haut-Arctique. PhD thesis, Département de biologie, Université Laval.

T.33. Gruyer, N. 2007. Étude comparative de la démographie de deux espèces de lemmings (*Lemmus sibericus* et *Dicrostonyx groenlandicus*), à l'Île Bylot, Nunavut, Canada. MSc thesis, Département de biologie, Université Laval.

T.32. Careau, V. 2006. Comportement de mise en réserve du renard arctique dans une colonie d'oies des neiges à l'Île Bylot, Nunavut. PhD thesis, Département de biologie, Université du Québec à Montréal.

T.31. Szor, G. 2006. Sélection des sites de tanières et des tanières de reproduction chez le renard arctique à l'Île Bylot, Nunavut. MSc thesis, Département de biologie, Université du Québec à Rimouski.
T.30. Dickey, M.H. 2006. Effet des facteurs climatiques sur la phénologie et le succès reproducteur de la grande oie des neiges (*Chen caerulescens atlantica*) à l'Île Bylot. MSc thesis, Département de biologie, Université Laval.
T.29. Pouliot, R. 2006. Les effets fertilisants de la grande oie des neiges sur la dynamique des milieux humides de l'île Bylot au Nunavut : impact du tapis de bryophites. MSc thesis, Département de phytologie, Université Laval.
T.28. Audet, B. 2006. Écologie alimentaire des oisons de la grande oie des neiges (*Chen caerulescens atlantica*) en milieux mésiques sur l'Île Bylot, Nunavut. MSc thesis, Département de biologie, Univ. Laval.
T.27. Calvert, A.M. 2004. Variations spatiales et temporelles de la mortalité due à la chasse et les effets des mesures de gestion chez la grande oie des neiges (*Chen caerulescens atlantica*). MSc thesis, Département de biologie, Université Laval.
T.26. Mainguy, J. 2003. Déplacements des familles de la grande oie des neiges durant la période d'élevage, Île Bylot, Nunavut. MSc thesis, Département de biologie, Université Laval.
T.25. Bourguelat, G. 2003. Durée de séjour automnale de la grande oie des neiges dans l'estuaire du Saint-Laurent : une nouvelle approche méthodologique. MSc thesis, Département de biologie, Université Laval.
T.24. Reed, E. 2003. Coûts des soins parentaux et effet des conditions environnementales sur la reproduction de la Grande Oie des neiges. PhD thesis, Département de biologie, Université Laval.
T.23. Béchet, A. 2003. Ecologie et comportement de la grande oie des neiges lors de sa migration pré-nuptiale dans le Quebec méridional. PhD thesis, Département de biologie, Université du Québec à Montréal.
T.22. Duclos, I. 2002. Milieux mésiques et secs de l'Île Bylot, Nunavut (Canada): caractérisation et utilisation par la grande oie des neiges. MSc thesis, Département de chimie-biologie, Université du Québec à Trois-Rivières.
T.21. Otis, P. 2002. Adaptations au froid chez les oisons, juvéniles et adultes et modèles de croissance chez la grande oie des neiges. MSc thesis, Département de biologie, Université Laval.
T.20. Féret, M. 2002. Effet d'une chasse printanière sur la condition physique de la Grande Oie des neiges en migration. MSc thesis, Département de biologie, Université Laval.
T.19. Bêty, J. 2001. Interactions trophiques indirectes, prédation et stratégies de reproduction chez l'oie des neiges nichant dans le Haut-Arctique. PhD thesis, Département de biologie, Université Laval.
T.18. Demers, F. 2000. Effets des colliers émetteurs sur le maintien du couple, le succès reproducteur et le comportement de la grande oie des neiges. MSc thesis, Département de biologie, Université du Québec à Montréal.
T.17. Rioux, S. 2000. Effets du vent et du rayonnement sur la thermorégulation chez les oisons de la grande oie des neiges, *Chen caerulescens atlantica*. MSc thesis, Département de biologie, Université Laval.
T.16. Renaud, M. 1999. Coûts énergétiques de la thermorégulation chez les jeunes de la grande oie des neiges en milieu naturel. MSc thesis, Département de biologie, Université Laval.
T.15. Pineau, C. 1999. Facteurs limitant la croissance des plantes graminoïdes et des mousses dans les polygones de tourbe utilisés par la grande oie des neiges. MSc thesis, Département de phytologie, Université Laval.
T.14. Massé, H. 1998. Estimation de la capacité de support des différents écosystèmes humides utilisés par la grande oie des neiges nichant à l'Île Bylot (TNO, Canada). MSc thesis, Département de phytologie, Université Laval.
T.13. Menu, S. 1998. Survie de la grande oie des neiges : aspects méthodologiques et implications dans la dynamique de population. PhD thesis, Département de biologie, Université Laval.
T.12. Ratté, J. 1998. Thermorégulation et croissance chez les oisons de la Grande Oie des neiges (*Chen caerulescens atlantica*). MSc thesis, Département de biologie, Université Laval.
T.11. Poussart, C. 1997. Patron d'incubation et régime thermique des oeufs chez la Grande oie des neiges. MSc thesis, Département de biologie, Université Laval.

T.10. Lepage, D. 1997. Variations saisonnières du succès reproducteur chez la Grande Oie des neiges (*Chen caerulescens atlantica*). PhD thesis, Département de biologie, Université Laval.

T.09. Piedboeuf, N. 1996. Qualité nutritive des sites d'alimentation des oisons de la grande oie des neiges: est-il avantageux d'utiliser des sites déjà broutés? MSc thesis, Département de biologie, Université Laval.

T.08. Lesage, L. 1995. La croissance corporelle, et l'influence de la date d'éclosion et du site d'élevage sur le développement tissulaire chez les oisons de la grande oie des neiges. MSc thesis, Département de biologie, Université Laval.

T.07. Fortin, D. 1995. L'environnement thermique des oisons de la grande oie des neiges (*Chen caerulescens atlantica*) dans l'Arctique canadien. MSc thesis, Département de biologie, Université Laval.

T.06. Beaulieu, J. 1995. La croissance des plantes arctiques (*Dupontia fisheri* et *Eriophorum scheuchzeri*) en réponse au broutement par les oisons de la grande oie des neiges. MSc thesis, Département de biologie, Université Laval.

T.05. Hughes, J. 1992. Utilisation de l'habitat par la grande oie blanche pendant la période d'élevage des couvées à l'Ile Bylot, Territoires du Nord-Ouest. MSc thesis, Département de biologie, Université Laval.

T.04. Choinière, L. 1992. Stratégie énergétique de la grande oie blanche (*Chen caerulescens atlantica*) pendant la reproduction. MSc thesis, Département de biologie, Université Laval.

T.03. Manseau, M. 1991. Habitats d'élevage des oisons de la grande oie des neiges (*Chen caerulescens atlantica*): une approche comparative incluant la perception de l'animal. MSc thesis, Département de biologie, Université Laval.

T.02. Boismenu, C. 1991. Physiologie du jeûne prolongé chez la grande oie des neiges (*Chen caerulescens atlantica*). MSc thesis, Département de biologie, Université Laval.

T.01. Tardif, J. 1990. Comportement d'alimentation de la grande oie blanche (*Chen caerulescens atlantica*) en période pré-reproductrice. MSc thesis, Département de biologie, Université Laval.