

AEWA Single Species Action-Planning Workshop for the Taiga Bean Goose (*Anser f. fabalis*), Tuusula, Finland 12-14 November 2013



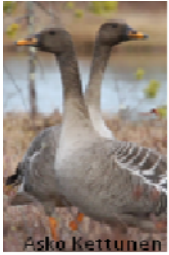
Population size, trends, distribution, threats, hunting,
management, conservation status and possible actions in Sweden



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Swedish Environmental Protection Agency (David Schönberg-Alm)





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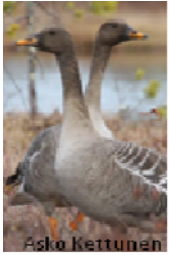
Recent Population estimates

- Breeding ¹⁾ 850 pairs (655 – 1045)
 - Staging autumn (October) ²⁾ 45000 – 55000
 - Wintering (January) ²⁾ 8000 – 42000
 - Staging spring (April) ?
- Breeding population estimate is very rough (“guestimate”)
- January totals vary substantially depending on weather conditions

Sources:

¹⁾Ottosson et al. 2012. Fåglarna i Sverige. SOF, Halmstad

²⁾ <http://www.zoo.ekol.lu.se/waterfowl/index.htm>



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Population trends (20 yr)

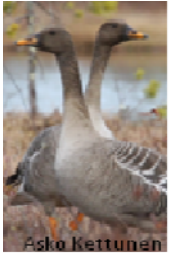
- Breeding ¹⁾ stable?
- Staging – post-breeding ²⁾ stable?
- Wintering (January) ²⁾ increasing?
- Staging – pre-breeding ³⁾ stable?

Sources:

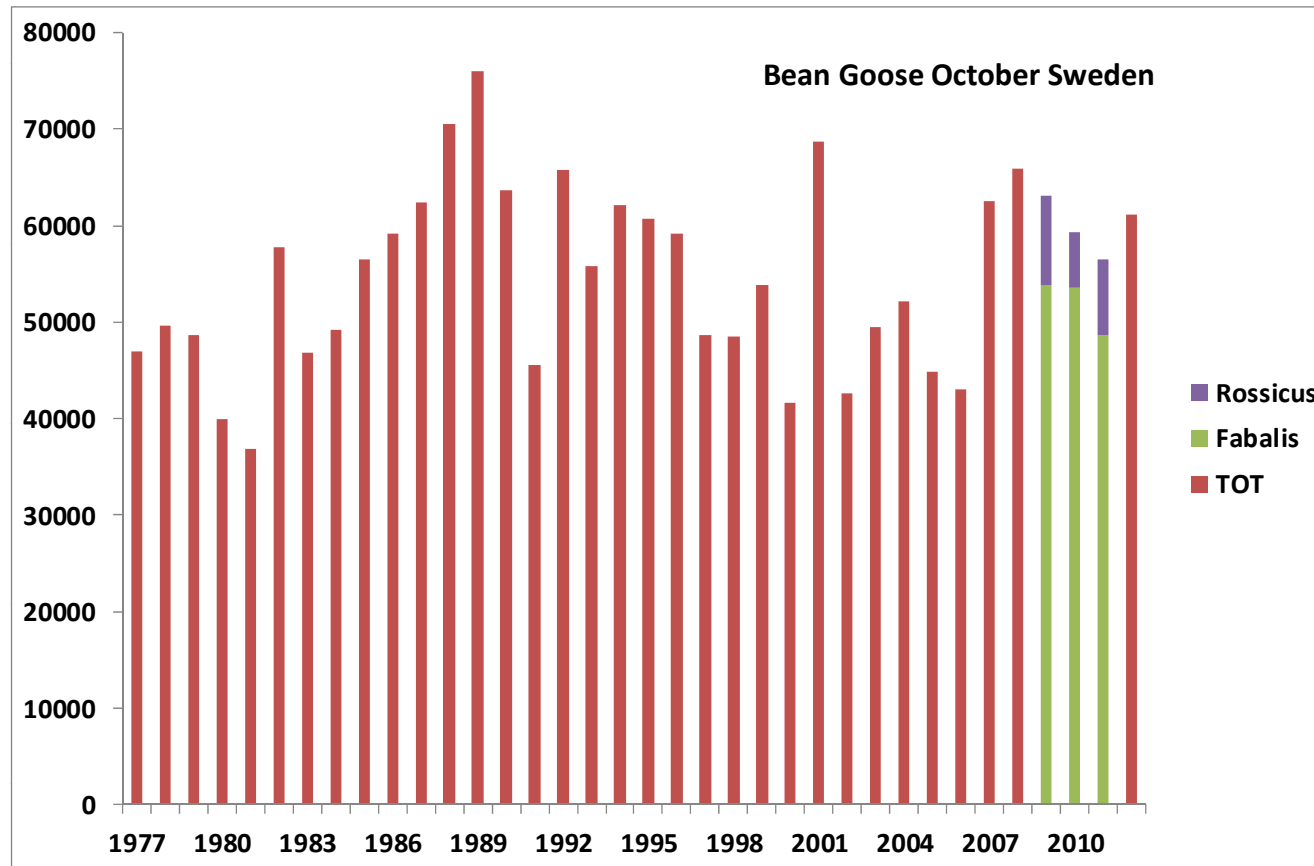
¹⁾ Ottosson et al. 2012. Fåglarna i Sverige. SOF, Halmstad

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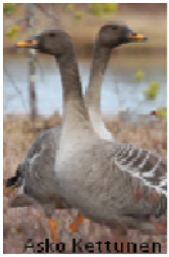
³⁾ Sjöberg & de Jong 2009, de Jong 2012 & 2013



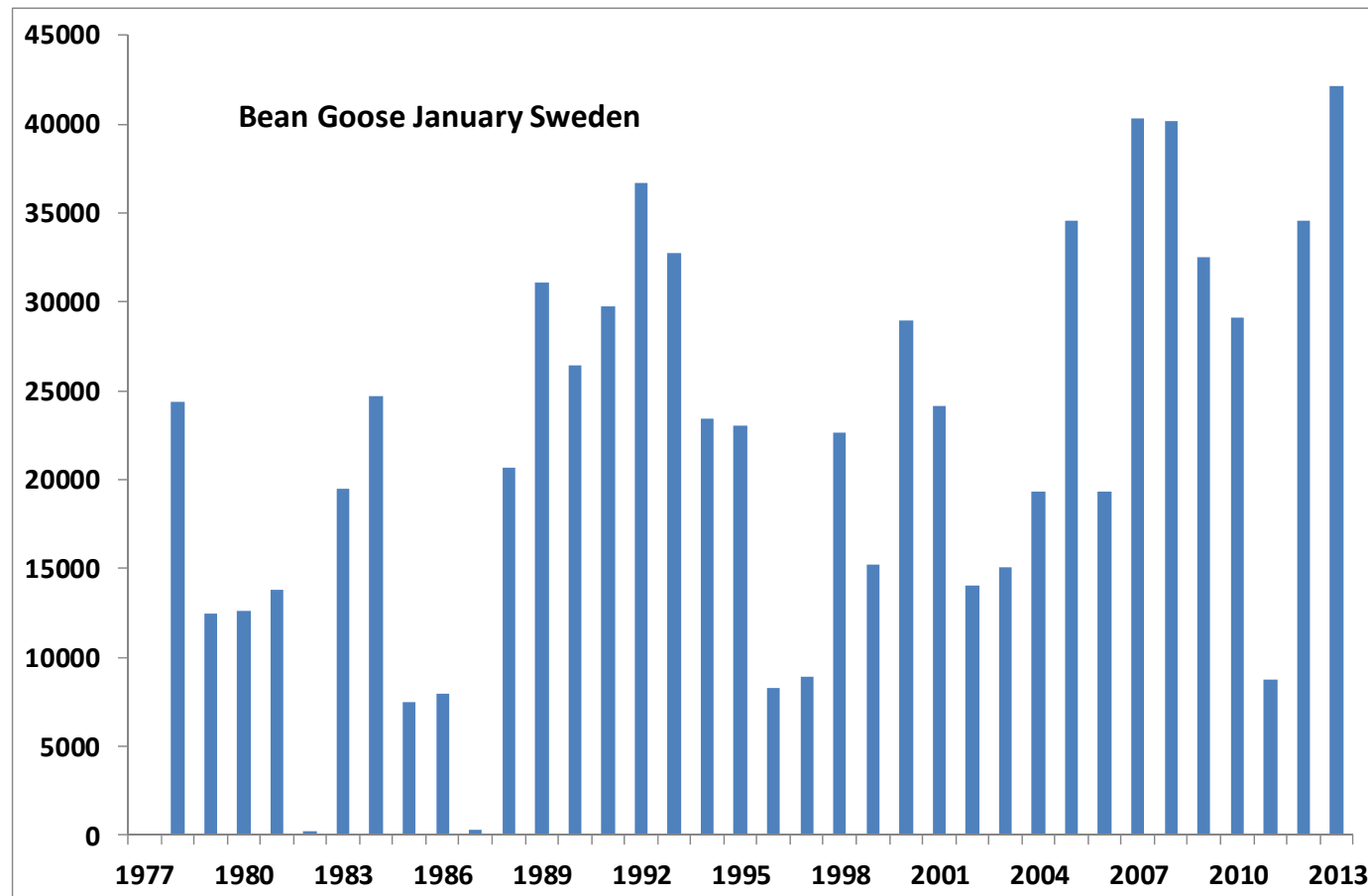
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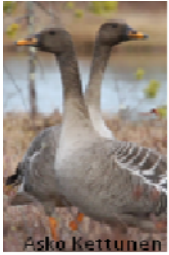


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! Count data are **not corrected for Tundra Bean Geese**

Source: <http://www.zoo.ekol.lu.se/waterfowl/index.htm>

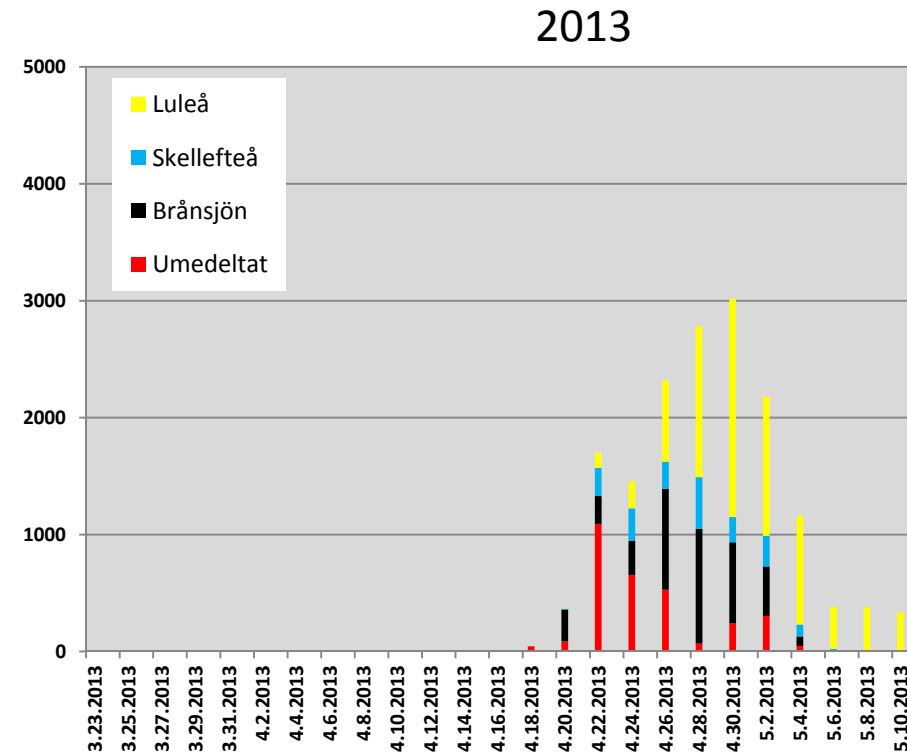
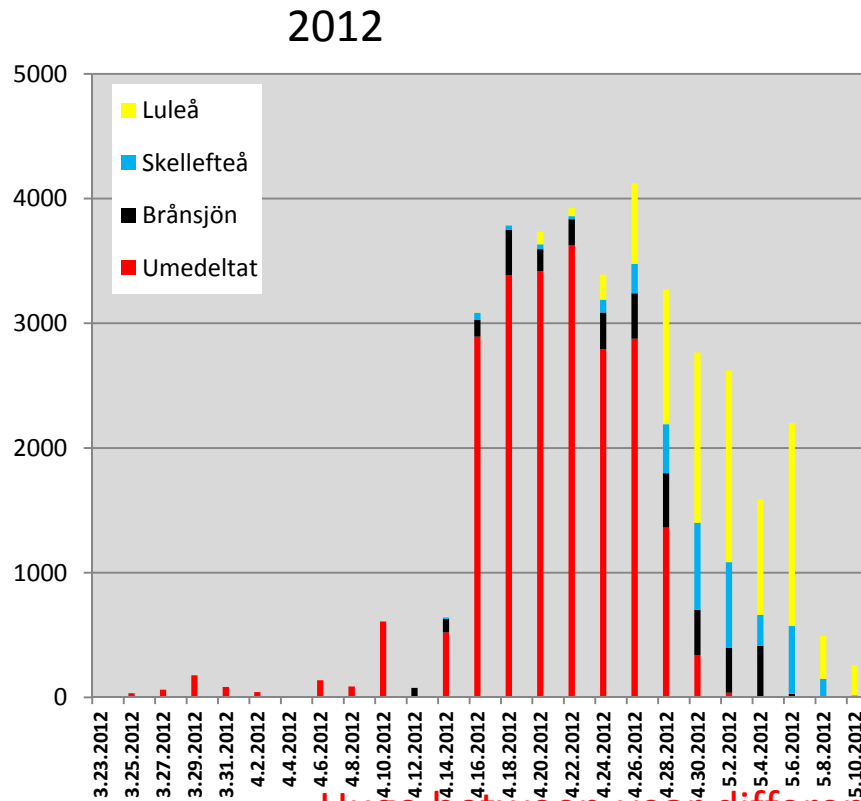


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Spring staging Population (& Trend?)

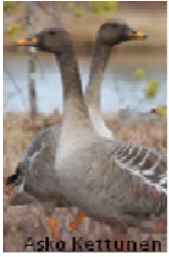
Coastal regions of northern Sweden



Huge between-year differences make trend analyses unreliable,
especially without good LOS data



Source: de Jong 2012 & 2013



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Distribution - Breeding

Summer observations of Bean Geese
on "Fixed routes" (regular 25x25 km grid)

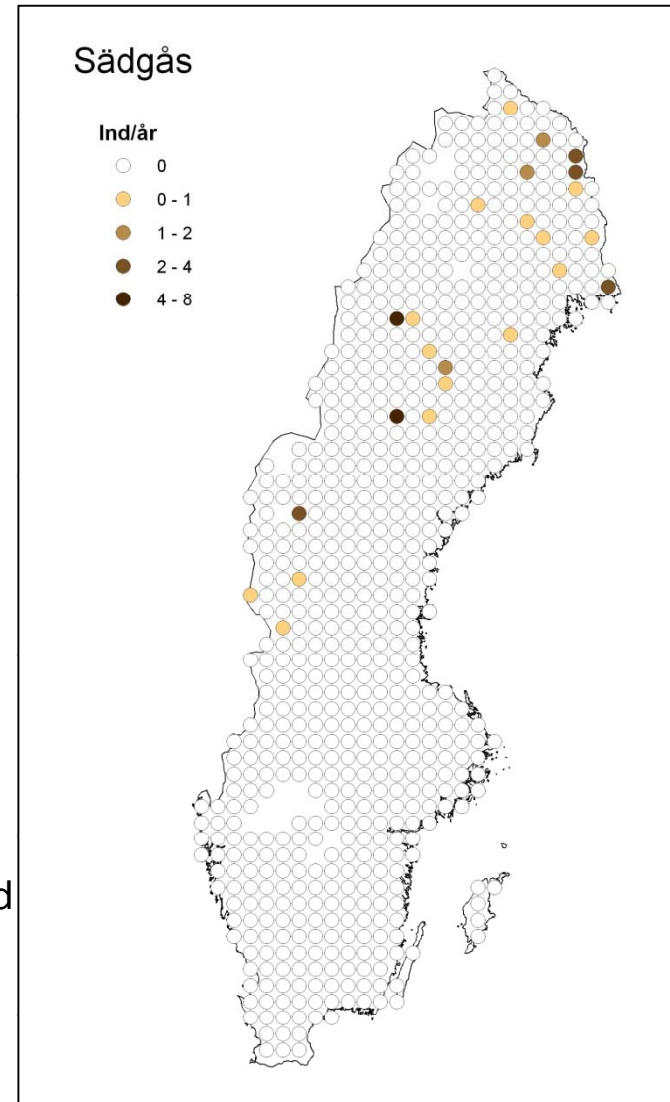
Legend:

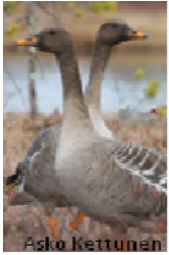
Average yearly numbers of individuals observed
from "Fixed routes" transects (8 km).

**Note that many of the relevant routes were
visited a small number of years only.**

Source:

Ottosson et al. 2012. Fåglarna i Sverige. SOF, Halmstad
Map based on the data from the Swedish Bird Survey
(c.f. Lindström & Green, 2012)





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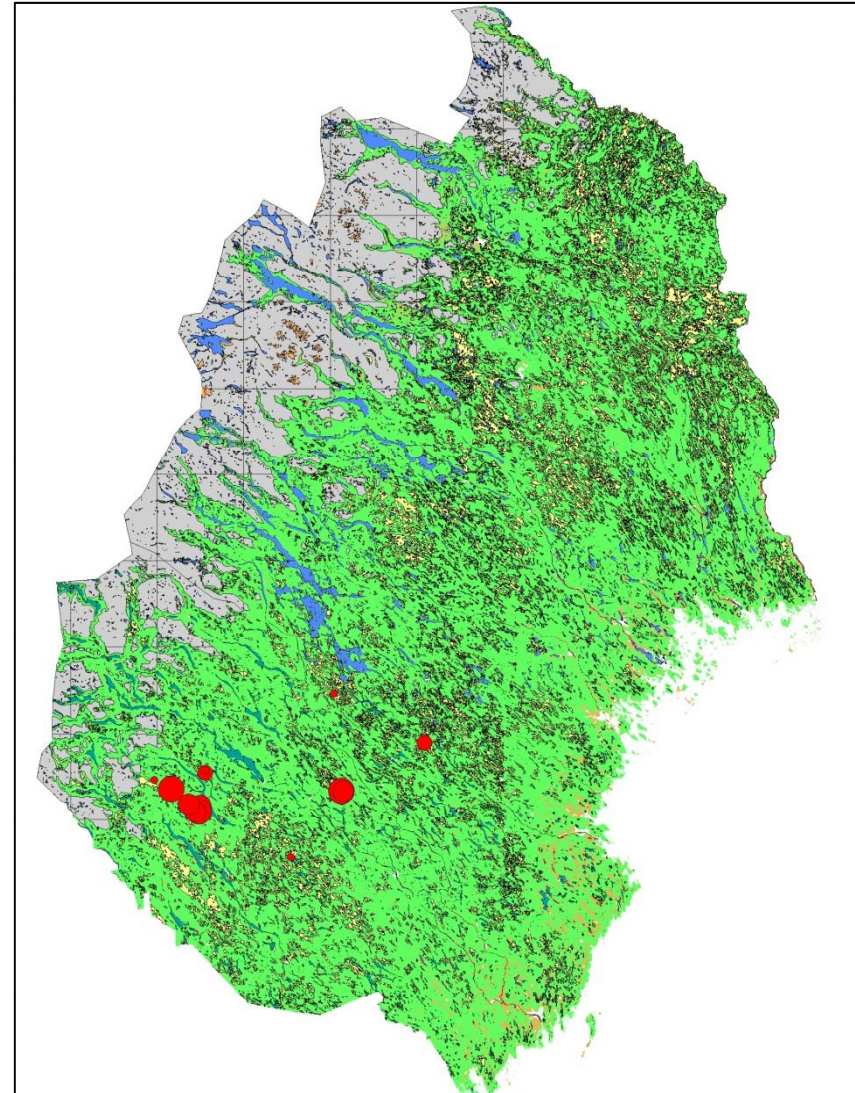
Distribution - Moulting

Map shows results from an aerial survey in 2008
(appr. 670 individuals on 15 sites
between Dorotea and Gällivare) ¹⁾.

In 2012 and 2013, additional sites
near Vilhelmina were discovered ²⁾.

Moulting site in Dalarna is outside
the range of this map ²⁾.

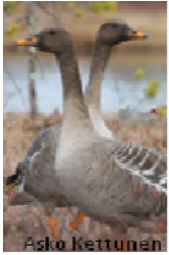
No moulting parties of geese found in
northern Lapland during surveys in the
1970s or in 2008.



Sources:

¹⁾ Nilsson, de Jong & Sjöberg, 2008

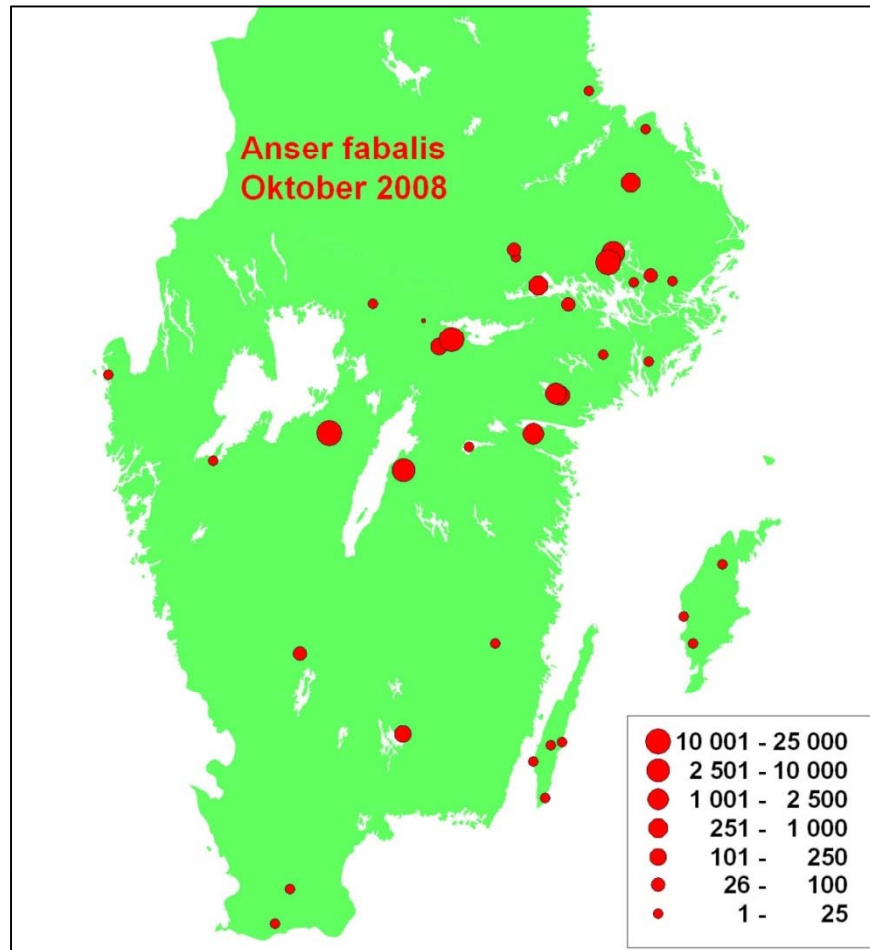
²⁾ de Jong, unpublished



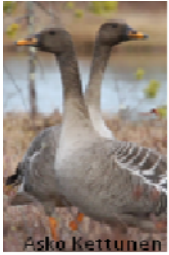
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Distribution - Autumn Staging (October)



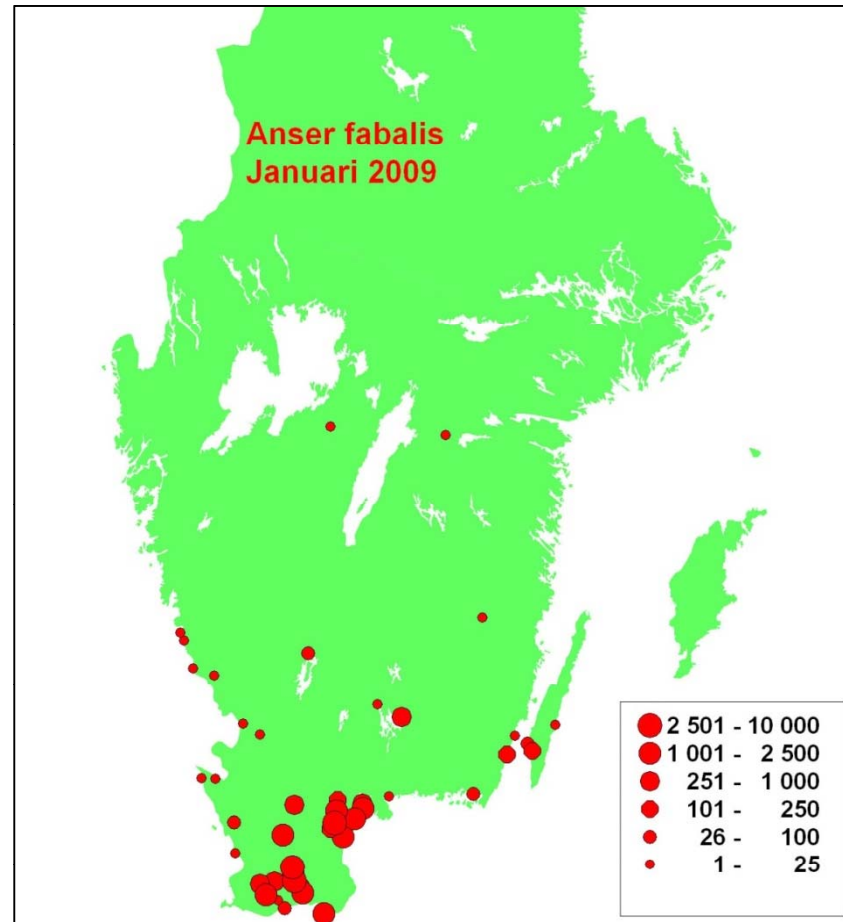
! Tundra Bean Geese are
included in the count data



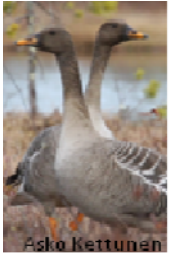
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Distribution – Wintering (January)



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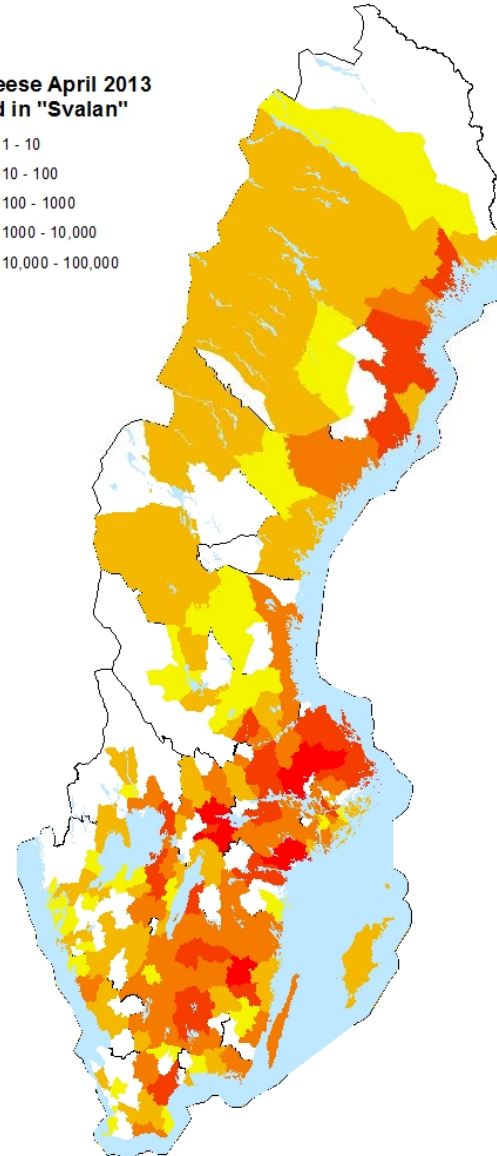
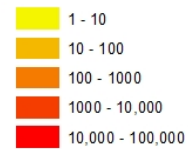


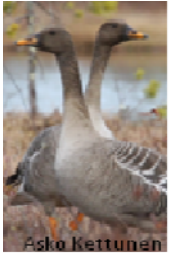
Distribution - Spring

Datasource:
Swedish Species Observation System

! Substantial variation between years

Bean Geese April 2013
reported in "Svalan"





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Threats to the Taiga Bean Goose in Sweden

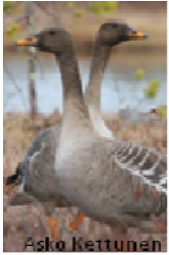
	Breeding	Moulting	Autumn	Winter	Spring ^{a)}
Habitat loss	(1)	2	2	NA	2
Habitat degradation	1	2	3 ^{b)}	3 ^{b)}	3 ^{b) c)}
Hunting	NA	NA	4	3	NA
Predation (non-human)	2	2	2	2	1
Disturbance, hunting	NA	NA	3	2	NA
Disturbance, other	2	3+ ^{d)}	2	2	3
Windfarms	1	1	2	2	2
Powerlines	NA	1	2	2	2
Infrastructure, other	NA	1	1	1	1

^{a)} This period also includes the pre-breeding staging sites near the breeding areas

^{b)} Loss of food resources by early post-harvest "blackening" (ploughing etc.) of fields, introduction of unsuitable crops (including energy crops), etc.

^{c)} Abandoned farming management of pre-breeding staging sites.

^{d)} Disturbance by berry-pickers, fishermen, etc.

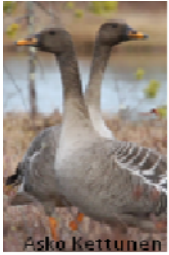


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National Information - Monitoring

- National Goose Counts organized annually since 1977/78
October (Main Bean Goose Count)
November (Additional Bean Goose Count)
January (International Midwinter Count)
(part of the International Goose Count scheme)
! No separation between *fabalis* and *rossicus* Bean Geese
- Monitoring of spring staging Bean Geese in northern Sweden
since 2005 (some 1970s/80s reference data are available)
- Swedish Breeding Bird Survey (Bean Goose observations are few!)
Breeding and moulting Taiga Bean Geese are notoriously difficult to monitor.

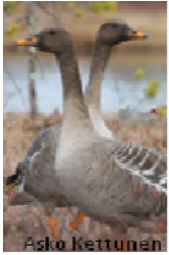


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Taiga Bean Goose – public opinion

- The TBG is a well-known and appreciated bird species for many Swedes (e.g. through the Nils Holgersson story by Selma Lagerlöf), and has a much higher status than e.g. Greylag or Canada Geese
- Meanwhile, most people do not distinguish between (T)BG and other goose species in the field
- In southern Sweden, the TBG is associated with long hunting traditions, both among noblemen and peasants
- Bean Goose hunting is regarded "exclusive" (high status)
- The general opinion that "Goose numbers explode, which causes major problems!" spills over on the TBG
- "Geese shit on our beaches, pollute our waters, spread diseases and damage farmer's crops, thus should be reduced by hunting!"
- Many birdwatchers still think that "all" Bean Geese in Sweden are Taiga Bean Geese

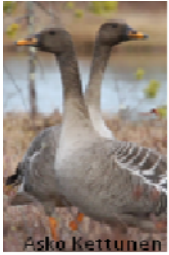


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Taiga Bean Goose – economy

- The Taiga Bean Goose has virtually no impact on the national economy of Sweden
- Damage to agricultural crops caused by Taiga Bean Geese is insignificant at the national and local levels, but can be significant for individual farmers. Damage assessments and compensation schemes do not distinguish Taiga Bean Geese from other geese (or swans and cranes)
- Taiga Bean Goose hunting for the sake of subsistence (in the strict sense) does not occur
- (Taiga) Bean Goose hunting is important for local communities, hunting-tourism providers and individuals (raising tolerance levels for crop-damage)
- Landowners can earn significant amounts of money from lending their exclusive Bean Goose-hunting rights to (foreign) hunters
- There is a small, but growing eco-tourism industry that uses Taiga Bean Geese (among other geese, among other birds/animals) as the base for their activities

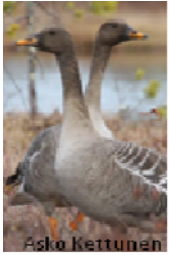


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Taiga Bean Goose - agriculture

- At the national level, crop damage by Taiga Bean Geese is very limited, but locally and for individual farmers, damage can be significant
- Taiga Bean Geese generally occur in mixed species assemblies, thus damages can seldom be assessed at the species level
- Assessment and compensation is organized at the County level
- Compensation for goose/bird damages competes with compensations for damage caused by other free-living animals (e.g. seal, bear, etc.), and in many counties, demand exceeds budget
- Financial compensation for crop damage is only given if protective measures were applied but proven insufficient
- "Many" farmers consider the application procedure "too cumbersome" and refrain from applying for compensation
- In several important staging areas, farmers, hunters, ornithologists and authorities work together in "goose/crane management groups" (c.f. "Viltskadecenter", www.viltskadecenter.se)

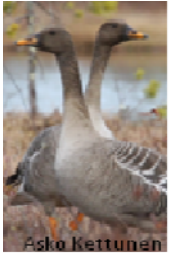


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Legal status of the Taiga Bean Goose in Sweden

- Taiga Bean Goose is a protected species, but hunting is allowed within certain time-frames, in certain counties and under certain conditions (see below)
- Current legislation was declared: 1987 (“Jaktförordningen”)
- Red list status: NT (both breeding and staging)
- Government agency responsible for implementation: Swedish Environmental Protection Agency (Naturvårdsverket)
- Level of implementation: Good / Satisfactory
- Obstacles hindering effective and improved implementation: data deficiency

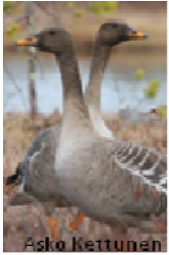


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Taiga Bean Goose - Hunting

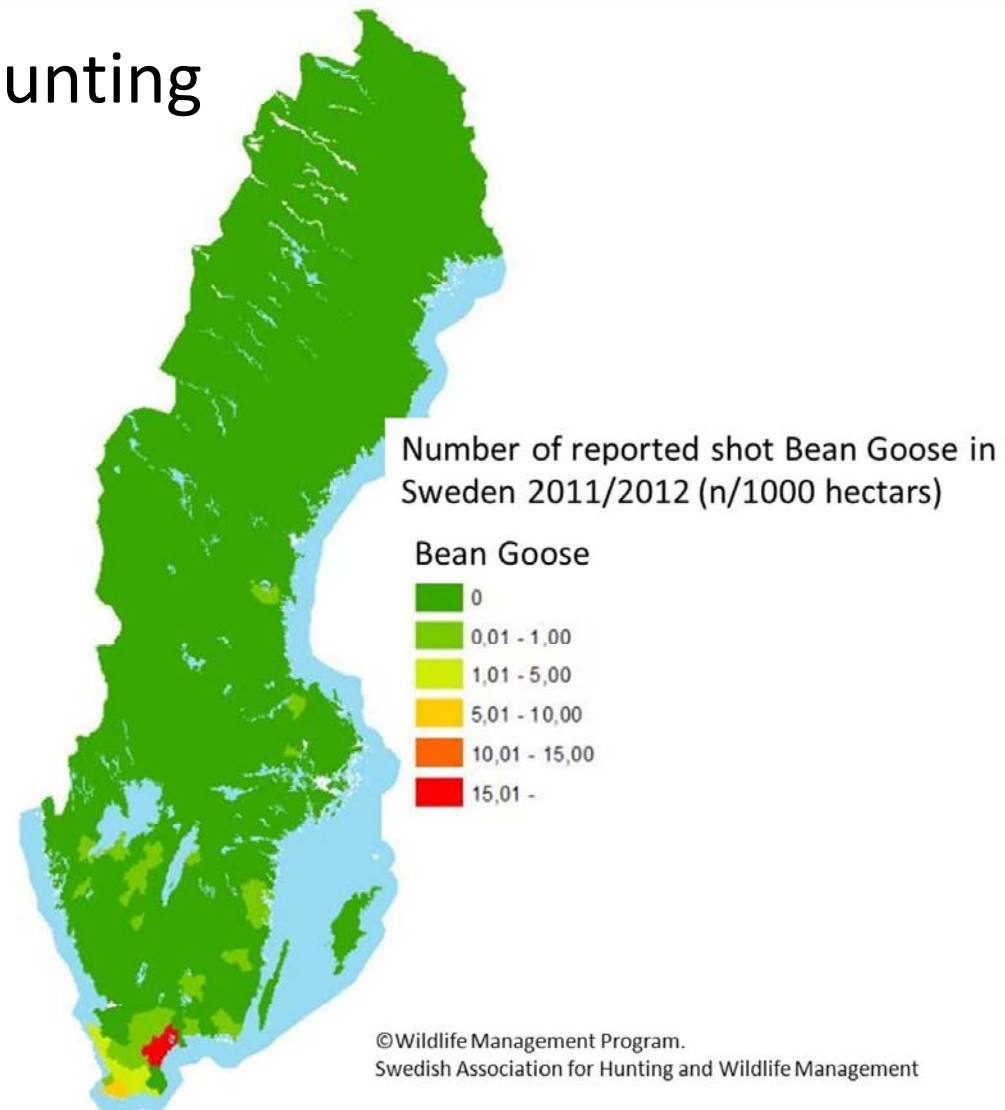
- Hunting regulations
 - Open season for the two southernmost counties (Skåne and Blekinge); duration 1st Oct - 31st Dec. Hunting allowed from first light to 11 AM.
 - Protective hunting to prevent damage on agricultural crops in some areas in central Sweden 1st Sept- 31st Oct, and in counties with open season 1st Jan - 15th Mar.
- Hunting bag, size and trends (recent and long term 10-20 years)
 - Average annual bag: 3105 (1995-2010)
 - Large variation between years (900-6400), probably depending on autumn/winter weather conditions, makes trend estimates unreliable.
 - Bag size also includes birds shot during protective hunting.
 - Proportion of Tundra Bean Geese unknown, but probably reflects the autumn distribution of the subspecies.
- Local hunters' involvement in conservation/management initiatives
 - Protective hunting and much of the crop-protection (e.g. scaring off geese) is done by local hunters.



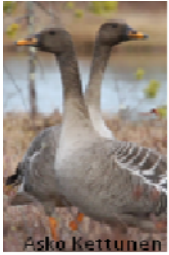
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Taiga Bean Goose - Hunting



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Swedish Association for Hunting and Wildlife Management

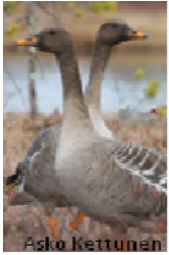


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Actions and Planning

- Many of the major staging and wintering sites are protected
Natura 200 / nature reserves / “Bird areas” (= periodic “no go”)
- Subsidies for non-harvested cereal fields (“fågelåkrar”) within CAP
- Wetland restoration programs
(Swedish Board of Agriculture, Svensk Våtmarksfond, etc.)
- Compensation programs for larger infrastructure projects
- Local arenas for sustainable natural resource management
(e.g. “Bird-problems groups” and Vilhelmina Model Forest)
- (Inter-)national (Taiga) Bean Goose Research Group (SLU, Umeå)

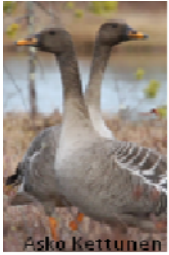


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Taiga Bean Goose - knowledge gaps

- True Taiga Bean Goose numbers during counts
- Unknown staging/wintering sites
- Current distribution and size of the Swedish breeding population (including cross Norwegian border distribution)
- Possible *fabalis/rossicus* hybridization zone in Nordkalotten (N/FI/SE/RU)
- Solid data on reproduction and survival rates
- Nesting habitat choice and potential threats to these
- Pre-breeding staging sites: locations, requirements, threats and management
- Fennoscandinavian moulting sites and site-use dynamics
- Moulting site bonding processes
- Predation on moulting sites
- Sub-population structure: movements, numbers and management
- “True” bag-sizes - flyway-level/subspecies-level
- Injuries caused by hunting and their population-level impact
- Landscape-level approaches to roost-foraging area management
- Competition from e.g. Whooper Swans in breeding areas
- Competition from other goose species on moulting sites (e.g. vegetation degradation)

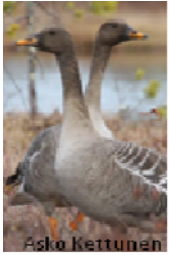


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Taiga Bean Goose – current research (all SLU)

- Monitoring spring staging geese, swans and cranes in northern Sweden (new approaches)
- Population structure among Bean Geese (Taiga and Tundra) in Sweden
- Sub-subspecies level genetics
- Catching and marking of staging and moulting Bean Geese (internationally)
- Improved counting and reporting system for Sweden
- Spring staging behaviour in northern Sweden, including habitat choice
- Pre-breeding staging behaviour
- Mapping of the Swedish breeding population
- Nesting habitat choice
- Mapping Swedish moulting sites
- Moulting site dynamics (including eDNA studies)
- Animal research ethics in goose research



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Other Information

-

proposed short-term actions

- All marking data in www.geese.org
- Broad propaganda for reporting neckband sightings
- Neckband-transmitter Contest
- Catching team for large scale year-round catching
- Genetics
- Info-database (pdf archive with translations into English)