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Report

Staging and wintering Taiga Bean Geese *Anser fabalis fabalis* in south Sweden

2016/17 -2018/19



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Introduction

Counts of staging and wintering Bean Geese *Anser fabalis* have been undertaken regularly since 1977/78, starting as a part of a Nordic program for Bean Goose Research including a number of different aspects including a neck-banding study of the migration patterns (Nilsson & Persson 1984). During the first years, geese were counted on all sites every month from September to April, but the counts were later changed to the months of October, November and January with a special survey for Greylag Goose *Anser anser* in September, which also included the other species (Nilsson 2013).

Most goose populations increased markedly during recent decades (Fox et al. 2010), this also applying to the Taiga Bean Goose *Anser fabalis fabalis*. (cf. also Nilsson 2013). The population of this subspecies peaked at about 100 000 in the 1990s and then showed a decrease to about 63000 in 2009 (Fox et al. 2010). Due to this development, work with a single species action plan started within AEWA and was published in 2015 (Marjakangas et al. 2015).

Within the framework of the newly established European Goose Management Platform (EGMP) work with a harvest management plan for the Taiga Bean Goose started. For this work, it was necessary to have adequate population estimates for the subspecies. As Tundra Bean Geese occur together with the Taiga Bean Geese in the flocks, it was not possible to obtain accurate numbers of the two subspecies for the areas north of Scania. On several important sites, geese were counted on the morning flights from the roosting lakes. In October 2017 and 2018, Hakon Kampe-Persson made special surveys of the feeding flocks on the important sites north of Scania to separate the two subspecies. He made a similar survey to some staging area in October 2016. In Scania, the situation was different as all areas counts being made on the feeding areas.

In early autumn, it is possible to separate yearling Bean Geese from older individuals. This opportunity was used to get a measure on the productivity of the staging Taiga Bean Geese in south Sweden. Some flocks of Taiga bean Geese was scanned during the special October surveys.

Staging numbers

At the special surveys in October 2017 and 2018 about 60000 and 59000, respectively, were counted in south Sweden (see Tables A1 and A2, appendix). In addition to the major sites visited at the special surveys in October, between 6000 and 7000 Bean Geese not separated to subspecies were reported from a number of smaller sites in south Sweden. The majority of these birds are considered to have been Taiga Bean Geese.

The **total population of Taiga Bean Geese** staging in south Sweden in 2017 and 2018 can thus be estimated to be **between 65000 and 70000 individuals**. In 2016 a larger proportion of the staging Bean Geese in Sweden could not be separated to subspecies. The absolute majority of these birds were most certainly Taiga Bean Geese.

The number of Tundra Bean Geese in Sweden were between 8000 and 10000 in 2016 and 2017, but only about 3000 were found in south Sweden in October 2018.

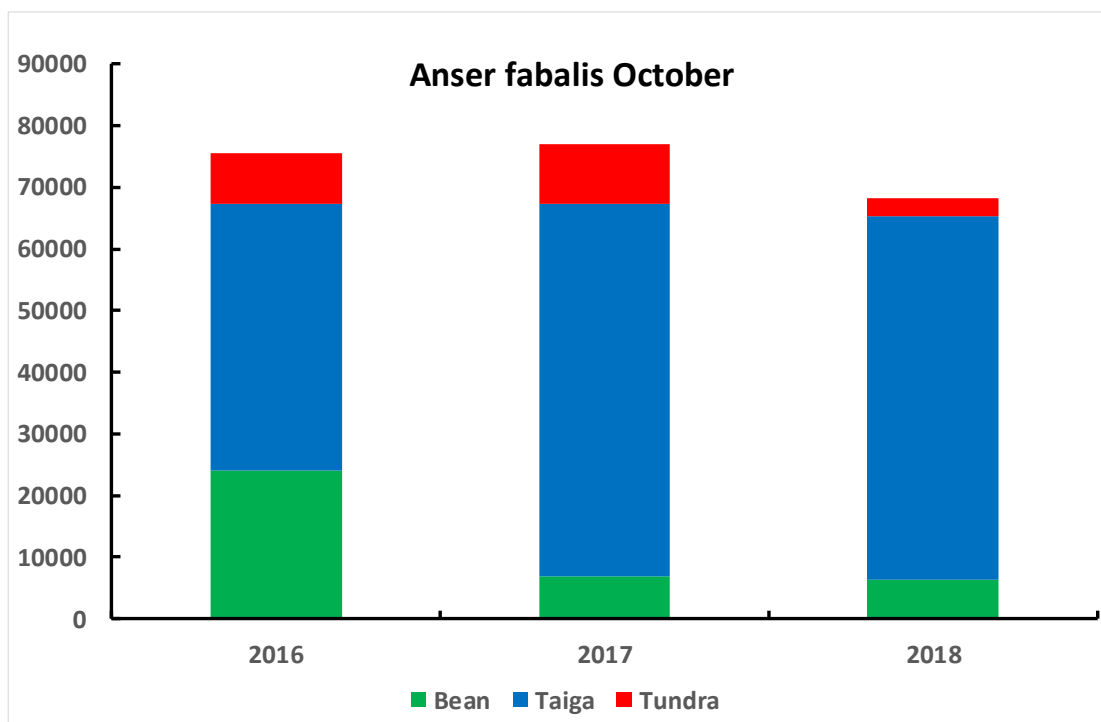


Fig. 1. The number of Taiga and Tundra Bean Geese on staging areas of south Sweden in October 2016-2018 together with the number of Bean Geese not separated on subspecies.

Wintering numbers

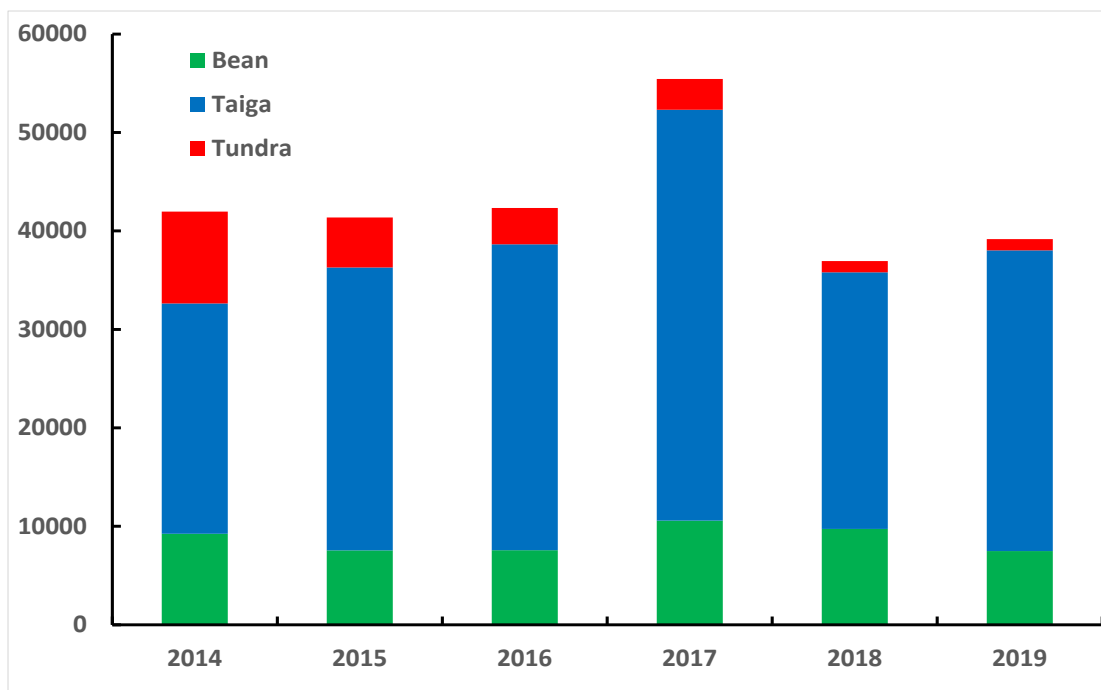


Fig. 2. The number of Taiga and Tundra Bean Geese on staging areas of south Sweden in January 2014 - 2019 together with the number of Bean Geese not separated on subspecies.

In January 2014 – 2019, between 23000 and more than 40000 Taiga Bean Geese were counted in south Sweden, mostly in the province of Scania (Fig. 2, Table A3). In addition, the number of Bean Geese not separated to subspecies varied between about 7500 and 10500. The majority of these birds were most certainly Taiga Bean Geese. Thus, the January totals for the Taiga Bean Geese in Sweden can be set to between 35000 and 40000 individuals in most recent years with no less than more than 50000 in January 2017.

The number of Tundra Bean Geese counted in Sweden in January decreased over the years from 9300 in 2014 to 1150 in 2019.

Distribution

The geographical distribution of the staging and wintering Taiga and Tundra Bean Geese was similar, but there were some differences on the local scale. In October, the Bean Geese of both subspecies were mainly found in south central Sweden (Fig. 3) with a concentration of the geese to staging areas like Lake Tåkern, Lake Kvismaren, Lake Östen, Hjälstaviken and some newly established staging areas in this region. Only smaller numbers were found in other parts of south Sweden, incl. the former traditional goose areas in Scania.

In November (not shown here on maps) the distribution of the staging Bean Geese in south Sweden is a little more variable, depending on the weather situation. In mild autumns, the majority remains in south central Sweden, but normally some larger flocks have moved to the winter areas in Scania by November. In most years, some of the Bean Geese have left the country by the November count (cf. Fig. 4!).

In January, the majority of the Bean Geese are found in the southernmost province of the country, Scania. There are also regularly a flock of wintering Bean Geese (mainly Taigas) in the province of Halland on the west coast. In mild winters some smaller flocks can remain on staging areas further north in south Sweden (Fig. 4). This was the situation in January 2019, when some flocks were found in Småland and on Öland.

Within Scania, most Taiga Bean Geese wintered in the central inland parts of south Scania and around the lakes in the northeastern part of the province. All larger groups of Tundra Bean Geese were found on one or two sites in the northeastern part of Scania, only smaller groups to be seen in the southwest.

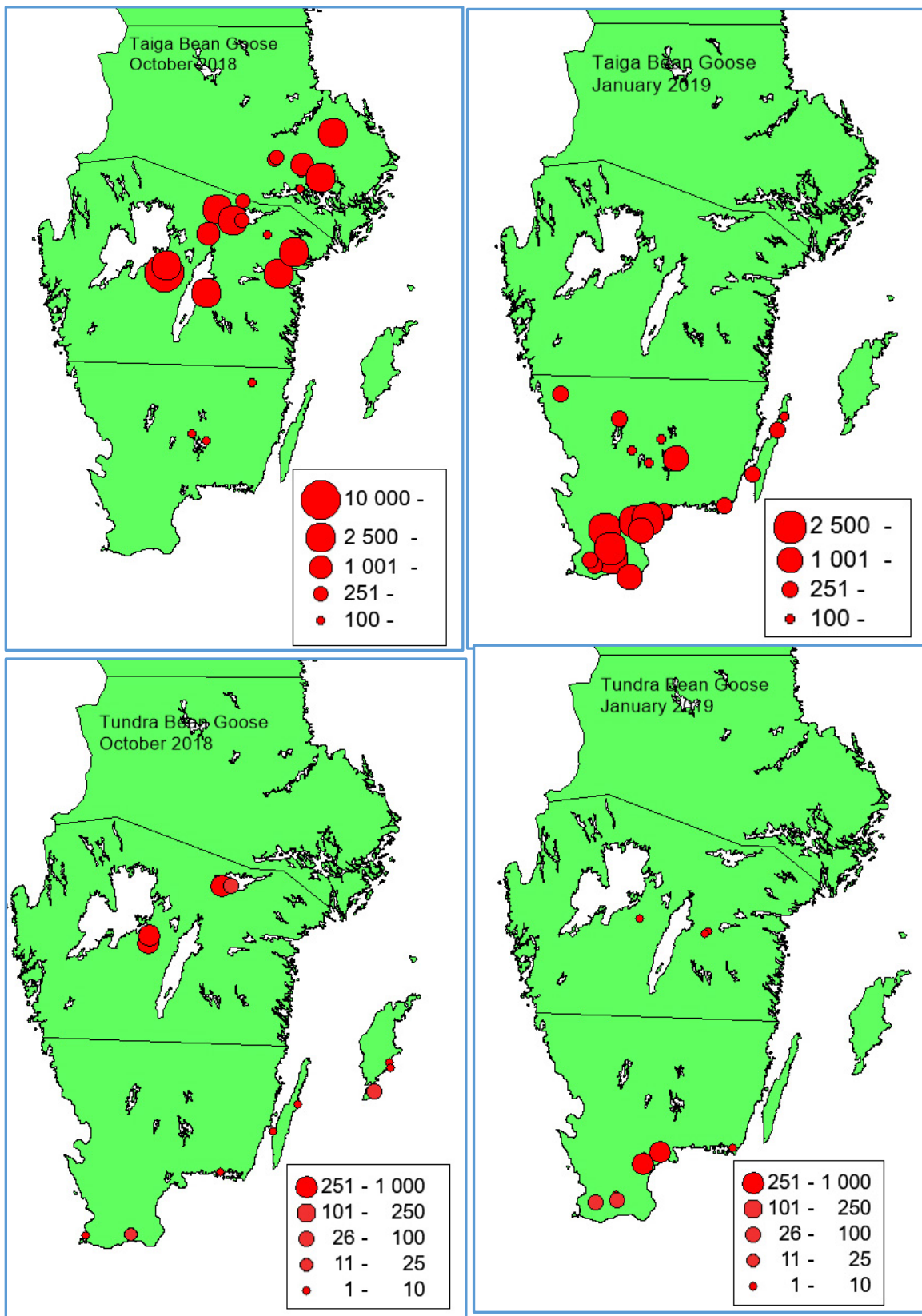


Fig. 3. The distribution of Taiga and Tundra Bean Goose in south Sweden in October 2018 and January 2019.

Production of young

Table.1. Percent yearlings in flocks of Taiga Bean Goose, where the age-ratio could be checked.

Year	Adults	Yearlings	Total checked	Per cent young
2017	1795	135	1930	7,0
2018	1336	116	1432	8,0

During the October surveys in 2017 and 2018 age ratio counts were undertaken in some flocks of Taiga Bean Geese. The sample size in both years was somewhat restricted as it was essential that whole flocks could be surveyed to avoid bias due to different distributions of age groups within the feeding flocks.

In 2017, 7% of the checked flocks were yearlings, whereas this percentage was 8% in October 2018.

Discussion

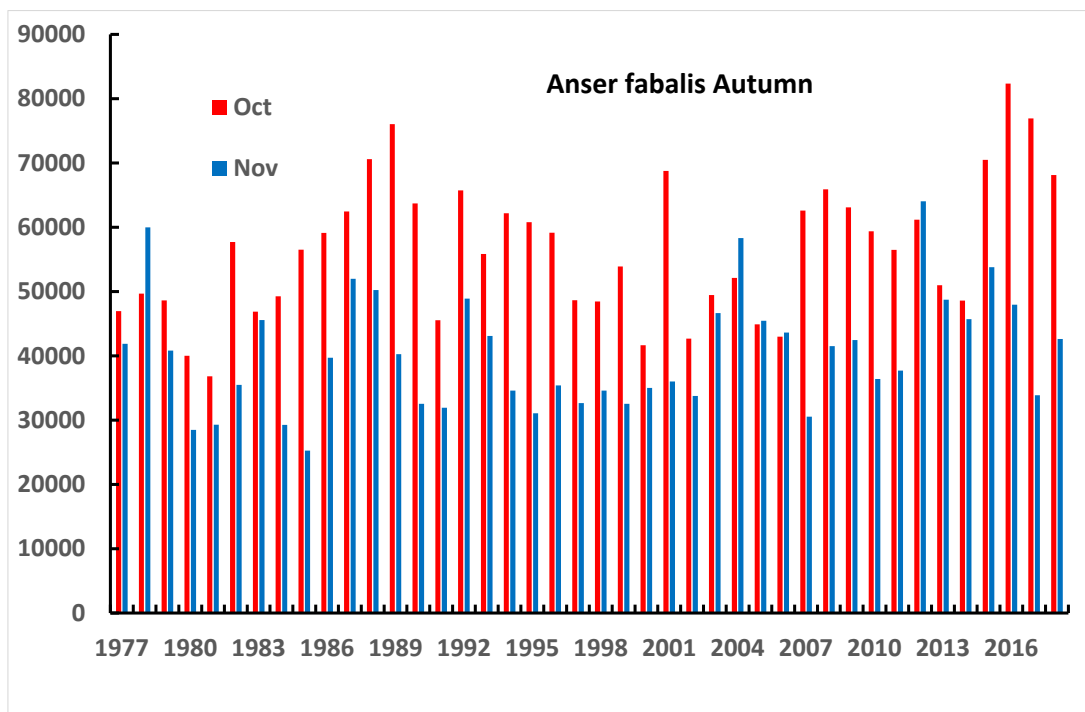


Fig. 4. Total numbers of Bean Geese counted in south Sweden in October and November 1977 – 2018.

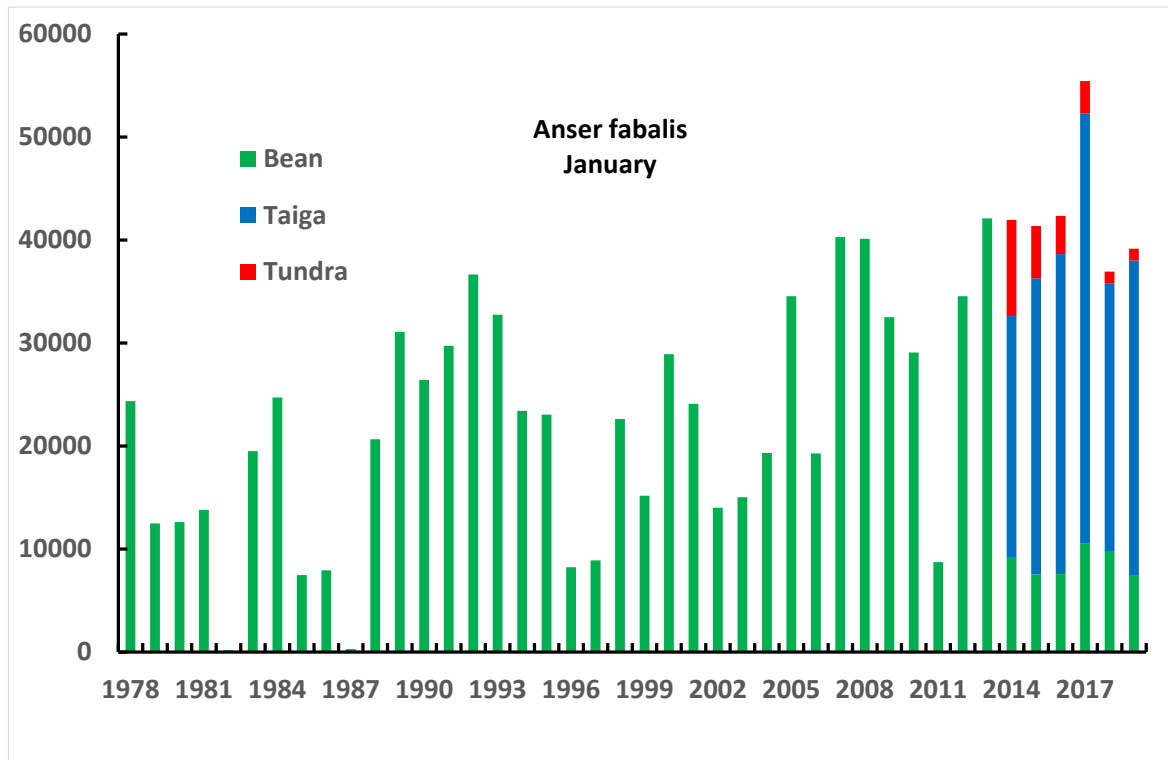


Fig. 5. Total number of Bean Goose counted in south Sweden in January 1978 – 2019. From January 2014, the two subspecies have been separated in most cases.

As a background to the discussions of the more recent surveys of staging and wintering Taiga Bean Geese in Sweden, the full series of autumn and wintering counts of the Bean Geese in Sweden (Figs 4 and 5). When viewing the graphs it should be remembered that the two subspecies were only clearly separated in the last few years (October from 2016 and January from 2014).

The first larger flocks of Tundra Bean Geese were found in Sweden in 2009, when about 9000 were found during a special survey to important staging sites. The staging of larger numbers of Tundra Bean Geese in Sweden probably started quite recently. The October counts of Bean Geese showed a steadily decreasing trend from the late eighties to about 2006 (Fig. 4). Then there was a sudden increase in the counts of staging Bean Geese in Sweden. In my opinion, the Tundra Bean Geese started to use Sweden for staging at this time resulting in an increase, the increase being in the same order of sizes as the numbers of Tundra Bean Geese counted.

The recent October counts indicate an autumn population of about 65000-70000 Taiga Bean Geese. Spring surveys in Sweden north of the winter areas in Scania during the period before the geese left for Finland and northern Sweden indicate a similar size of the Taiga Bean Goose population (Skjallberg & Nousiainen. 2017).

January totals for south Sweden has been between 35000 and 40000 for most recent years except January 2017 when more than 50000 were counted. Thus, an appreciable number Taiga Bean Geese left Sweden between October and January. In the last three winters only 2900 – 8900 of the missing geese were found in Denmark (Jensen et al. 2017, 2018). There

were however no January counts reported from northern Germany, where at least formerly a large number of geese moved from Sweden for the winter.

The action plan for the Taiga Bean Goose (Marjakangas et al. 2015) recognizes two management units in Sweden. The majority of the Bean Geese of the Central Management Unit stage in Sweden in October. In the same time, most of the Western Management Unit also use Swedish sites for staging making it impossible to monitor the two units separately during the autumn. Tagging of Taiga Bean Geese from southern Swedish Lapland show that these birds use the same staging areas (Lakes Östen and Ymsen) in south Sweden as do much larger numbers belonging to the Central Management Unit.

References

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Appendix

Table A1. The number of Taiga and Tundra Bean Geese on staging areas of south Sweden in October 2016-2018 together with the number of Bean Geese not separated on subspecies.

Year	Not separated	Taiga	Tundra	Total
2016	24085	43243	8251	75579
2017	6959	60327	9642	76928
2018	6344	58913	3040	68297

Table A2. Number of Taiga and Tundra Bean Geese and Bean Geese not separated to subspecies counted at the special survey in October 2018.

Staging area	Taigas	Tundra	Not separated
Trollbosjön	400	0	0
Fläcksjön/Gussjön	1 250	0	0
Södra Vendelsjön	3 100	500	0
Tämnaren	-	-	-
Revelstasjön	1 725	0	0
Hjälstaviken	125	0	0
Skåra	7 000	0	0
Askövik	0	0	0
Tysslingen	4 900	0	0
Kvismaren	7 750	325	0
Hjälmaren SV	625	34	0
Velandasjön	700	0	0
Vibysjön	1 800	0	0
Svensksundsviken	3 500	48	0
Tåkern	5 530	800	0
Ymsen	3 525	400	0
Östen	16 225	800	0
Mörlundaslätten	225	35	0
Skatelövsfjorden	200	0	0
Lidhemssjön	300	0	0
Övriga lokaler	33	98	445
Totalt:	58 913	3 040	445

Table A3. The number of Taiga and Tundra Bean Geese on staging areas of south Sweden in January 2014 - 2019 together with the number of Bean Geese not separated on subspecies.

Year	Not separated	Taiga	Tundra	Total
2014	9241	23391	9330	41962
2015	7549	28748	5070	41367
2016	7574	31072	3691	42337
2017	10569	41737	3128	55434
2018	9738	26068	1139	36945
2019	7488	30534	1148	39170