

VI. ON THE SITUATION OF *ANSER ANSER* IN THE FEDERAL REPUBLIC OF GERMANY

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1. Occurrence

Anser anser is practically restricted to Schleswig-Holstein as a breeding species in the Federal Republic of Germany. Occasional records west of the River Elbe nowadays refer almost exclusively to attempts to introduce the species. In this context occurrences at Lake Dümmer and the Riddagshaus Ponds should be mentioned.

The breeding distribution of *A. anser* in Schleswig-Holstein is restricted to the hilly areas in the east. The main points of concentration are the coastal lakes of the island of Fehmarn, the Lauenburg border wetlands and especially the east Holstein lake area. According to an investigation by *Knief* (1977), nearly two thirds of all breeding sites in 1977 were in the east Holstein lake area.

In Schleswig-Holstein, breeding sites are predominantly on ponds and lakes; when the water-level is sufficient, breeding also occurs in bogs and marshes. Islands are preferred and the nests are often concentrated like colonies. Occasionally breeding is recorded at sites some distance from water.

An essential requirement is that grazing areas with short grass should be available for raising the young.

2. Population size

In the last century there were still natural occurrences of breeding birds west of the Elbe. These came to an end in the first half of this century.

In Schleswig-Holstein, there was also a decrease at the end of the last century (*Rohweder*, 1875). However breeding probably never ceased altogether (*Beckmann*, 1951). According to *Bauer* and *Glutz* (1968) about 170 pairs bred in Schleswig-Holstein in the mid 1960s. The real number of breeding birds was probably higher, however. In the 1970s, a distinct increase has taken place. *Knief* (1977), in a precise study of the population, found 657 pairs with young in 1977, excluding the small population in the Lauenburg border area. The average brood size was 4.1. Altogether, *Knief* estimated the number of breeding pairs in that year at about 1000, of which 700 (70%) were successful (Table 1).

A count in 1978 gave a slight decrease in pairs with young—about 560 excluding Lauenburg, with brood size of about 4.3 per pair. The figure for 1980 was 538 successful breeding pairs (excluding Lauenburg) with a brood size of 4.7 per pair. Studies in 1981 showed a distinct decrease in the breeding population to 410 families, excluding Lauenburg.

Table VI/1.

Population of Anser anser in Schleswig-Holstein

Year	Families	Brood size	Non breeders (May)	Total population		
				August	September	October
1977	657	4.1	2750	8850	6750	1200
1978	560	4.3		7200	7550	1350
1979			2600	8000	6400	2400
1980	538	4.7	2300	6750	6500	1750
1981	410	4.0		6050*	5200*	4500*

* = Excluding Lauenburg breeders

3. Reasons for changes in population size

3.1 Hunting

It is not clear how far the increase in the population in the 1960s is related to restrictions in the open season. Until 1967, *A. anser* could be hunted from 1 August to 25 January. From 1967 the open season was limited to the period between 1 October and 15 January. As a result the species was hardly affected any more by hunting, since as a rule the geese leave Schleswig-Holstein in early October. In 1977 a new open season was introduced, whereby *A. anser* could be shot in Schleswig-Holstein from 1 to 31 August and from 1 November until 31 December. Restriction of shooting to the period before 1000 hours was an innovation. According to rough estimates about 600 *A. anser* have been shot each year since the introduction of the new hunting season in August, while between 1967 and 1977 about 300 geese a year were shot.

3.2. Agriculture

Agricultural measures such as removal of hedges have probably had a certain positive effect on the quality of goose areas in the hilly parts of east Holstein. It is not clear however to what extent the reduction of grassland from 25.4% of the agricultural area in 1970 to 22.4% in 1979 has had a negative effect. At present there is still extensive grassland by lakes and ponds for raising young.

3.3. Tourism

Tourism acts as an increasingly important burden. Schleswig-Holstein is the sixth most popular destination for German tourists. The number of nights spent by tourists in Schleswig-Holstein increased from 15.9 million in 1960/61 to 33.2 million in 1979/80. In the Plön district, which is very important for *A. anser* 1.9 tourist/nights were recorded in 1979/80. The increase in windsurfing on the Schleswig-Holstein lakes since the end of the 1970s should be mentioned. It is obvious that *A. anser's* early breeding season

is the reason why no very marked effects on the breeding population have so far been observed. At the beginning of the tourist season (end of May) the young are, as a rule, nearly full grown. Furthermore *A. anser* shows a strong capacity to learn how to avoid disturbance.

3.4. Other reasons

Overall, the reasons for the changes in population size of this species are probably to be found in the migration and wintering areas. This seems to be the case with the decrease in breeding pairs in 1981, which is clearly connected with conditions in the Spanish wintering-area (Castroviejo *in litt*).

4. Non-breeders

Knief (1977) gave the non-breeding part of the population as 68% of the whole. According to available counts from 1977 to 1980, this in May represents about 2500 birds.

As soon as the young birds are able to fly adequately—at the end of June—a concentration of *A. anser* begins. From the middle of August, *A. anser* is really only to be found at particular summering sites. *Knief's* figures for July suggest that the local breeding population is joined by non-breeders returning from their moulting places and by further birds on passage. Numbers of *A. anser* are at their highest in Schleswig-Holstein in August, with over 8000 birds (Table 1).

5. Conflicts with agriculture

Reduction of agricultural production occurs in cereal fields and grassland.

In the early spring, after the arrival of the geese, cereal fields are visited, particularly by non-breeders and birds on passage. Grazing of the cereals may then restrict their growth. Additional application of fertilizer or loosening of the ground following excessive trampling in wet weather has in some places been necessary.

The breeding birds graze predominantly on grassland, but also on cereal fields if they are very close to water. *Knief's* studies however only revealed serious damage in exceptional cases.

When the geese forage on grassland near the shoreline of breeding area, there are no doubt reductions in production which however are generally restricted to the immediate area of the shore. Competition with cattle grazing in the same area is as a rule tolerated by agricultural interests, especially as the geese often exploit islands and shores which are not used for agriculture. There has been no proof of goose droppings affecting grazing by cattle.

When the young geese have learnt to fly, feeding flights to cereal fields occur. Damage is then caused, particularly in standing winter barley but also in fields of rye and wheat. In his investigation of this subject, *Knief* reached an estimate of 22 000 DM for Schleswig-Holstein in 1977. As soon as stubble fields are available, they are regularly preferred.

Table VI/2.

Recoveries of the 222 *A. anser* ringed in
Schleswig-Holstein in 1977

	1978	1979	1980	1981	Total
Found dead Schleswig- Holstein	1	2		1	11
Shot	4	2	1		
Found dead France					5
Shot	1	1	2	1	
Found dead Spain					8
Shot	4		1	2	
	10	5	4	5	24

After the resowing of the cereals, *A. anser* feeds on winter cereal fields until the departure for the winter quarters. According to agricultural specialists, this grazing definitely leads to a strengthening of the plants, even with modern strains of seed.

6. Ringing

In 1978, a total of 222 *A. anser* was ringed, 100 of them with a further broad white plastic leg-ring, on which a black digit was engraved. It was not possible to analyse the results of this project, since very few rings were read. Twenty-four of the ringed birds have been recovered. Five were found dead, while the others were reported as shot. Table 2. shows clearly that the major part was shot in Spain.

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References

- Bauer – Glutz (1969)*: Handbuch der Vögel Mitteleuropas, Frankfurt.
- Beckmann, O. (1951)*: Vogelwelt Schleswig-Holsteins, Neumünster.
- Knief, W. (1977)*: Bestandsaufnahme der Graugans und Erfassung der durch diese Gänse auftretenden Schäden, Gutachten für das Landesamt für Naturschutz und Landschaftspflege.
- Knief, W. (1980)*: Zwischenbericht über Bestandserhebungen und Bestandsentwicklung der Graugans in Schleswig-Holstein (unveröffentlicht).
- Rowehder, J. (1975)*: Die Vögel Schleswig-Holsteins und ihr Vorkommen in der Provinz, Husum.
- Rüger, A. (1980)*: Derzeitiger Stand und zukünftige Schwerpunkte des zoologischen Artenschutzes in Schleswig-Holstein, Schriftenreihe der Akademie Sankelmark, Schleswig.
- Rüger, A. (1976)*: In Schleswig-Holstein gefährdete sowie seltene Vogelarten und deren Lebensräume. *Corax* 5. 151 – 160 p.