

VII. SHORT COMMUNICATION ON *ANSER ANSER* IN THE NETHERLANDS, 1970 – 1980, WITH SPECIAL REFERENCE TO OOSTVAARDERSPLASSEN

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The continental population of *Anser anser* in western Europe, that winters mainly in the Marismas of the Guadalquivir in southern Spain, increased from 30 000 birds during the 1960s (Rooth, 1971) to at least 50 000 in November 1973 (Dubbeldam, 1978), and to at least 80 000 in December 1980 when this number was counted in the Marismas of the Guadalquivir (Luis Garcia Garido, pers. com.).

The Netherlands, especially the Oostvaardersplassen, a large *Phragmites* marsh in the new Ysselmeerpolder of Southern Flevoland, play an important role in the flyway of this population during nuptial and postnuptial migration and as a moultingplace for non-breeding birds. Suitable ecological conditions and the absence of goose hunting in the Oostvaardersplassen and adjacent agricultural area could have favoured the increase in the population.

During the 1970s, ecological conditions for *Anser anser* in the Netherlands altered. Their major haunts during nuptial and postnuptial migration in the Hollands Diep-Haringvliet in the southwestern part of the Netherlands became of lesser importance after this estuary was dammed off from the sea in 1970. The extent of the stands of rushes (*Scirpus maritimus* and *Scirpus lacustris*) decreased considerably. These stands provided shelter for roosting geese and the underground parts of the plants formed an important food stock.

Table 1 demonstrates the alteration of the percentages of geese in different types of feeding habitat in the Southwestern Estuary in the Netherlands.

Although the geese were forced to change their feeding habits in the area their numbers during autumn migration and winter are at the same levels of 8000–10 000 and 3500–4000. The number of geese during the period of spring migration, however fell from 10 000 to 1000–1500 (Ouweneel, 1981).

The Ysselmeerpolders of North East Polder (pumped dry in 1942) and Eastern Flevoland (pumped dry in 1957) were important haunts for *Anser anser* during the period between the drainage of the bottom of the former lake and the reclamation and cultivation of the soil. Extensive areas of temporary marshland with adjacent extensively cropped state farmland formed an attractive combination of feeding and roosting habitat. When the last reclaimed polder of Southern Flevoland had been pumped dry in May 1968 a permanent extensive marshland was created since 5000 ha. of *Phragmites* marsh and shallow lakes were preserved from drying out and reclamation in 1973. This marshland and adjacent statefarmed land evolved during the following years into an outstanding area for *Anser anser* (Dubbeldam, 1978). Maximum numbers of geese during the period of postnuptial migration are between 20 000 and 30 000 (42 000 in October 1979). Depending on the occurrence of frost

Table VII/1.

Proportion (%) of *Anser anser* on various types of feeding habitat in Southwestern Estuary in the Netherlands (Draayer, 1967 and Ouveneel, 1981)

| | | 1964 – 65 | End of 1970s |
|-------------------------------|------------------|--------------|-----------------|
| Autumn migration period | Stands of rushes | 32 | 0 |
| | Grass | 16 | 10 |
| | Sugar beet | 52 | 90 |
| Wintering period | Stands of rushes | 32 | 0 |
| | Grass | 68 | 100 |
| | Sugar beet | – | – |
| Spring migration period | Stands of rushes | 100 | 0 |
| | Grass | 0 | 100 |
| | Sugar beet | 0 | 0 |

some hundreds (sometimes up to 6000) geese stay here during winter. Peak numbers of 10 000 to 15 000 are present during the period of nuptial migration.

During the first years the food of the geese consisted mainly of *Phragmites australis* and *Typha latifolia*. The preference for rhizomes of *Typha latifolia* was distinguished as a new feeding habit (Dubbeldam, 1978). In order to prevent the marsh from becoming completely overgrown with reeds, the water level in the marsh was raised in 1975. The aim was twofold: to slow down the germination of *Phragmites* and *Typha* from seed and to enable the geese to wash out the roots of these plants from the clay-soil by dabbling and to enable the birds to wash their bills while eating. As a result of this measure to control the vegetation, *Typha latifolia* was nearly exterminated from the area and dense reedstands were thinned out as well as reduced in total area. Resulting from the disappearance of *Typha latifolia* – with its relatively shallow growing rhizomes an easily obtainable food – the geese partly shifted their feeding area to surrounding stubble fields with spilled cereal grains and barley seedlings and to fields with young winter rape plants in autumn and to grass ley and barley and wheat crops in winter and spring (Table 2).

The Oostvaardersplassen have become the moulting place for one of the largest flocks of non-breeding *Anser anser* in western Europe in the last five years. More than 6000 of these birds pass the period of wing moult in the area. The food consists mainly of grass during the one or two weeks prior to moulting and of leaves of *Phragmites* during the moulting period. The numbers of geese on the other two moulting places in the Netherlands, Steile Bank (peak numbers of 2000 to 5000 geese in the start of the 1960s) and Ventjagersplaten (peak number of 1100 in the end of the 1960s) have greatly decreased.

Since 1909 when *Anser anser* disappeared as a breeding-bird in the Netherlands it was found breeding from 1948 up to and including 1952 and in 1962 and 1963 in the Ysselmeerpolders as the only place in the Netherlands (Dubbeldam, 1978).

Table VII/2.

Proportion (%) of *Anser anser* in various types of feeding habitat in Flevoland during autumn and spring migration before (Aug. 1972 – April 1975) and after (Aug. 1976 – April 1980) the water level of the marshland was raised

| | Marsh-land | Grass-ley | Cereals | Stubble-fields | Winter rape | Ploughed |
|-------------|------------|-----------|---------|----------------|-------------|----------|
| AUG. – DEC. | | | | | | |
| 1972 – 1974 | 60 | 2 | 1 | 19 | 9 | 8 |
| 1976 – 1979 | 10 | 1 | 4 | 41 | 38 | 8 |
| JAN. – APR. | | | | | | |
| 1973 – 1975 | 83 | 9 | 8 | 0 | 0 | 0 |
| 1977 – 1980 | 46 | 23 | 25 | 1 | 3 | 2 |

Since 1970, two years after Southern Flevoland had been pumped dry, *Anser anser* has become a breeding bird of the new marshland. The number of pairs of breeding birds in the Oostvaardersplassen has increased to about 200 since then. From this population the geese established themselves as breeding birds in a number of other localities in the Netherlands. Apart from these spontaneous settlements, totalling about 250 pairs, *Anser anser* was introduced in the province of Friesland (about 70 pairs now) and settled as a breeding bird in Zeeuws Vlaanderen from ancestors escaped from Zwin aviary on the Belgium border. *Anser anser* is a key factor in the ecosystem of that open *Phragmites* marsh of the Oostvaardersplassen (Poorter, 1979). Without any natural or artificial control of the vegetation, the open spaces in the marshland would quickly be covered by *Phragmites australis* and other marshplants and the marsh would lose its function as a place for shelter and food to many waterfowl species.

The main effects of the activities of the geese on the vegetation are :

- preventing the extension of the marsh vegetation by seedlings of *Phragmites* and *Typha*. Seedlings that have been massively germinated on the naked mineral soil during dry summers are removed by the geese in autumn;
- repelling the vegetational extension of *Phragmites* and locally forcing back *Phragmites* stands in summer. Stems and leaves of *Phragmites* are intensively grazed and damaged by the geese in summer during their moulting period. Following recovery of the plants in July and August the fresh leaves and stems are consumed or damaged again in September and early October.
- Forcing back the vegetation of *Phragmites* and *Typha* in autumn and winter. Roots and rhizomes of these plant species are consumed by the geese in autumn and winter.

Apart from vegetation control, the geese could play an important role in the ecosystem of the marsh by fertilizing the water and feeding the detritus food

chain. About 80% of the consumed plant material is defecated smashed and undigested into the water (Owen, 1972).

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