Geese on the Hortobágy, autumn 1966

JULES PHILIPPONA and TOM LEBRET

Introduction

In 1966 it was thirty years after Peter Scott's visit to the Hortobágy, the famous puszta in the eastern part of Hungary. The story and the pictures in *Wild Chorus* (Scott, 1938) and papers in *Aquila* the well - known Hungarian ornithological magazine gave a legendary fame to an area where a considerable part of all the geese of Europe gathered in autumn and spring. In recent years rumours about a decrease in the numbers of the geese were heard. Both the former fame and the wish to know what actually is going on, made us decide to visit the Hortobágy. And so our group of five ornithologists—F. Haak, R. Visser, P. Zomerdijk and the authors—arrived at the Hortobágyi Csárda (csárda means inn) in the evening of October 29th, 1966. Here we spent six fine days. In the evening we enjoyed the music of the gypsy band of the Burai family. The leader of the band is still the same violinist we found in the stories of *Wild Chorus*.

Our main object was to count the geese as accurately as possible and to get an idea about their behaviour patterns in this part of their range. Our first observations were made on October 30th, the last in the early morning of November 5th.

The area

The Hortobágy is situated east of the river Tisza and west of the town of Debrecen (47°30'N and 21°E). It measures some 45 km from north to south and some 30 km from east to west. Nagy (1938), referring to the early 1930s, gives the size as some 200,000 ha (772 sq. miles). In the MAR list of wetlands (1965) the area is given as c.450,000 ha (1,736 sq. miles). The "Hortobágy Guide Book," edited by the Foreign Traffic Office Debrecen, mentions 200,000 cadastral Hungarian acres. One Hung. acre = 1,422 Eng. acre = 0.575 ha. This would make a total of only 115,000 ha (443 sq. miles). But this still refers to the area as a whole. We tried to plot on our map the actual size of the grasslands (puszta) still present and from this got the impression that only 40,000 to 50,000 ha (154-193 sq. miles) are still untouched. See map Figure 1.

Originally the Hortobágy consisted mainly of endless flat grazing land, but there has been an increase of arable country, especially at the borders of the area. Moreover many fish-ponds have been created, mostly in the centre of the area. According to the Guide Book the total area of these ponds amounts to 4,600 ha (11,380 acres).

The most typical and finest parts of the original puszta landscape we found to the east and north-east of the oldest and largest fish-pond, the Hortobágy halastó (halastó means fish-pond); between Viztárolo and Elep halastó; and to the east and south-east of Nagyiván. According to Dr. Sóvágó the Bagota puszta in the north of the Hortobágy is also very beautiful. One can best enjoy the grandeur of the landscape when making long walks into the heart of the puszta. Then the horizon is only broken by some lever arms of wells, a line of distant trees and a lonely herd of sheep.

Observation methods

We had two cars and were able to make observations at two or three different points simultaneously. The morning flight proved to be the best opportunity to count the geese. Every day we observed the morning flight, mostly at one or two places near the Hortobágy halastó, but also at the Virágoskut and Elep ponds. The evening flight was also observed at the Hortobágy and Virágoskut ponds. By car we could reach all different parts of the puszta, and from the roads we made long walks into the puszta landscape. Especially in the puszta to the north and to the north-east of Hortobágy halastó we observed several groups of flying White-fronted Geese *Anser a. albifrons*. The flight lines proved to be related to that pond and sometimes perhaps with the Virágoskut halastó.

The roosts

The fish-ponds are very important in many ornithological respects. They provide the geese with very good roosts. During our stay we found that two ponds, the Hortobágy halastó and the Virágoskut halastó, were used by large numbers of geese, while the Elep halastó may have harboured some hundreds of geese. The fish-ponds consist of a system of rectangular dykes. Between these dykes the water level of the ponds is some two meters above the surface of the puszta. There are heavy stands of reeds *(Phragmites)* and other aquatic vegetation. Reed-

mace *(Typha)* is considered to be a weed and it is cut out.

The largest and oldest fish-pond is the Hortobágy halastó, which dates from 1916. Its total size is about 1,350 ha (3,330 acres). It is divided into eight or ten sections of 100 to 140 ha each. The main fish is Carp *Cyprinus carpio*. After two to five years each section is emptied and kept dry for one season, but during winter it may be partly flooded by rain water. We waded in such habitat and found a rather open vegetation of Orache *(Atriplex)*, Bulrush *(Scirpus)* and Water Dock *(Rumex)*. The water between the vegetation was covered by a sheet of seeds. No doubt this is extremely attractive habitat for surface feeding ducks and we saw many thousands of Mallard *Anas platyrhynchos* and Teal *Anas crecca* on the ponds.

The Virágoskut halastó is smaller than the Hortobágy pond. Its size is some 600 ha. Its largest section measures about 300 ha (740 acres) and is probably the most extensive in any fish-pond at the Hortobágy. This may have been an important factor in its attractiveness for the geese. Perhaps it was also important that this very section happened to be drained during our stay.

It is unlikely that important numbers of geese roosted at the other ponds in the centre of the Hortobágy. We did not visit

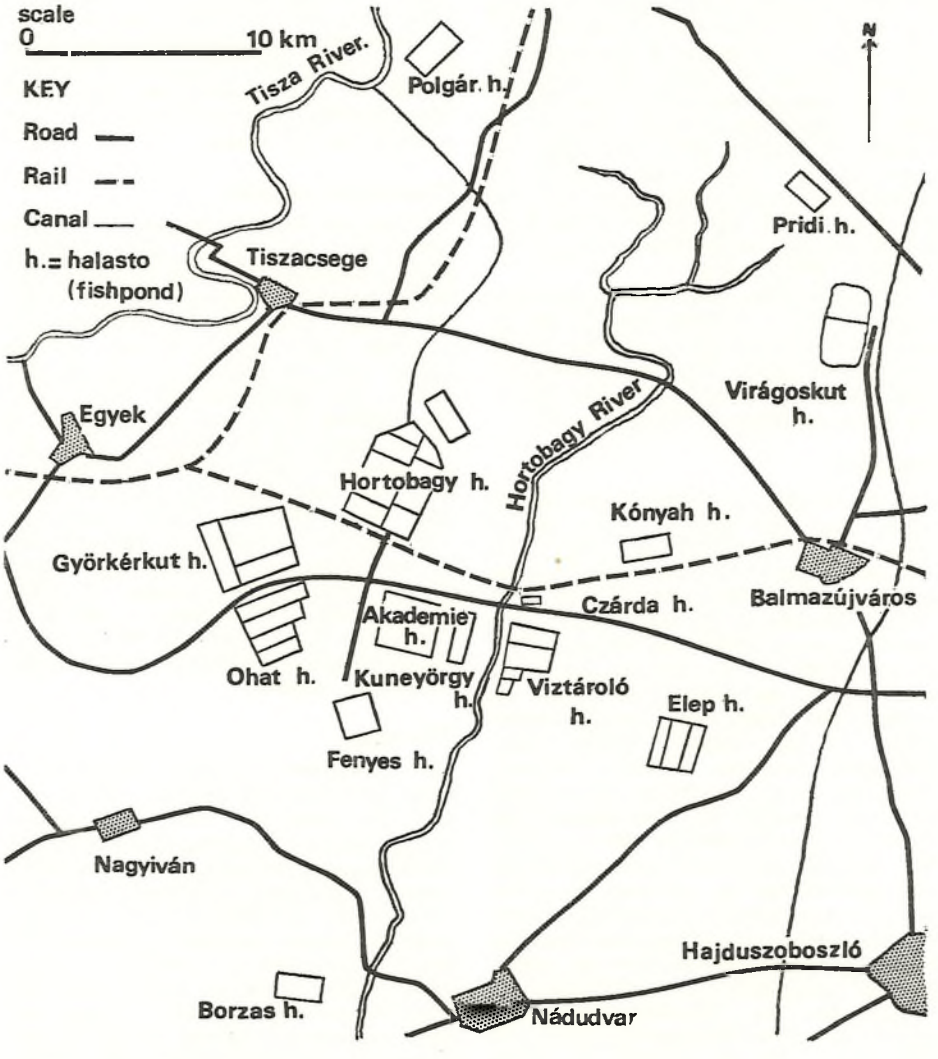

Figure 1. Map of Hortobágy, eastern Hungary.

some ponds at the edge of the area, like Polgár, Fenyes and Borzas, but looked at the surroundings of these ponds in the daytime and think it very unlikely that geese occurred there.

When parts of the puszta are flooded, geese also sleep at such places, but during our visit the puszta was still rather dry and flooded places were few in number and very small.

The feeding grounds

It proved to be rather difficult to trace the feeding grounds of the geese. Only some smaller groups of a few dozen up to some hundreds of geese were seen on the puszta near the Hortobágy halastó. Although we inspected large tracts of puszta we found practically no other geese on this type of habitat. It is very likely that the arable fields at the edges of the puszta were the main feeding grounds of the White-fronted Geese during our stay. We know from literature, however, that many geese often occur on the grasslands. In some cases the geese were seen flying well into the arable country and those coming back had their feet and sometimes even their bills heavy with clay. On one occasion some hundreds of White-fronted Geese were seen in an area with arable fields 13 km to the south-east of the Hortobágy pond. It is more difficult to inspect the arable fields than the puszta, because the fields are sometimes not quite flat and in many cases unharvested corn, hedges and rows of trees restrict one's view.

We have no proof that the Greylag Geese were also feeding on the arable fields.

The Geese

Anser anser — Greylag Goose

We were told that some 35 pairs breed at the Hortobágy halastó. We do not know if they are breeding on other ponds, but several ponds appeared to supply suitable breeding habitat.

During our stay we regularly observed Greylags in the near surroundings of the Hortobágy pond. 50 to 100 may have been present. Subspecific identification was impossible.

Anser albifrons — White-fronted Goose

A total of at least 10,000 Whitefronts was observed. In the first days of our visit numbers were probably less. Seven thousand Whitefronts roosted at the Hortobágy halastó, 3,000 at the Virágoskut halastó and 200 at the Elep halastó.

Anser erythropus — Lesser White-fronted Goose

At the Hortobágy halastó our maximum count amounted to 130 birds, at Virágoskut up to 50 birds. The Lesser Whitefronts mainly occurred in separate flocks, but some were heard and seen in flocks of Whitefronts. It was fascinating to hear whole flocks flying overhead, producing their very high-pitched musical voices, which previously we had known only from gramophone records and from tame birds.

We were shown two specimens shot on November 2nd; the gullets of these birds were stuffed with a dense mash of stems and leaves of the short thin puszta grass.

Branta ruficollis — Red-breasted Goose

One bird was seen near the Hortobágy halastó in a small group of Whitefronts.

Morning and evening flight

Generally the morning flight started not earlier than 35 minutes before sunrise, when there was already sufficient light to see the geese at distances of many hundreds of meters. In the evening many geese arrived only after it had completely darkened and of course these birds could not be seen.

Our visit coincided with the period from full moon to first quarter. It is quite normal for wild geese to be feeding during the night in this part of the moon cycle, when there is sufficient light. This was not the case in the first nights, as the sky was heavily overcast. But from the afternoon of November 3rd most of the clouds disappeared and the nights were much lighter than those before. The observations during the morning flight however make it probable that the geese did not feed during any of the foregoing nights.

Morning flight was observed at the following places:

Hortobágy halastó — on 7 days
(on 3 days at two places simultaneously)
Virágoskut halastó — on 1 day
Elep halastó — on 1 day

Evening flight was observed at:

Hortobágy halastó — on 4 days
Virágoskut halastó — on 1 day

At the Hortobágy halastó most of the geese were observed at the south and south-east edges of the fish-pond. Most of them were flying to the east and south-east, many also to north-east and south. In the evening geese came back from the same directions, but at least

400 Whitefronts were seen arriving from the north.

The observations of the geese which roost at the Virágoskut halastó prove that the main feeding grounds must be situated to the north, north-east, east and in lesser degree to the south-east of the pond.

Changes in the numbers of geese

Has the time of one or two hundred thousand geese gone forever? It seems so. There has been a large scale decrease in the numbers of wild geese visiting the Hortobágy puszta (Keve and Sterbetz 1964). This decrease had probably more the character of a rather sudden break down than of a gradual one. This happened in the early 1950s.

Our observations cover only the period of October 30th - November 5th. As top numbers may arrive during the latter part of the first half of November, we are well aware that we may have missed the arrival of the bulk of the Whitefronts. For this reason we were eager to know more about the average numbers of Whitefronts in recent years. We understood that since the years of the great decrease, numbers do not exceed 50,000 or 60,000 birds and we got the impression that the numbers do not reach this level in many years.

Dr. Radó (in litt.) reports that maximum numbers in 1966 stayed between 16th and 22nd November. Totals were about 55,000 or 60,000, with the Whitefront by far the most numerous species.

Precise data on the size of the geese populations in the ancient days are difficult to obtain. This is quite understandable, as some observers speak of "hundreds of thousands" or "half a million" or even more geese. Nagy (1938) says there were "hundreds of thousands" of Whitefronts. If we interpret this as 200,000 and *if* we assume 50,000 as representative for the last fifteen years, this would mean a decrease of the order of 75%. But if the former numbers were larger and the present ones are smaller, the decrease is proportionally and absolutely still more important.

We shall never know exactly how many geese passed through the Hortobágy. But we have to handle with care old records which speak of half a million or one million geese. We believe that authors like Scott (1938) and Nagy (1938) who speak of "one hundred thousand" or "hundreds of thousands" (200,000?) give a good idea of the situation in the past. Moreover those numbers are more in accordance with the carrying capacity of the breeding grounds in the tundras of the Soviet Union (Uspenski 1965).

It is not certain that the decrease at the Hortobágy results from a decrease on the breeding grounds, as this might also have affected the numbers of flocks wintering in Western Europe; but these do not show such a decrease.

A westward change of migration routes, so that former Hortobágy geese passed through the area of the Neusiedler Lake in Austria seems possible, as a great increase occurred in the latter area in the years 1950-1962. Peak numbers of 100,000 or more geese have been counted (H. Steiner, *in litt.*). But in recent years the maximum has fallen back sharply to the much lower level of 5,000 to 20,000 geese (Greylags, Whitefronts and Beans). F. Haak and T. Lebret observed morning flight from the main roost there (Lange Lacke) before and after their Hortobágy trip. On October 28th there were some 8,000 Whitefronts and on November 5th, 6th and 7th some 15,000 Whitefronts. The numbers of Bean Geese were 1,000 and 2,000 respectively. The numbers of Greylag Geese in the whole "Seewinkel" were 4,000-5,000.

The White-fronted Geese have possibly again changed their migration patterns. It is not unlikely that we have to look for many of our lost geese in countries more to the east and south-east, like Roumania, Bulgaria, Greece and Turkey.

Sudden changes in the use of migration routes by the White-fronted Goose in Canada and the U.S.A. are known (Linduska 1964).

Observations of other birds

Not all the species observed are mentioned here. Exact numbers are only given of such less numerous birds as raptors, the Crane and some others.

Ardea purpurea—1 at Hortobágy halastó.
Botaurus stellarus — 1, 2 or 3 at Hortobágy halastó on different mornings.
Buteo buteo — about 30 birds.
Buteo lagopus — at least 4 (3 of them near Virágoskut halastó).
Accipiter nisus — 7 at different places.
Accipiter gentillis — 1 bird.
Haliaëtus albicilla — 3 birds at fish-ponds (a adult and 1 juvenile at Virágoskut halastó).
Circus aeruginosus — 7 birds.
Circus cyaneus — 17 birds (6 male and 11 females).
Pandion haliaëtus — 1 bird.
Falco columbarius — 1 female.
Falco tinnunculus — about 50 birds.

Falco species — 1.
Raptor species — 4 larger birds (3 of them probably buzzards, the fourth probably a middle-sized eagle).
Megalornis grus — 4 small groups (11, 35, 6 and 7 birds).
Vanellus vanellus — at many places, mostly in smaller groups of 10-50 birds and only few larger groups of some hundreds. Certainly not very numerous.
Larus argentatus — about 50.
Larus ridibundus — at least 2,000 in one group.
Athene noctua — some heard or seen.
Dendrocopus syriacus — at least 1 near Csárda.
Lanius excubitor — 6 birds.
Remiz pendulinus — some at Hortobágy halastó. Some tens at Virágoskut halastó.
Corvus frugilegus — very c o m m o n . Totally many thousands.

Acknowledgements

We wish to express our thanks to several people for the great deal of information we received. In Hungary we thank Dr. A. Kere, Dr. A. Radó, Dr. I. Sterbetz and especially Dr. M. Sóvágó, who accompanied us to the Virágoskut halastó and gave us most of the information. We regret that we do not know the names of some other persons in Hungary whose information has also been used. We also thank H. Steiner (Austria), Dr. J. Szijj (Germany), Peter Scott (England), J. P. van de Weghe (Belgium), and Dr. L. Hoffmann and H. H. Hoekstra from the headquarters of the I.W.R.B. in France. Finally we wish to thank Hugh Boyd who improved considerably the English of this paper.

References

Foreign Traffic Service Debrecen (no date). *Hortobágy Guide Book.*
KEVE, A. 1960. *Nomenclator Avium Hungariae.* Budapest.
KEVE, A. and I. STERBETZ. 1964. Tentative counts of geese and ducks in Hungary. *Proc. 1st European Meeting on Wildfowl Conservation (St. Andrews, Scotland, 16-18 October, 1963)* : 39-43.
LINDUSKA, J. P. (ed.) 1964. *Waterfowl Tomorrow.* Washington.
NAGY, E. 1923-1924. Die Vogelwelt der Puszta Hortobágy in Ungarn. *Aquila* 30-31 : 279-288.
NAGY, E. 1938. Die nordischen Gänsearten auf der Puszta Hortobágy in Ungarn. *Proc. VIIIth Int. Orn. Congress, Oxford.*
OLNEY, P. J. S. (ed.) 1965. List of European and North African wetlands of international importance. *I.U.C.N. Publications New Series No. 5.*
SCOTT, P. 1938. *Wild Chorus.* London.
USPENSKI, S. M. 1965. *Die Wildgänse Nordeurasiens.* Wittenberg Lutherstadt.