

THE WHITE-FRONTED GEESE OF ENGLAND AND WALES

By Hugh Boyd

SINCE the presence at Slimbridge of the largest flock of Whitefronts in Britain was of decisive importance in the establishment of the Wildfowl Trust headquarters, it is easy to understand why this species should have received particular attention in the Trust research programme. Early in 1956 a census of the Whitefront population of England and Wales was organised, and its results used as the basis for a report on the status of the Russian-breeding race *Anser a. albifrons* in this country during the last ten years. This paper summarises its principal findings and offers some comments on them, with particular reference to their relation to the aims of wildfowl conservation policies and to the practical application of such policies.

Two subspecies of Whitefront winter in Britain. The typical race *albifrons*, breeding in north-west Russia, occurs almost entirely in England and Wales, being only a vagrant in Scotland and Ireland. The Greenland-breeding *flavirostris* winters in Ireland, Scotland and (in small numbers) in Wales, being only a vagrant in England. This paper is concerned only with *albifrons*.

The British population of *albifrons* seems to have numbered about 6600 on 19 February 1956. Some late immigrants probably arrived after this date, but the greatest number present in England and Wales during the winter of 1955-56 is unlikely to have exceeded 8500. Counts made in earlier years were not so complete, but it seems likely that in the period 1947-55 seasonal maxima varied between 4000 and 8000, except that in January 1947 the total may have been as high as 10,500. Figure 1 records the best available estimates of numbers during the period. None of these totals is very accurate, nor do they necessarily represent the maximum numbers present in any season.

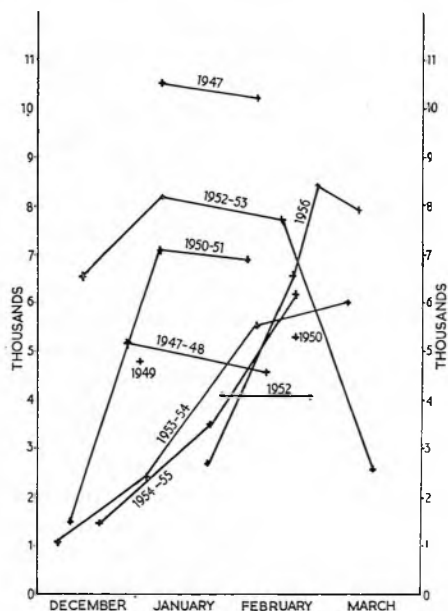
The pattern of immigration of this population seems to be changing. Whitefronts may normally be found in England between the last days of September and the second half of March, although the early arrivals are few in number. Formerly the first large-scale arrivals occurred in late November or early December and were further reinforced in late December or January. But in



the last three seasons (1953-56) the importance of the December influx has greatly declined and a large part of the population has delayed its arrival until February. Related differences in the distribution in Germany, Holland, Belgium and France have been found.

A feature of the distribution of Whitefronts in England and Wales is the extent to which the population is at all times almost wholly concentrated in a few places. The most important of these localities (measuring importance by the numbers of birds occurring) are visited each year. There are only 12 or so such places (the number depending on how some areas are defined). In addition another 24 are known to have been visited in three or more of the seasons studied. During the whole period (1946-56) Whitefronts were reported from as many as 120 localities, but half of the occurrences were unique. Thus it appears that the choosing of places to live in is dominated by tradition but involves some exploration (which may or may not be the same as failure to find established

Fig. 1.—Counts of White-fronted Geese in England and Wales, 1947-56. The points marked represent totals obtained by summing figures from the major haunts of the species, with interpolation and estimates included when necessary. Only in 1956 do the totals approach the accuracy of a census, but the seasonal trends shown are fairly reliable. There is no certainty that the maximum number recorded in any winter coincides with the maximum number of geese present in the country. The dates selected are almost all those used in the Wildfowl Count scheme (i.e., Sundays near the time of new moon). Numbers present in October and November are usually well below 2,000. In the spring, few Whitefronts remain by the end of March.



haunts). This system seems to allow sufficient flexibility for the gradual transfer of 'allegiance' from a place no longer favourable (such as Margam in Glamorgan or Holkham in north Norfolk) to others more suitable.

Areas which provide relatively undisturbed conditions (such as the Walmsley Sanctuary near the Camel estuary in Cornwall, the Bure marshes in south Norfolk, and Slimbridge) seem to retain geese for longer periods than others (Somerset moors) where, though the food supply seems to be ample, disturbance is considerable. But there appear to be upper limits to the numbers that a refuge can hold for more than a few days (about 120 in the Walmsley Sanctuary and 3000 at Slimbridge). The upper limits to 'stable' flock size may also be affected by the social behaviour of the geese themselves, though it is difficult to be sure of this.

Shooting has not apparently been responsible for any major changes in distribution, although it has immediate dispersing effects: 11 of 15 recent shoots

at Slimbridge (where traditional organised shoots, by five to ten guns, take place up to five times each season in December and January) were followed by immediate decreases of one-fifth or more of the Slimbridge flock, although the numbers of geese killed were small. Small flocks seem to suffer relatively heavier casualties than larger ones. It has not been possible to obtain information from enough different areas to demonstrate this quantitatively on a national scale. But if this suggestion is correct it may help to explain why many minor groups (for example, in Sussex and in Dorset) have failed to increase or to become established.

A rather melancholy inference from the most recent alteration in the status of the British population, the change of the peak arrival period from December or January to February, is that what would seem to be greater protection afforded to them in this country in recent years has apparently failed to develop an early-immigrating group. (It *might* be argued that, since there are consistently more geese in October and November at Slimbridge than in all other British haunts, some progress is being made in this direction.)

A second corollary of the change in time of arrival is that a substantially reduced proportion of the population is exposed to the risk of being shot in this country. Indeed, if there was reason to suppose that the legal limits of the shooting season (31 January inland and 20 February on the foreshore) were rigidly adhered to, it would seem that few should die here. Complete bag records are not, of course, available, but it appears that the British kill from this Whitefront population in recent years may have been of the order of 200. There is no evidence for a decrease in the last three seasons.

This raises an issue of some interest; how are the annual losses of English Whitefronts distributed among the different countries visited by them in the course of the year? A direct answer by means of bag records is impracticable, but it is possible to make some provisional calculations based on the distribution of the recoveries of ringed Whitefronts and using estimates of the average death rates of various age-groups. These calculations and the estimates on which they are based are set out in Table I. The derivation of the mortality estimates is not given here, but may be found in Boyd (1957).

The national allocation of the autumn and winter losses depends on the assumption that the tendency to report British rings is the same in all the countries visited. This is probably not strictly correct, but is likely to be a smaller source of error than the use of only 42 recoveries as a basis for the distribution. Despite the vulnerability of the third and fourth parts of the table on that score, the evidence on shooting pressure and bags that is available conforms quite well with the rank order indicated here. Of course, the kill in different places varies widely from one winter to another.

It is worth noting that the average number of Whitefronts estimated from the recovery data to have been killed in recent winters in England and Wales is 200, in agreement with the total arrived at from the evidence of wildfowlers and other observers.

Tentative calculations, based on information about the total numbers of Whitefronts visiting Germany and Holland, not all of which also visit England, suggest that the toll taken by Dutch wildfowlers is proportionately rather smaller than in England, as Table I indicates, while fowlers in Germany (including a considerable number of British servicemen) take at least twice as many.

The idea of spring shooting is one which most British sportsmen regard as particularly heinous and it may seem to them that the suggested spring kill

$(1370 \times \frac{16}{26} = 840)$ is deplorable both because it occurs at all and because it

falls not far short of the total winter losses. On the first charge two comments may be offered. First, you can kill geese only when they are in your vicinity. Whitefronts visit central Russia in autumn as well as in spring and it is not clear why the autumn kill is very small. But in any event, it is only for a very few weeks each year that the geese can be hunted in central Russia. Second, while no sporting shooting of geese takes place in spring in Britain large numbers of geese (Pink-footed and Greylag, but not Whitefronts) are nevertheless shot, on the plea of damage to crops. The Russians may also be acting on this belief: they certainly do so in the wintering areas around the Caspian.

Before it is asserted that the spring kill is too big it must be remembered that the area here described as 'central Russia' is as large as the whole wintering area in north-west Europe.

TABLE I

A summary of the Mortality Statistics of ringed White-fronted Geese; estimates of the Seasonal Distribution of the Annual Losses from the British Population; and the Regional Distribution of Recoveries of Ringed Birds

The average number of Whitefronts in England and Wales in late February is assumed, from field counts in recent years, to be 7000.

1. Mortality statistics of ringed geese:

Annual death-rate of adults (after surviving one winter)	..	..	..	28%
Losses of adult geese during winter (October-February)	..	..	..	8.9%
Losses of young geese in their first winter (October-February)	..	..	..	22.2%

2. Annual losses among the British population, numbering 7000 in late February.

In February the average proportion of the total population which is made up of first-winter birds is 28%.

Thus a population of 7000 survivors in February would have consisted of 5530 adults and 2520 young geese = 8050 geese in the preceding October.

∴ Average autumn and winter losses from the British population = 8050 — 7000 = 1050 geese.

Total annual losses from the British population (October-October):

$$= (5530 \times 0.28) + (2520 \times 0.56) = 2420.$$

∴ Losses from March to September = 2420 — 1050 = 1370 geese.

3. Regional distribution of autumn and winter recoveries of ringed geese:

East Germany	..	..	..	..	2
N.W. Germany	..	..	..	..	17
Denmark	..	..	..	..	1
Holland	..	..	..	..	6
Belgium	..	..	..	..	3
France	..	..	..	..	5
England and Wales	..	..	..	..	8

From 1 and 2 eight recoveries in England and Wales correspond to a total season kill of 200 geese in this country.

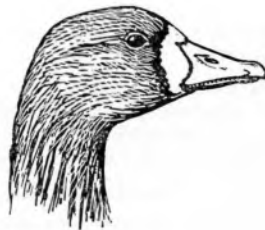
4. Regional distribution of spring and summer recoveries of ringed geese:

Central Russia (spring passage)	..	..	11
Russian Arctic coast (spring passage)	..	..	5
Kolguev Island	} (breeding places)	..	10
Novaya Zemlya			

No objection can reasonably be made to the kills on the breeding grounds. These are places where it is essential for the human inhabitants to use every available source of food. They are killing for survival, not sport. The rounding-up of moulting geese, formerly practised by the Samoyeds, has been prohibited, at least in some places, and may have died out with the Samoyeds in others, but shooting is widespread, though the human population is small.

All the figures in Table I, especially those for spring and summer, would have to be increased if the annual mortality was substantially greater than 28%. But even if this became necessary it would still remain true that, because the losses are widely dispersed, the numbers killed in any country and even more in any one locality would not be impressively large. A kill of 200 in Britain or even 540 in central Russia from a population of 7000 does not *appear* excessive.

Yet a population of 7000 is a small one, and, as such, relatively more vulnerable than one of ten times the size. Even if, as it should be, the British population of the Whitefront is considered as part of the north-western European population, of about 15–20,000, the total may still appear precariously small. A similar total for the population of the Brent goose *Branta bernicla* in the same area has been considered alarming enough to warrant the introduction of special legislation for its protection. And yet the *albifrons* population appears to be maintaining itself without particular winter protection and in the face of extensive spring and summer losses.



THE FIDELITY OF A WHITEFRONT GANDER

By Jack Williams

I have two Grey Lag Geese which commenced to lay on 15 and 16 April 1955 respectively. After the second bird had laid three eggs in the same nest as the first one, she went and made another nest some 100 yards away and laid three more eggs in it. The first one contrived to lay in the original nest, and on laying the sixth egg commenced to sit. The second goose never attempted to sit at all: she finished laying at the sixth egg and then forsook the nest.

As soon as the first goose commenced brooding, a Whitefront gander that I have had for some 18 years went in attendance, never leaving the sitting goose and guarding her with great ferocity. This he had done on previous occasions with other unpaired sitting geese: the first a farmyard Toulouse Goose which he attended on for two seasons and, after she was removed, a Pinkfoot Goose a year or two after.

Very unfortunately, after the first Grey Lag Goose had been brooding for a week, on 29 April she became very seedy and died the following day. Whereafter the Whitefront gander became very perturbed and literally forced the