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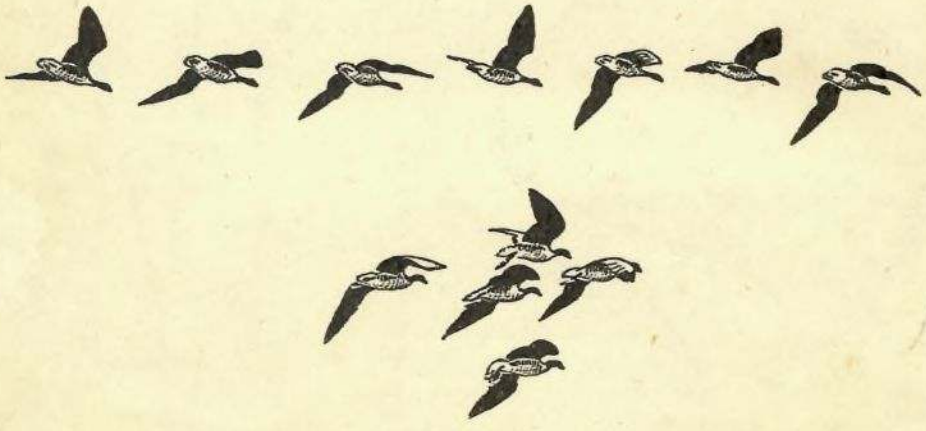

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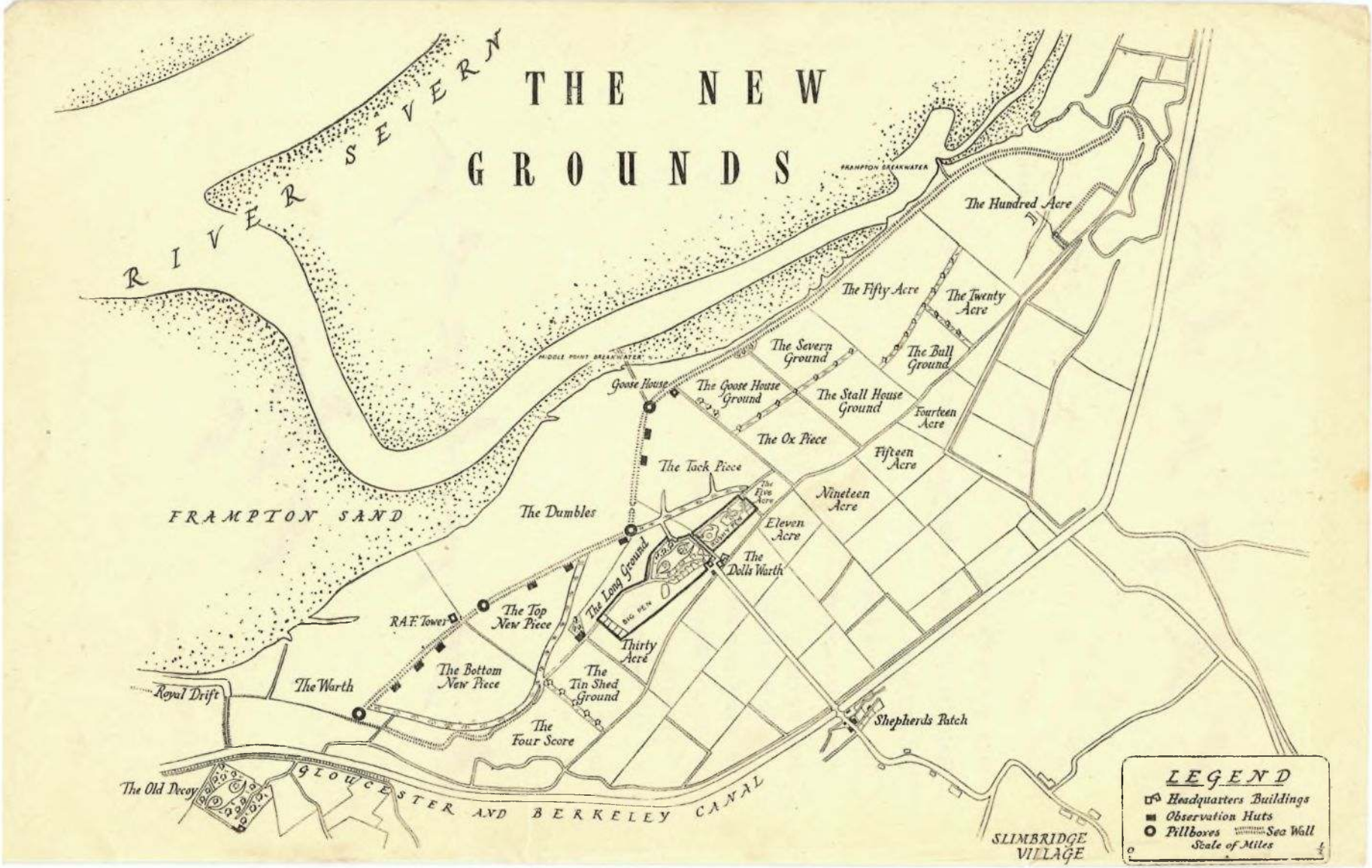
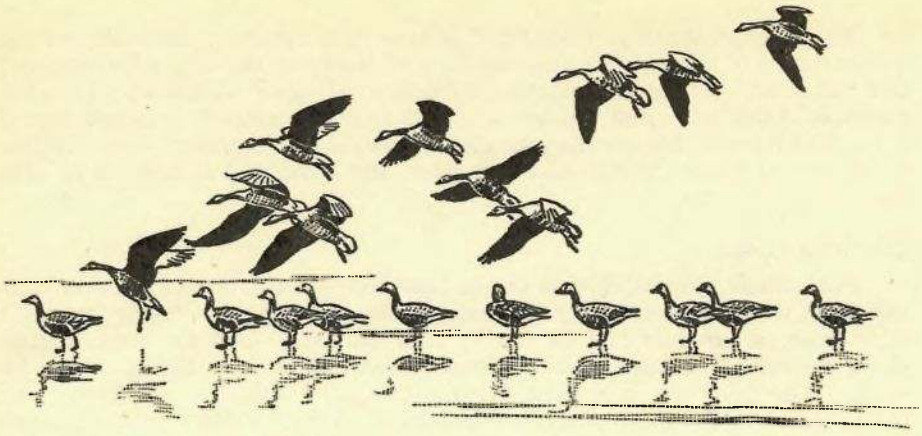

THE NEW GROUNDS
RIVER SEVERN
FRAMPTON BREAKWATER
MIDDLE POINT BREAKWATER
The Hundred Acre
The Fifty Acre
The Twenty Acre
The Severn Ground
The Bull Ground
Goose House
The Goose House Ground
The Stall House Ground
Fourteen Acre
The Ox Piece
Fifteen Acre
The Tack Piece
The Five Acre
Nineteen Acre
FRAMPTON SAND
The Dumbles
Eleven Acre
The Long Ground
The Dolls Warth
RAF Tower
The Top New Piece
Thirty Acre
The Bottom New Piece
The Tin Shed Ground
The Warth
Royal Drift
The Four Score
Shepherds Patch
The Old Decoy
GLOUCESTER AND BERKELEY CANAL
SLIMBRIDGE VILLAGE
LEGEND
Headquarters Buildings
Observation Huts
Pillboxes
Sea Wall
Scale of Miles



FIRST ANNUAL GENERAL MEETING

The first Annual General Meeting of the Severn Wildfowl Trust was held at the Livingstone Hall, Broadway, London, S.W.1, on Tuesday, 27th January, 1948.

The Director, Mr. Peter Scott, was in the Chair.

1. (*a*) The Chairman read the following Report of the Council for the year 1947, and proposed the adoption of the Report and Accounts :—

REPORT OF COUNCIL
1947

(*This Report contains a statement of the Trust's aims, but it is mainly concerned with the development of the amenities at the New Grounds and the works of all kinds which have been undertaken there. It forms a short summary of the Trust's first year. A fuller account of the ornithological achievements is contained in the Bird Report beginning on p.* 13.)

The Trust was inaugurated in November, 1946, and during its first year it has grown in a spectacular manner. It has had wide publicity in the press (including an article in *The Times*), on the wireless and in a number of lectures delivered by the Director in many parts of the country. It staged an exhibition of photographs and models at the Bath and West Agricultural Show and another at Bristol. But above all it has greatly developed the amenities at the New Grounds. As a result the membership stands at 854 Full Members and 248 Associates.[1] It has also received support from a number of associations and other bodies, both local and national, and has been accepted as established for educational purposes and therefore free from income tax by the Commissioners of Inland Revenue.

The work of the Trust is in part educational and in part scientific. The educational aspect is reflected in the new proposals for Corporate Membership which you will see farther down on the agenda. The scientific studies are mainly in the field of pure ornithology—of learning about little-known birds in order to add to knowledge. But there is a practical aspect of the Trust's scientific work, and that is to provide data which will help to arrest the decline in the world's wildfowl. This is a matter of the greatest pertinence to all those interested in these birds—either from a sporting, scientific, æsthetic, economic or even a gastronomic point of view.

[1] Membership at April 1st, 1948, was 1,131 Full Members, 379 Associates.

The work at the New Grounds falls into three spheres ; the study of the winter flocks of wild geese ; the catching of ducks in the decoy for ringing ; and the study of the comparative collection of tame waterfowl. Detailed accounts of this work and the very satisfactory results already obtained appear in the Bird Report. Meanwhile your Council would like to present some account of the way in which the New Grounds have been developed in order to achieve these ends.

The Wild Geese

For watching the wild geese on the Dumbles—an expanse of grass-covered saltmarsh which is their winter feeding-ground—it has been necessary to build eight observation huts and to modify four pillboxes. All these are spaced along the seawall behind which an unobserved approach to the geese can be made. The pillboxes have been fitted with special shutters, which are also incorporated in the newly built thatched huts. These shutters are adjustable, so that if the geese are within ten yards, as is often the case, the observation slit can be narrowed to prevent the geese from detecting the observers. The huts are fitted with seats, foot rests, and elbow rests for convenience when using binoculars.

From these huts many hundreds of ornithologists have been able to watch the wild geese at close range. Ten of the 13 sub-species of geese on the British List were to be seen at one time or another on the New Grounds during the winter of 1946–47, including three examples of the very rare Lesser Whitefronted Goose.

A number of other birds were also seen on the Dumbles or the adjacent mudflats including Peregrine, Merlin, Raven, Iceland Gull, Common Scoter, Goldeneye, Goosander, Black-tailed Godwit, Curlew Sandpiper, and many others.

A large binocular telescope was installed in a special observation post built as a second storey on top of the central pillbox. It commands a remarkable view of the whole marsh and hundreds of visitors have used the telescope, which magnifies 42 times and appears to bring the geese to within a few yards even when they are at the far edge of the marsh.

The Decoy

The duck decoy had not been used since 1929 although certain repairs had been made in 1937. Further extensive repairs were therefore necessary before it could be put into working order. Two of the four pipes were complete by the late autumn of 1946, but there was no " lead " of ducks and only six birds were caught during that season. These—three Mallards, two Teal, and one Garganey Teal—were ringed and released. Only one of these has been returned so far—a Mallard which had gone no farther than Cheltenham. During the summer some trees which were too high and a great deal of dead underbrush were removed and a third pipe was dug out and equipped with nets and screens. There was still no satisfactory " lead " in the autumn, but such ducks as used the decoy could often be caught and by the end of December, 109 birds had been taken, of six species—Mallard, Wigeon, Teal, Shoveler, Pintail and Garganey. A few of these were recaptures, but 96 birds were ringed and released of which five have so far been recovered. Three Mallards were recovered locally and two Shovelers were shot, one on the Wexford Slob in Ireland, and one in the Gulf of Morbihan in France.

Rings issued by the British Trust for Ornithology have been used, and the work is part of the researches sponsored by the International Wildfowl Enquiry Committee.

There are two observation huts overlooking the decoy from which it is possible to watch the ducks at very close range, sometimes about ten feet. But in order not to risk disturbing the decoy, visitors have not been admitted during the catching season.

It is proposed, if funds permit, and labour is available, to open the fourth pipe during the coming summer, and also to rear a large stock of free-flying call-ducks in order to establish the all-important " lead."

The Collection

The Trust's collection of tame waterfowl is almost certainly the most representative of its kind in the world. It consists, at present, of more than 400 birds of 67 species of swans, geese and ducks. These are for the most part exceptionally tame, so much so that care must be taken to avoid treading them underfoot at feeding time. Large numbers feed freely from the hand. During the summer the collection was considerably smaller, but in spite of that ten species of geese nested and a satisfactory number of young birds was reared. In addition some eggs were received from Iceland by which means such rare ducks as Barrow's Goldeneye, Scaup and Redbreasted Merganser were added to the collection.

The accommodation for the birds consists, at present, of about 17 acres of low-lying rushy fields, surrounding the decoy. This area is encircled by a perimeter of fox-proof fencing eight feet high, buried in the ground and turned outwards at the top. Within this perimeter a number of pens have been made in which ponds have been dug with bulldozer and dragline ; these are fed by a rhine (pronounced reen) which is the local name for a ditch—or, in this case, the sluggish stream which waters the area. In these excellent conditions the Council looks forward to an even more successful breeding season this summer, from which it is hoped to improve the collection by exchange and to derive a small income from the sale of surplus young birds—particularly to the United States and other hard-currency countries.

The feeding of the birds has been a considerable problem, although many of them live mainly upon grass. Because the collection is open to the public, however, an allocation of coupons for feeding stuffs has been made.

The fish-eating ducks live on eels and rabbit, but the problem of rearing the young birds was acute. A maggot factory was required, while three newly hatched Redbreasted Mergansers disposed of 600 sticklebacks a day.

The Headquarters

The establishment of the Trust's Headquarters at the New Grounds has been a slow and rather costly business. Two disused cottages were taken over and have at last been made habitable. They accommodate the Director, the Assistant Curator, and one of the wardens with his family. Water and telephone have been laid on from the village half a mile away—a complicated procedure involving a diver to pass them across the bed of the canal.

In winter the paths become very muddy owing to the clayey nature of the soil, and ashes and gravel have had to be laid in the neighbourhood of the buildings, the pens and the decoy. In the latter, sawdust has been laid on top of the ashes for silent walking.

These are some of the problems which have been met by the Trust, and the interest in its activities which has been aroused not only in its own district but throughout the country is shown by the very large number of visitors who have come to the New Grounds during the past year. It was common during the summer for between one and two hundred people to spend an hour or two in the Trust's enclosures on Saturday afternoons and Sundays. But for the cessation of the basic petrol ration these numbers would probably have persisted during the winter because of the wide interest in the wild geese. As it is, scarcely a weekend passes without a visit from some party arriving in one or more motor coaches. It is not possible to keep an accurate tally of the exact number of visitors to the New Grounds but not less than 2,500 people have been there to see the birds during the past year.

THE SEVERN WILDFOWL TRUST

INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD FROM 10th NOVEMBER, 1946, TO 31st DECEMBER, 1947

EXPENDITURE	£ s. d.	£ s. d.	INCOME	£ s. d.	£ s. d.
To WAGES AND INSURANCE		1,807 8 3	By SUBSCRIPTIONS		984 8 6
„ COLLECTION EXPENSES :			„ DONATIONS		1,659 7 6
Birds and Eggs	782 15 4		„ SALE OF BOOKLETS		38 2 6
Goats	9 0 0		„ SUNDRY RECEIPTS		29 9 6
Food	86 14 11		„ NEW GROUNDS, SLIMBRIDGE :		
Hens	45 0 0		Birds, Sale of	21 2 6	
Sundries	94 18 5		Eggs, „	4 11 4	
		1,018 8 8	Gate Takings	17 4 7	
„ OTHER EXPENSES :			Sundries	7 1 8	
Repairs to Cottages, etc.	1,100 0 0				50 0 1
Plants, Seeds, etc.	133 7 1				2,761 8 1
Timber	19 13 4		„ Balance, Excess of Expenditure over Income for period, carried to Balance Sheet ..		2,879 3 11
Rent and Rates	67 9 5				
Travelling	75 13 9				
Agricultural Activities, Excavating, Levelling, etc.	539 19 6				
Materials	460 9 11				
Transport	76 17 7				
Sundries	8 15 0				
		2,482 5 7			
„ OFFICE EXPENSES, ETC. :					
Printing and Stationery	278 13 9				
Postages, etc.	43 8 8				
Bank Charges	10 7 1				
		332 9 6			
		£5,640 12 0			£5,640 12 0

THE SEVERN WILDFOWL TRUST

BALANCE SHEET—31st DECEMBER, 1947

LIABILITIES	£ s. d.	£ s. d.
SUNDRY CREDITORS		76 19 10
LOAN ACCOUNTS		1,986 8 2
BANK OVERDRAFT		922 17 0
EXCESS OF ASSETS OVER LIABILITIES :		
Stock of Birds at Valuation.. ..	3,146 0 0	
Deduct : Excess of Expenditure over Income for period per Account ..	2,879 3 11	266 16 1
		£3,253 1 1

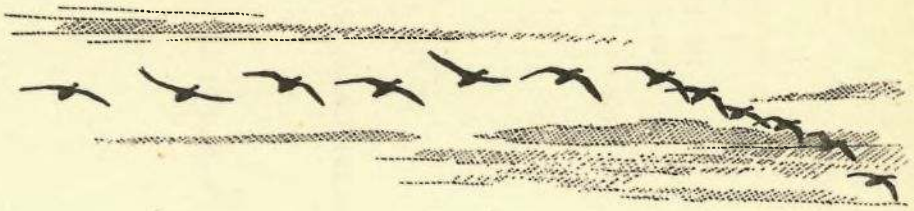
ASSETS	£ s. d.
CASH IN HAND	7 1 1
CASH AT BANK ON DEPOSIT	100 0 0
STOCK OF BIRDS (as valued by Director)	3,146 0 0
STOCK OF BOOKLETS (not valued)	—
	£3,253 1 1

We have examined the above Balance Sheet and the accompanying Income and Expenditure Account with the Books and Vouchers and Accounts of the Trust and certify them to be in accordance therewith.

We have verified the Bank Balances.

Finsbury Circus House,
Blomfield Street, London, E.C.2.
19*th January*, 1948.

(Sgd). W. B. KEEN & CO.,
Chartered Accountants.



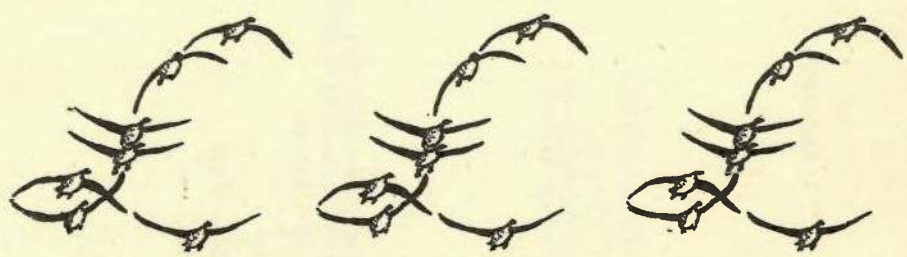
THE APPEAL FOR FUNDS

An appeal for £5,000 for the Trust was launched at a luncheon held at Pimm's Restaurant in the City of London on 11th December, 1947. This was followed by a letter to *The Times* signed by the President, the two Vice-Presidents and the Director.

The response to this appeal was fairly widespread, but most of the sums contributed were small, and the total sum received in donations up to February, 1948, was only £610.

The Trust, therefore, still urgently needs funds. The most promising source seems to be by an increase in membership. We do not feel diffident about this, as we are convinced that the Trust offers an exceptionally good guinea's worth. Members can help by interesting their friends ; our membership could quickly be doubled if each member were to undertake to bring in at least one new member. They can also help by encouraging the use of the seven-year Covenant arrangement by which the Trust can recover the income tax on the sum from the Inland Revenue, and by drawing attention to the Form of Bequest which is suggested on the last page of the Trust's Membership booklet. This reads as follows : " I bequeath free of duty to the Society known as the Severn Wildfowl Trust, of the New Grounds, Slimbridge, Gloucestershire, the sum of £..... to be used for the general purposes of the said Society. And I declare that the receipt of the Treasurer or other proper officer of the said Society for the time being shall be a good discharge for all monies paid to the said Society."

Those interested in the preservation of the few remaining wild places in England, and in the wild creatures which frequent them, might well consider the possibility of a legacy to the Trust.



FOOTNOTE

" ' What shall we give ? '
' All that is ours '
' Why shall we give it ? '
' For the sake of the Trust.' "
The Musgrave Ritual by A. Conan Doyle.

ACKNOWLEDGEMENTS

In its first year the Trust has been well served by those responsible for the work of development at the New Grounds.

We are greatly indebted to Colonel Maurice Berkeley, who, as Honorary Agent to the Trust, has undertaken an enormous number of different problems, many of them involving very detailed organisation. We have been most fortunate in having so able a voluntary organiser and helper.

Particular mention must be made of Mr. John Yealland to whom the Trust also owes a deep debt of gratitude. He agreed to come for a year as Curator, to establish the waterfowl collection, before setting off on a long-projected expedition to West Africa, and we hope that in between his future expeditions—from which he expects to bring back new birds for the Trust's enclosures—we shall have the benefit of his wide experience again at the New Grounds.

Meanwhile the collection is under the care of Miss Eunice Overend assisted by Mr. Tommy Johnstone. The Trust is most fortunate to have acquired the services of two such keen and conscientious workers.

The staff at the New Grounds includes two keepers, who have prevented any disturbance to the geese by poachers or other unauthorised persons. Mr. Cameron, who lives with his family in the bungalow at the Trust's Headquarters, has also done well in reducing the vermin, notably stoats, weasels and rats. The other keeper, Mr. Everett, lives on the bank of the Severn at Framilode—up-stream from the New Grounds. He has wide experience as a salmon and elver fisherman and has supplied food for the fish-eating ducks in the collection. He has also done useful work in making and repairing nets for the decoy and for the goose catching.

Miss Peggy Cameron—16-year-old daughter of the Trust's keeper—has been of the greatest possible service. As a voluntary worker she made herself responsible for a number of the birds in the collection and has been especially successful in the care of birds which are ailing. She has also been very useful in helping to show round parties of visitors. She has recently been appointed to the permanent staff and her exceptional flair for animals makes her a happy addition to the team at the New Grounds.

Some mention should also be made of the German prisoners who have undertaken much of the development work. One particularly must be named : Heinz Meineke, was in charge of the party and worked most willingly and cheerfully for more than a year. He volunteered to stay on as a civilian worker and the Trust would have been fortunate to obtain his services ; but so far it has not been possible to make this arrangement. He has now been removed to a new camp and is no longer employed by the Trust.

In the London offices (which are lent by the Director without expense to the Trust) we have been unfortunate to have had two changes of Assistant Secretary within a year.

The Trust is greatly indebted to Miss Penelope Jamieson, who did splendid work at the time of its inauguration and in its early days. Owing to a bereavement she had to give up the work, and her place was taken by Miss Elizabeth Adams. Miss Adams worked most ably for the Trust for some eight months, when she too had to leave in order to be married. Members will no doubt be glad to join us in wishing her all good fortune in the future.

Miss Philippa Talbot-Ponsonby is now Assistant Secretary and has picked up the rather complicated threads of the Trust's activities with great efficiency.

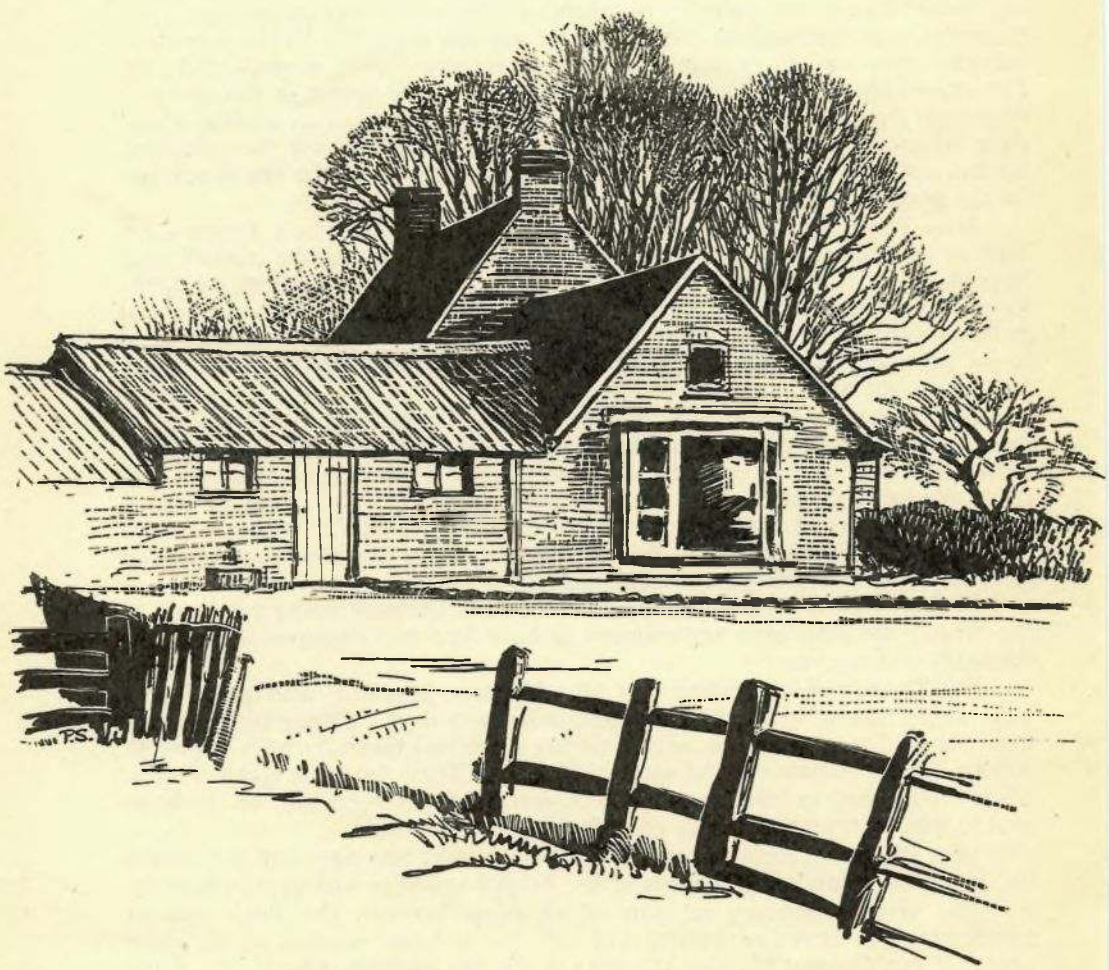
The very satisfactory relation which exists between the Trust and its Landlords—the Berkeley Estates Ltd.—is due in large measure to the good offices of our Council Member, Captain R. G. W. Berkeley, who is one of the Directors. We are grateful also for the helpful co-operation which has always

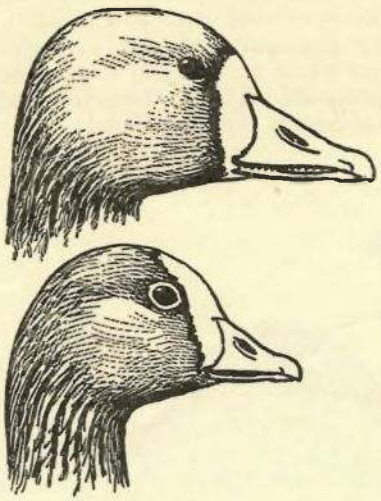
been shown by Mr. Francis Peter, the Estate Agent, and Captain Harold Baldwin, his assistant.

Reference is also due to Mr. D. Nelson, who has visited the New Grounds a number of times giving good service in the treatment of sick birds, and he has been appointed as Veterinary Surgeon to the Trust. He has used penicillin on several occasions with excellent results ; and has also conducted post-mortems from which we have been able to save the lives of birds showing similar symptoms.

Special acknowledgement must be made to *Country Life*, who have given their services on very generous terms to the Trust on so many occasions.

Any acknowledgement of the Trust's gratitude would not be complete without mention of those numerous benefactors who, by their donations and contributions, have enabled us to keep the work of development going and to build up this new and unique project. A number of magnificent gifts have been made to the Trust, both in funds and in kind. One in particular should not go unrecorded. It is a gift from our Council Member Mr. James Robertson Justice of six bottles of Founders Port—Sandeman 1917.





Whitefront and Lesser Whitefront.

THE WILD GEESE

The headquarters of the Trust is at the New Grounds, Slimbridge, Gloucestershire, on the south bank of the River Severn, just above Sharpness Railway Bridge. Here two cottages and about 20 acres of land, including the duck decoy, have been rented from the Berkeley Estate. This is in the centre of the " goose grounds " over which the Trust has been granted watching rights in return for keepering duties.

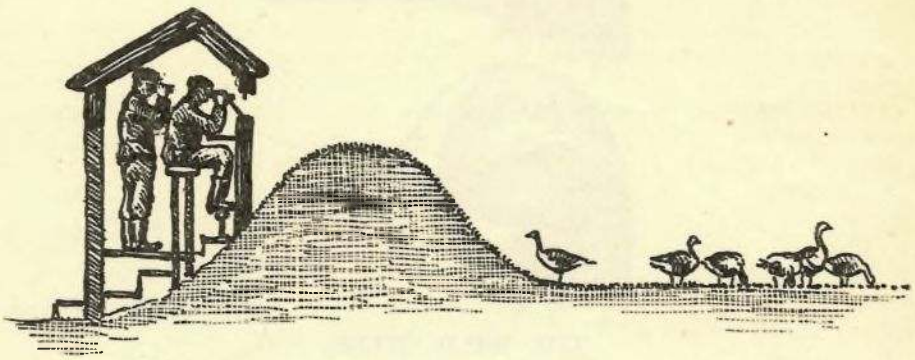
For those who have not been able to visit the New Grounds it must be explained that the principal feeding ground of the wild geese which winter on the Severn Estuary is a stretch of 200 acres of grassy saltmarsh known as the Dumbles, and the adjacent grass fields which are protected from the high spring tides by a sea-wall. Four pillboxes were built on this wall in 1940, and from their embrasures the wild geese can be watched at very close range. The pillboxes have been modified and improved for their new purpose and a number of observation huts made of straw thatch have been spaced between them along the bank. The watchers can move freely behind the bank so as to be opposite the geese wherever they are on the marsh and can watch them through special adjustable shutters without disturbing them even when they are no more than five yards away.

Early History

Geese have probably visited this part of the estuary every winter for centuries under the admirable protection afforded by the Berkeley family, but there is very little record of them until just over 100 years ago. Since 1843 the dates of their arrival from their breeding grounds in the Arctic have been carefully recorded in a special book held at Berkeley Castle. From 1930 onwards detailed notes of the geese seen on the New Grounds have been made by our Council member Mr. H. H. Davis and other observers. The 16th of December, 1945, was an important day. Among 2,000 geese on the Dumbles, seven species were identified by Mr. Davis, two observers (now Members), Mr. John Winter and Mr. Clive Wilson, and the Director. The seven included the very rare Lesser Whitefronted Goose (*Anser erythropus*) which had previously been recorded only twice in Britain—in 1886 and in 1942. Two Lesser Whitefronts were seen that day, and it was also the first time that all five of the British Grey Geese had been seen together—Whitefront (*Anser albifrons albifrons*),

Lesser Whitefront, Pinkfoot (*Anser arvensis brachyrhynchus*), Bean (*Anser arvensis arvensis*), and Greylag (*Anser anser anser*). Barnacle (*Branta leucopsis*) and Brent (*Branta bernicla bernicla*) were also present.

It was this red-letter day combined with the presence of the old decoy and two uninhabited cottages which were largely responsible for the selection of the New Grounds for the proposed wildfowl observatory, and for the establishment, nearly a year later, of the Severn Wildfowl Trust.



Season 1946–47. The Arrival of the Geese

Six thatched observation huts were built during the summer, and, indeed, they had not all been completed by the time that the first geese arrived on the New Grounds on 21st September—a flock of eleven. By 30th September there were 41 geese and they were, as the earliest arrivals usually are, Pinkfooted Geese, except for one Light-bellied Brent (*Branta bernicla hrota*) which came with them. This western race of the Brent Goose shares part of the breeding range of the Pinkfoot in Greenland and Spitzbergen.

Throughout the winter, as had been noted in previous years, odd single birds of different species of geese appeared among the flocks. In many cases these were young birds. The reason for this seems to be that a goose lost from its own flock will take up with a flock of another species rather than be alone. Young birds seem most frequently to get lost. Thus it came about that ten of the thirteen British species and sub-species of geese were recorded on the New Grounds (they are placed in order of numbers seen).

Whitefront, Pinkfoot, Canada (*Branta canadensis canadensis*), Bean, Lesser Whitefront, Barnacle, Greylag, Greenland Whitefront (*Anser albifrons flavirostris*), Light-bellied and Dark-bellied Brent. Only the Greater and Lesser Snow Goose (*Anser hyperboreus atlanticus* and *Anser hyperboreus hyperboreus*) and the Redbreasted Goose (*Branta ruficollis*) were not seen, but these have all been recorded from the New Grounds at one time or another in previous years.

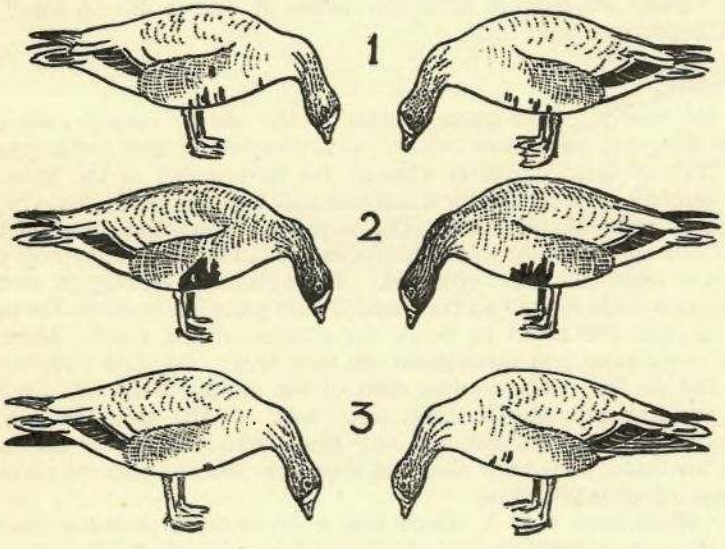
The first Whitefronts arrived on 6th October, 1946—a flock of 19. By 13th October, 295 Whitefronts had come and there were 79 Pinkfeet and the Light-bellied Brent, which was an adult gander.

The Whitefronts had evidently had a successful breeding season as 60 per cent. were young birds. For a month the numbers of the geese scarcely increased. The Pinkfeet reached a peak of 97, and an immature Greenland Whitefront (*Anser albifrons flavirostris*) was recorded. This is a sub-species described for science by the Director and Mr. C. T. Dalgety in March, 1948. At the beginning of December, the Pinkfeet left, taking the little Brent with them. This is their usual practice and their destination is one of the mysteries

yet unsolved. Perhaps they go farther south to Northern France or perhaps they join the Pinkfoot concentrations in Norfolk and Lincolnshire—or in Lancashire. We hope to discover this by ringing in due course.

A single Bean Goose arrived on 8th December, and on that date 444 geese were present on the Dumbles. A week later came a large and exciting influx of geese. By Saturday 14th, 1,000 had assembled and during the following day many flocks of between 15 and 40 geese were seen arriving, planing down from a height to settle on the Dumbles. Each new flock was eagerly scanned in the hope that it might contain something unusual.

An immature Greylag, an immature Dark-bellied Brent and a new Bean Goose arrived that day and by the following weekend two Barnacles had also appeared—young birds which always kept together. The total was now 3,000 and two days later it was over 4,000. Many non-breeding adults arrived and the percentage of young birds was greatly reduced from the previous figure of 60. Unfortunately, however, accurate counts of the ratio were not made at this period.



Lesser Whitefronts

On 28th December, the first Lesser Whitefront was seen. The second was discovered on 3rd January, and on 18th January the presence of a third was established, and it was realised that it had been seen earlier and confused with No. 1. These three geese had nothing to do with each other, were always in different parts of the flock and could be distinguished one from another by the black markings on the belly. No. 1 and No. 3 were rather similar, which caused the early confusion. No. 3 had been wounded and his left wing sometimes drooped. At one time he separated himself from the main flock and was clearly ailing, but he recovered.

These birds were on the New Grounds on and off from mid-January until mid-March. No. 1 was seen on 17 different days, No. 2 on 10 days and No. 3 on 6 days. All three were seen on 18th January and 1st March. It is estimated that some 200 ornithologists saw one or other of these very rare British birds from the Trust's observation huts.

Other records of particular interest concern some wild hybrids between the Bean and the Whitefront. The first of these was to be seen for several days always with its parents—a large Bean gander and a female Whitefront. There were also two other immature birds for whose general appearance such parentage appeared to be the only explanation, and a fourth young bird which might have been an extreme of individual variation or a Whitefront-¼ Bean Goose.

Several adult and immature Bean Geese were present for varying periods during the winter. It was not always possible to determine whether they were birds which had been seen earlier or not. Thus there may have been nine Bean Geese but there cannot have been less than five individuals present at one time or another. All these appeared to belong to the same race of the Bean Goose—the *segetum* type.

On 3rd January a third Barnacle Goose appeared. It did not associate with the other two.

By 7th January there were only 2,000 geese on the New Grounds. At about this date a large influx had been noted on the Sedgemoor in Somersetshire. But on 12th January there were again 4,000 geese present. These did not include the Barnacles or the Brent or Lesser Whitefront No. 2, and many of them are likely therefore to have been newly arrived birds. A small gaggle of 20 Pinkfeet arrived with them.

Severe Weather

With the arrival of the hard weather at the end of January, the feeding grounds of the geese were snow covered and remained so until the beginning of March. This, of course, greatly affected the movements of the geese. The grass was already so short on the Dumbles and the grassfields that the frozen snow made an unbreakable crust. The wind had blown the snow off the top of the sea-wall and off some of the banks in the fields which left small patches of grass on to which the geese crowded. Their principal feeding ground, however, was in two fields which had been seeded with grass but in which the previous summer's stubble still stood to break the surface of the snow. Here a fair number of geese remained throughout the cold spell. By 21st February only 500 were still present. On the last days of the month, however, many geese returned, and on 3rd March 2,500 were back on the Dumbles. A single Canada goose was among them, and nine more were seen farther up the river. The single bird later joined the nine and they were seen on various parts of the New Grounds for several days.

Lesser Whitefront No. 2, which had a conspicuous black patch on its belly, was seen on several occasions displaying with a female Whitefront.

With the thaw the fields behind the sea-wall became flooded, while snow drifts lingered on the side of the bank itself, which made access to the observation huts difficult, but it was still possible to reach them by careful stalking.

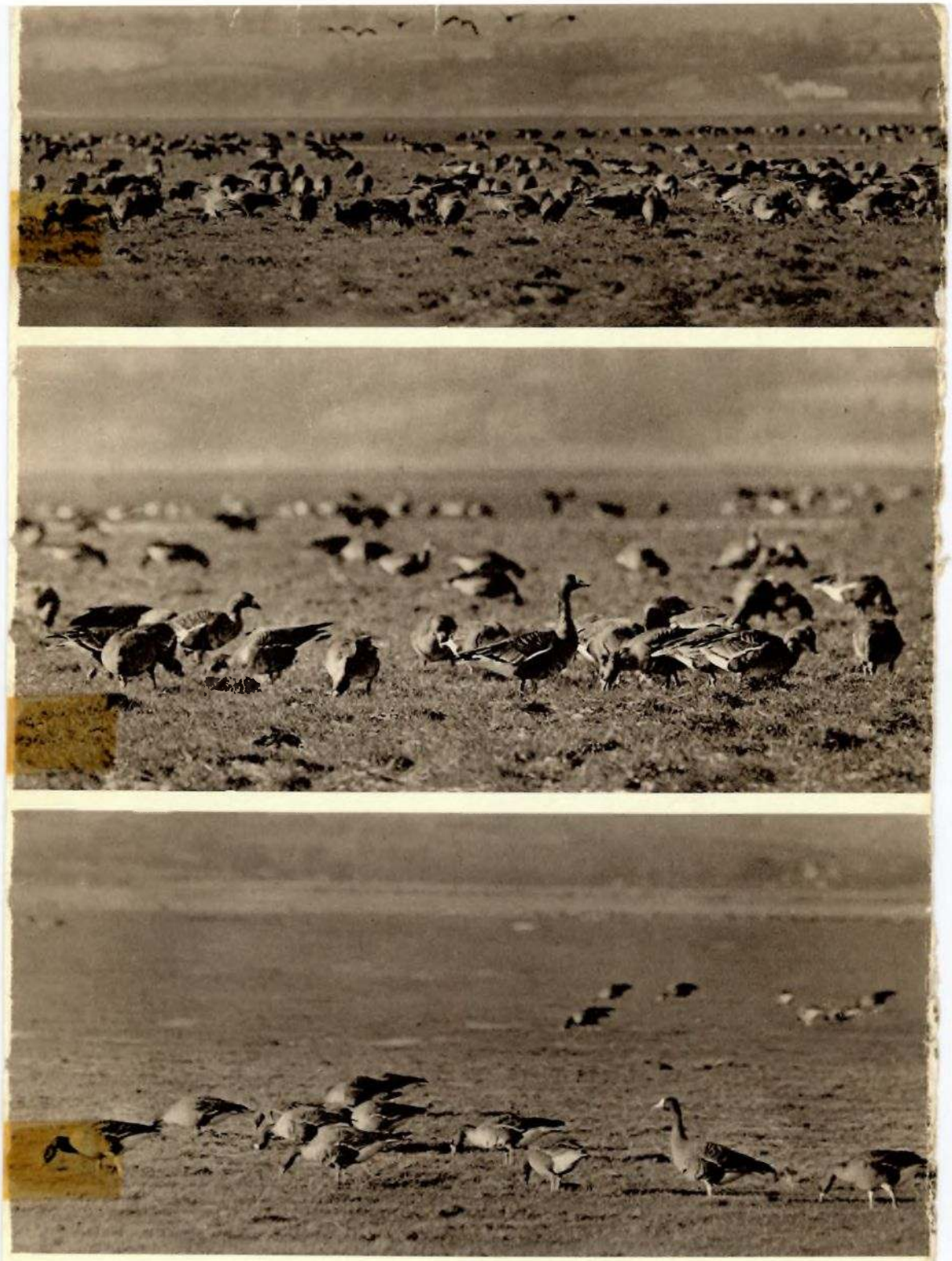
The Departure of the Geese

The geese normally leave during the second week in March, but so late and cold was the season that on 21st March 600 geese were still on the Dumbles. By 29th, eight Whitefronts were left—one adult and seven immatures—sitting placidly in the sun. Next day they too had gone.

Wild Geese had been on the New Grounds for just over six months and during that time, without disturbance to them, several hundred ornithologists had watched them from the Trust's huts—feeding, sleeping, preening, fighting, living their lives, often within a few yards of their most feared enemy but quite unaware of his proximity.

In the building of the huts various aspects had not been foreseen. We had not expected busloads of members of other Societies to come to watch the geese with only an hour and a half at their disposal. Some huts would hold

(*Continued on page* 41)



Sport & General
Philip Wayre

Wild white-fronted geese feeding on the Dumbles.

Sport & General

Above : About 180 geese feeding far out on the Dumbles.
Below : Part of the main flock of whitefronts photographed from the central observation hut.

P. Wilkins

Whitefronts settling in front of one of the observation huts.

Sport & General

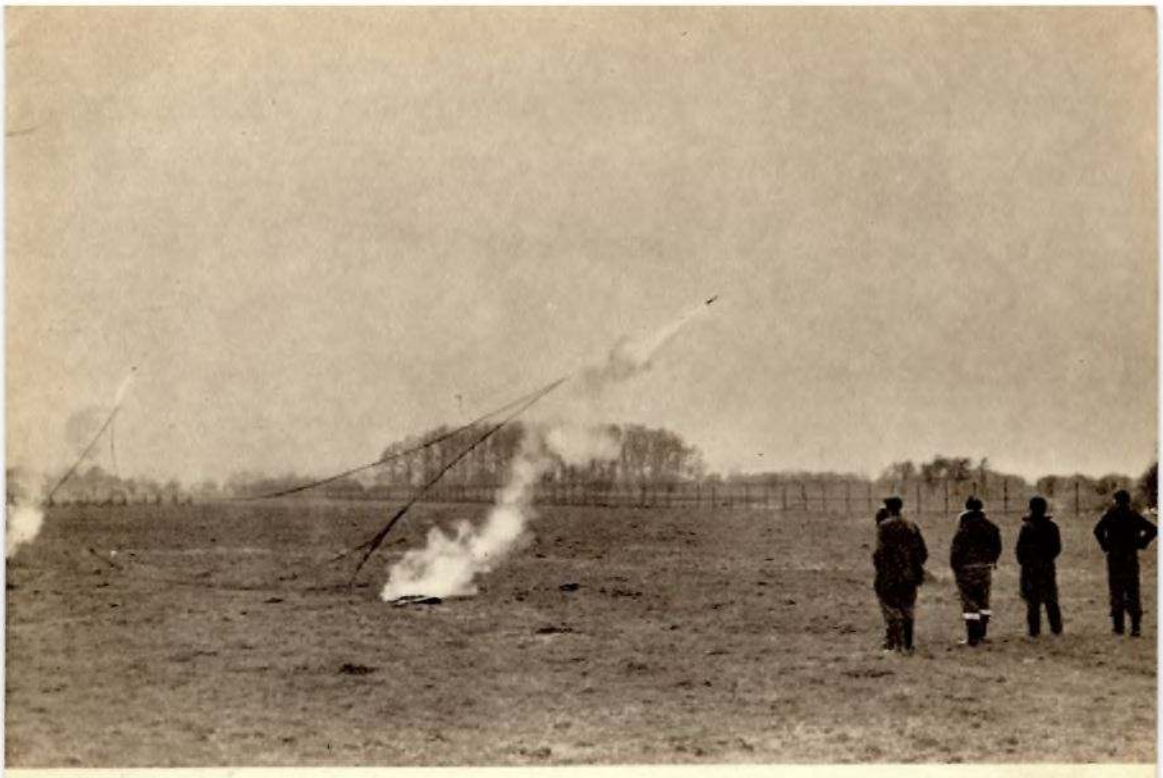
Whitefronts flighting in to feed on the Dumbles.

Sport & General

Geese rising from the Dumbles in alarm, a movement which every precaution is taken to avoid.

Philip Wayre

Wild whitefronts on the Dumbles.



Practice throw with the rocket net.

Two seconds after the rockets were discharged in the first throw ever made at wild geese with this net.

Thirty-one geese caught with the first throw of the rocket net.

The work of disentangling the captured geese.

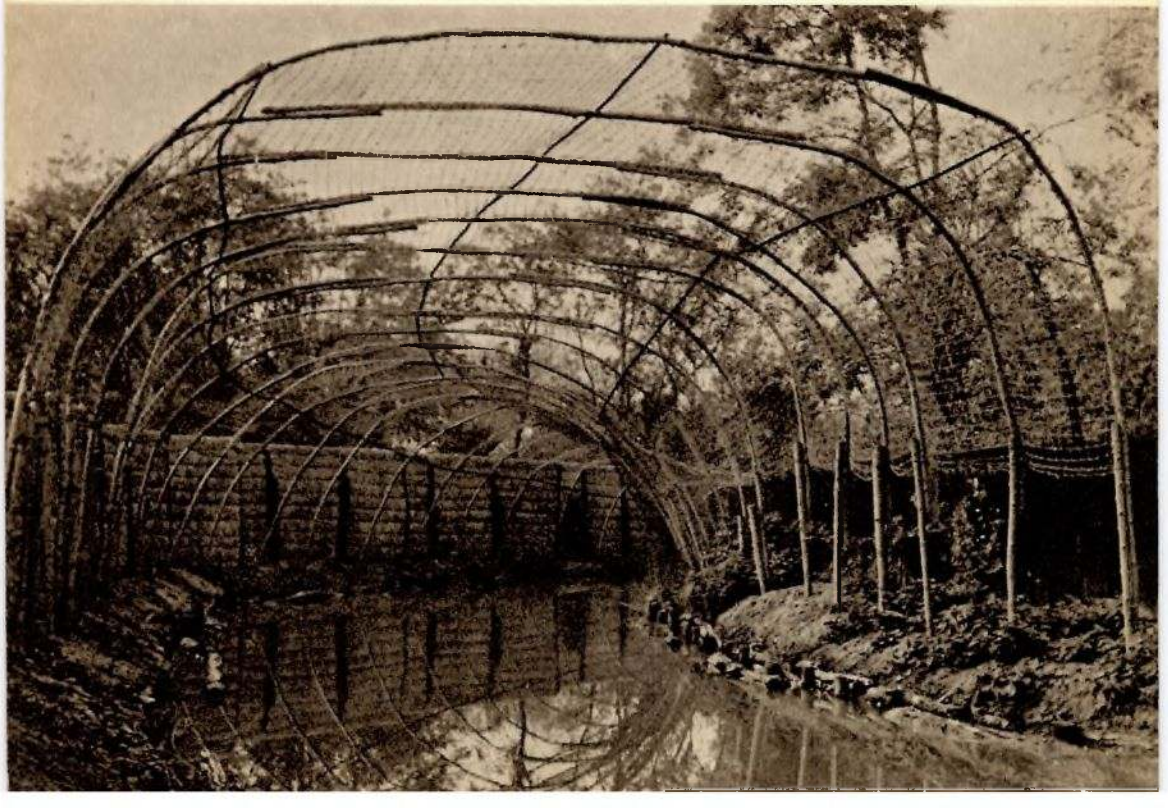
Mr. Keith Shackleton extricating a goose to which the ring has already been attached.

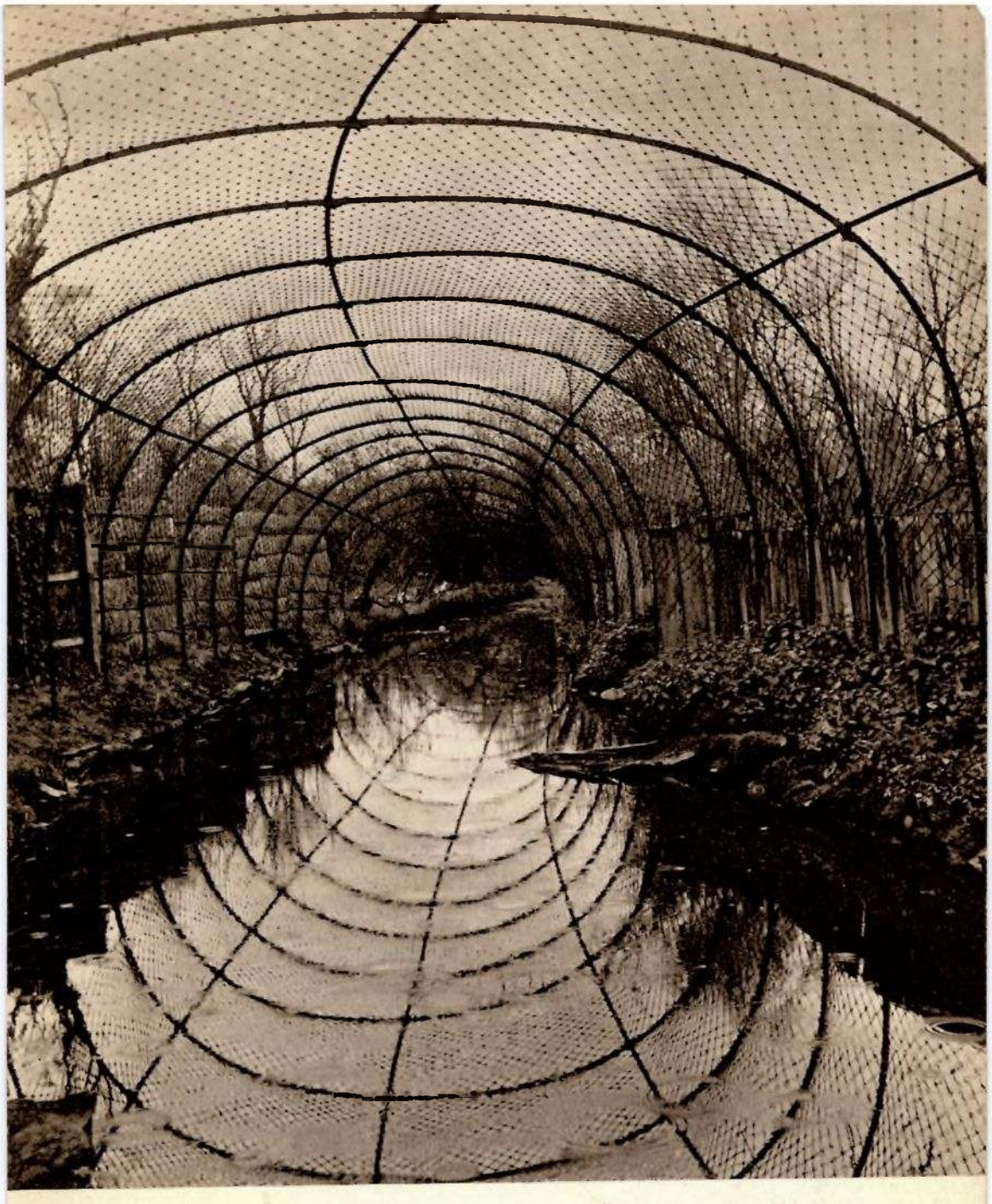
Miss Peggy Cameron, one of the Trust's assistant wardens, with a goose ready for release.

Releasing the ringed geese. Note ring on right leg of leading bird.

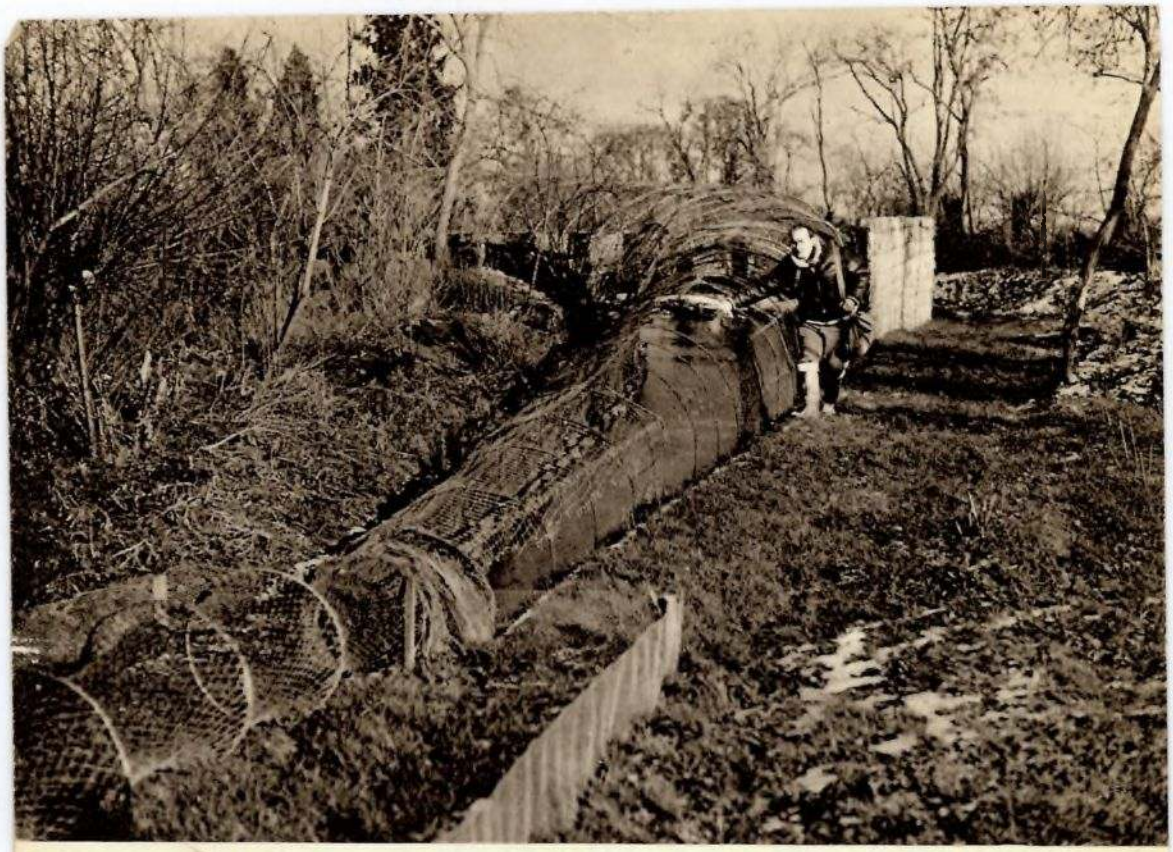
The back of one of the observation huts.

The newly-constructed south pipe of the decoy.





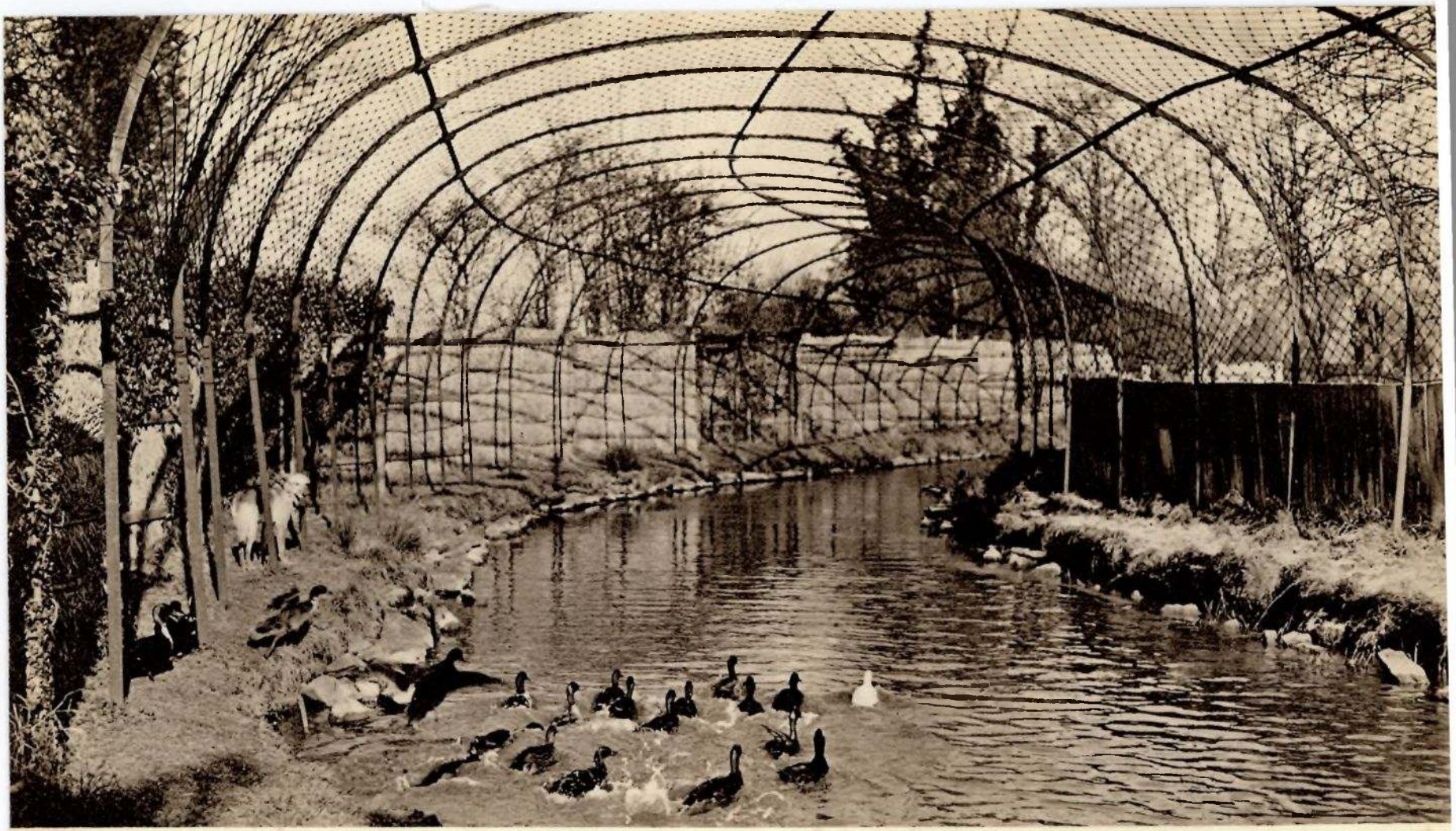
" Come into my Parlour "—the north pipe.



Sport & General

Driving the ducks into the tunnel net.

Peeping at the new south pipe.



Sport & General

The tame ducks follow the dog into the north pipe of the decoy because they know its appearance means food. The wild ducks follow out of curiosity and bravado.

The Assistant Curator with the birds in the Rushy Pen.

A party among the birds in the Rushy Pen. From left to right: Ross's Snow, Brent, Chilian Pintail, Black Swan, Egyptian, Spur-wing, Blue Snow, Greater Snow, Bean, Abyssinian, Emperor, immature Blue Snow, Swan Goose.

The Times

The Director with the birds in the Rushy Pen.

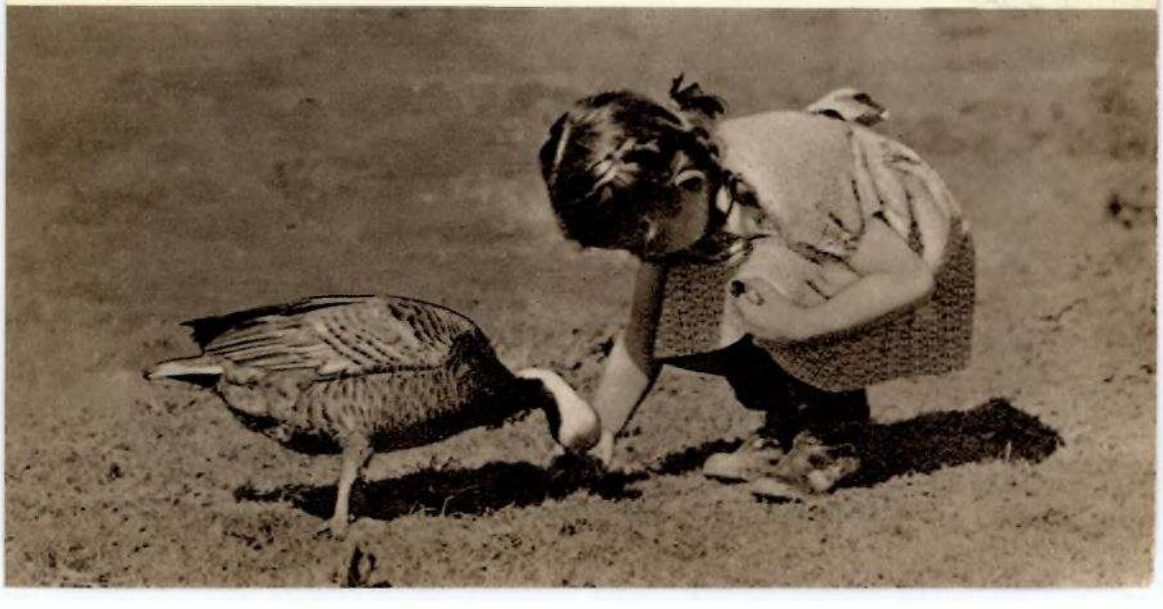
Sport & General

The Director feeding the full-winged Greater Snows.

Sport & General

The Greater Snow Geese, with the warden's bungalow in the background.

Miss N. Scott feeding an Emperor Goose.



Four greedy young Eider ducks.

Feeding some of the 70 species of waterfowl in the collection. Barrow's Goldeneyes, Carolinas, Mandarins, American Wigeon, Bahama Pintail, Chilian, Cape and Puna Teal, Whitefront and Lesser Whitefront in background.

Emperor Gosling
(Anser canagicus)

Down grey & white
Bill black with paler tip.

Leg & foot greenish-greyish-buff.

Greater Snow Gosling.
(Anser hyperboreus atlanticus.)

Down pale greenish-yellow. Forehead bright yellow
Bill blackish, becoming pale & pinkish at base.

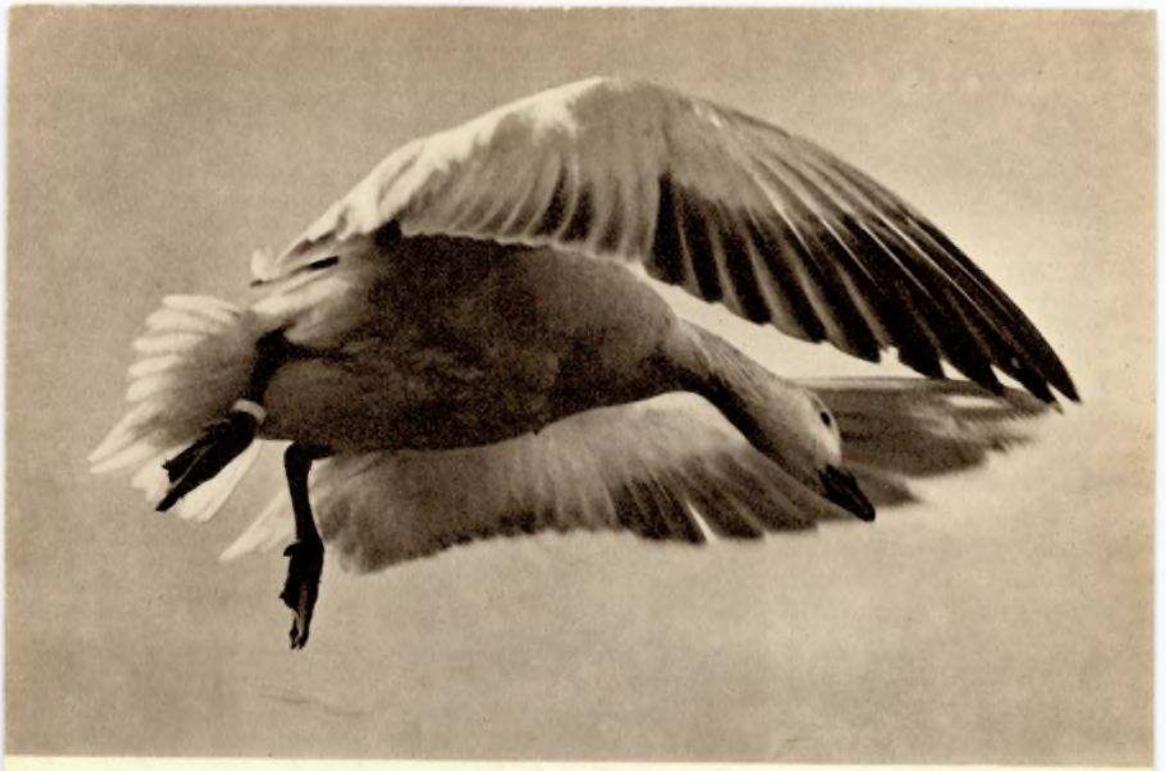
Leg & foot greenish grey

Ross's Snow Gosling
(Anser rossi)

Down pale silver yellow.
Bill dark slate.

Leg & foot pale greenish grey.

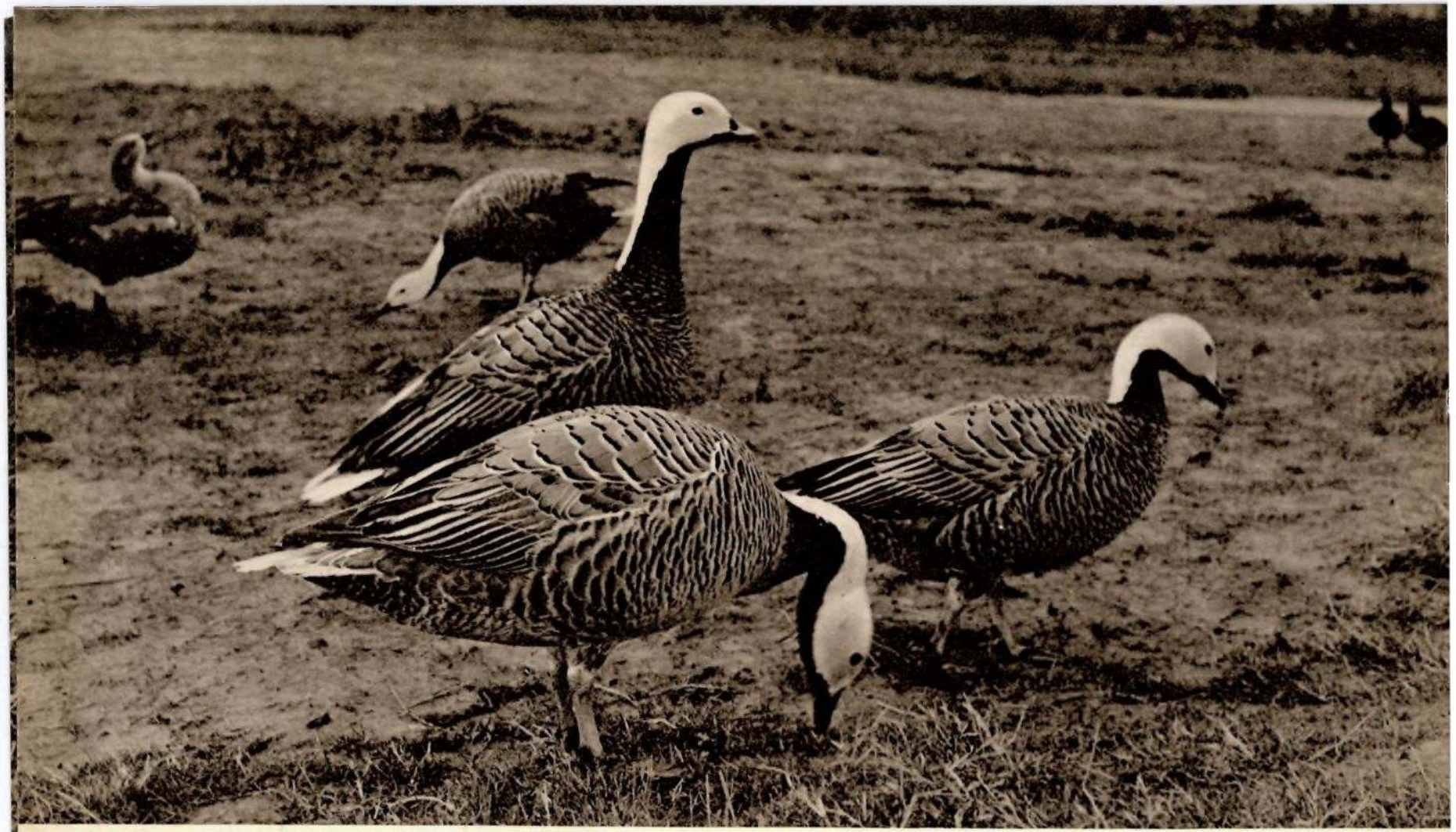
Peter Scott.



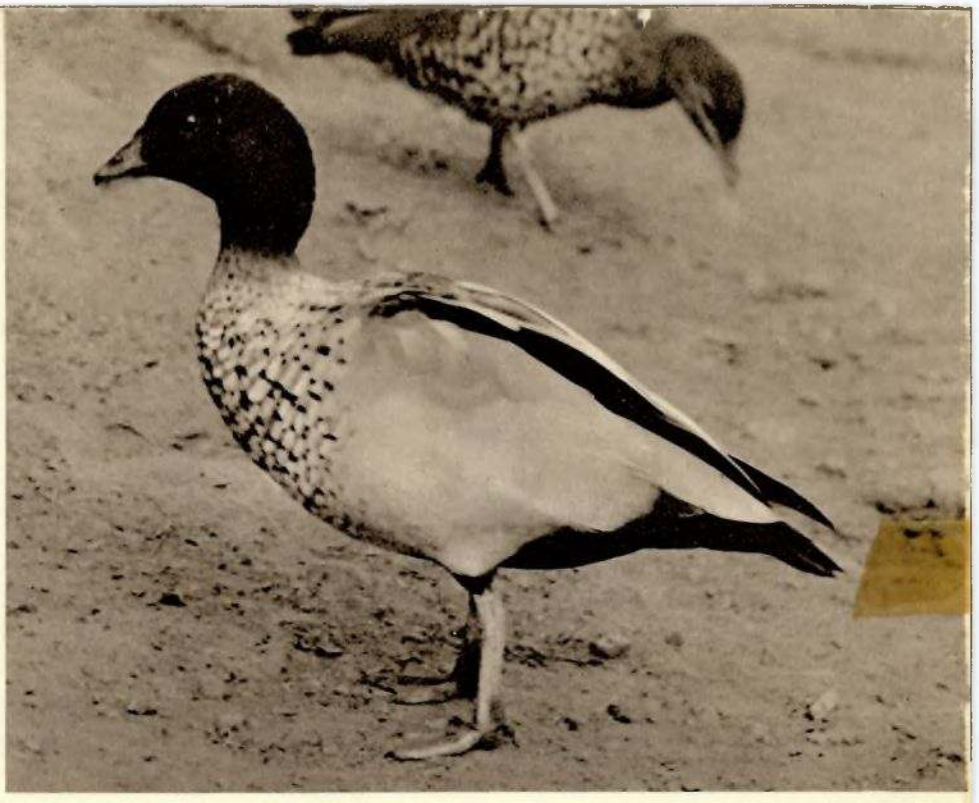
Sport & General

One of the full-winged Greater Snow Geese (*Anser hyperboreus atlanticus*).

Red-breasted Geese (*Branta ruficollis*) from Siberia.



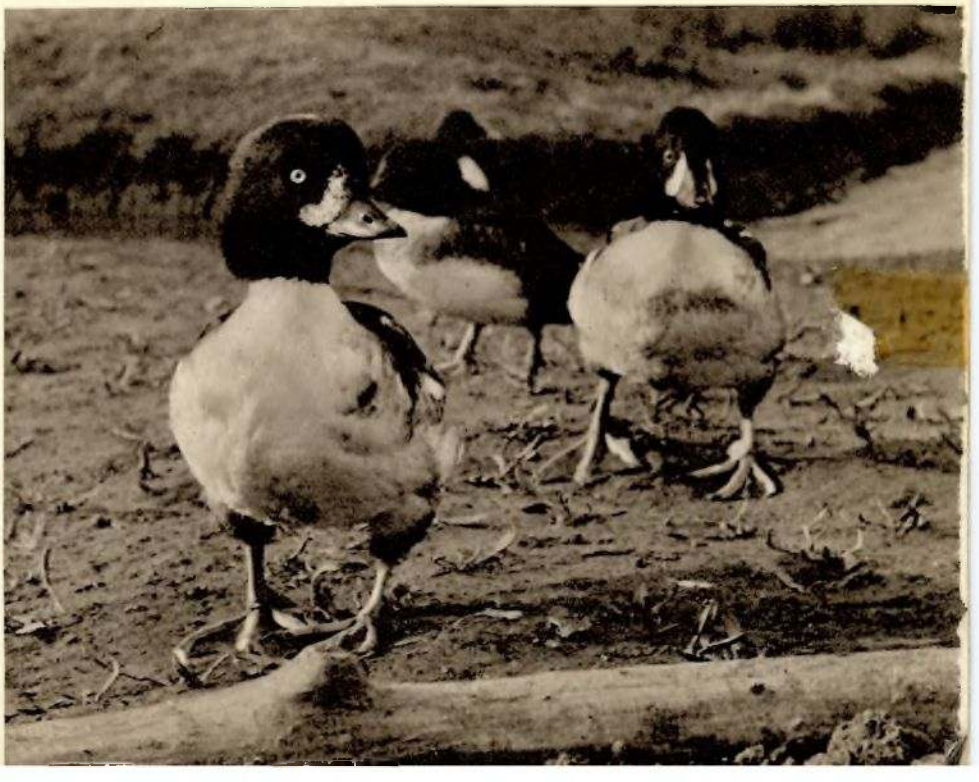
Emperor Geese (*Anser canagicus*) from Alaska.



John Berry

Maned Goose (*Chenonetta jubata*) from Australia. There are only three of these birds in Europe, a pair being at the New Grounds.

Young Barrow's Goldeneyes (*Bucephala islandica*) hatched at the New Grounds from eggs sent from Iceland.



five people only and the visitors had to be hustled in in relays. We had not expected the geese to be frequently less than ten yards away, and we had built our huts a little too low. When the geese were really close they went out of sight under the bank in front of us. We found also that the pitch of the roof had not left space enough for a long telescope to be used in some sectors in some huts. And so on.

During the summer of 1947 some new and superior huts were built and a second storey was added to the central pillbox—a special vantage point in which to site a large binocular telescope which had lately been acquired for the Trust.

All was now in readiness for the much greater number of visitors who came to see the geese during the autumn and winter—by car before the basic petrol ration was abolished and in busloads afterwards.

Season 1947–48

The first geese arrived on 24th September—three days after the first appearance the year before. It was a gaggle of 20 Pinkfeet. The numbers increased until on 6th October there were 121—all Pinkfeet except one Whitefront. At that time we had four full-winged Pinkfeet and one Whitefront which had been caught the previous winter, feather cut, and had lived in the enclosure with the other tame geese. After the moult when their pinions had grown again these five used to fly out to the Dumbles to feed. The tame Whitefront—a female—took up with the new Whitefront—a gander—on the day of his arrival and brought him into the pen in the afternoon. We could walk within ten yards of him in the pen and he showed no signs of alarm whatever, so great was the confidence given by the nonchalant behaviour of his new friends in the presence of mankind.

The first Whitefronts to arrive in any numbers were some 60 on 13th October (by which date in the previous year there were already 295 Whitefronts).

The Pinkfeet remained steady at 120 from 6th October until 20th November, when their numbers began to decrease. By 1st December, 29 were left and by 11th December, ten. By 13th only one Pinkfoot was left—a stray one firmly attached to the Whitefronts. It arrived with them and did not ever consort with the rest of the Pinkfeet while they were still there. (This bird subsequently joined up with the tame Pinkfeet in the New Pen and remained for some weeks. Later it returned to the Dumbles, and two other Pinkfeet also appeared. One of these three was caught in the rocket net.) The numbers of the Whitefronts increased much more steadily than in the previous year as is shown in the following comparative table :—

	Pinkfooted Geese		Whitefronted Geese	
	1946–47	1947–48	1946–47	1947–48
September 21st	11	..	..	..
,, 24th	..	20	..	..
,, 28th	..	42	..	..
,, 30th	40	89	..	..
October 6th	50	120	19	1
,, 13th	79	120	295	60
,, 14th	..	120	..	110
,, 19th	..	119	..	107
,, 20th	83	..	293	..
,, 25th	..	119	..	253
,, 26th	..	123	..	530
,, 31st	..	119	..	704
November 10th	97	..	302	..
,, 16th	..	117	..	754
,, 23rd	..	67	..	757
,, 24th	72	..	364	..
,, 30th	..	29	..	787
December 6th	..	29	..	1085
,, 8th	0	..	443	..
,, 11th	..	10	..	1260
,, 14th	0	1	1000	1314
,, 15th	..	..	2800	..
,, 19th	0	1	..	1986
,, 20th	..	..	3000	..
,, 22nd	4	..	4000	..
,, 26th	..	1	..	2500
,, 27th	..	1	..	3000
,, 30th	3	..	4200	..
January 1st	..	1	..	2800
,, 4th	1	..	..	..
,, 5th	..	..	2000	..
,, 7th	..	..	2000	..
,, 8th	..	3	..	2800
,, 11th	..	1	2800	..
,, 12th	20	..	4000	..
,, 16th	0	..	3300	..
,, 20th	..	1	..	..
,, 25th	..	..	1700	2300
,, 26th	..	..	..	2000
February 1st	..	..	1912	1300
,, 7th	..	..	1700	500
,, 8th	..	..	..	1050
,, 10th	1	..	..	..
,, 16th	..	..	900	1240
,, 17th	..	..	..	1300
,, 18th	..	1	..	1300
,, 21st	..	..	500	900
,, 22nd	..	..	..	600
,, 29th	..	2	..	1411
March 1st	..	..	2000	..
,, 2nd	..	..	2500	..
,, 6th	..	2	..	1600
,, 8th	..	..	..	1500
,, 9th	..	..	1000	900
,, 11th	..	..	..	200
,, 12th	..	..	..	60
,, 13th	..	2	..	20
,, 15th	..	1	1400	21
,, 16th	..	..	1800	..
,, 17th	..	1	..	21
,, 18th	..	..	..	0
,, 21st	..	..	600	..
,, 24th	..	..	50	..
,, 29th	..	..	8	..
,, 30th	..	..	0	..

Note.—Although the figures for 1948 do not properly belong to this report they have been included for completeness.

A careful study of these flocks was made and detailed counts of families and immature birds were recorded. For instance, when there were 2,000 geese on the marsh it was found that 520 were young birds of the year—26 per cent. The average size of family appeared to be 3·6, which meant that 144 families were present. If both parents still survived, as in most cases they seemed to have done, only 288 of the 1,480 adults were accounted for. The remaining 1,192 were either non-breeding birds or had lost all their young.

Supposing this to be an average season with 520 grown young, then the flocks should contain 520 1946 birds and 520 1945 birds, less losses. As geese do not breed till they are three years old these 1,040 birds (less losses) would form the bulk of the 1,192. The remainder are presumably barren pairs or pairs which have lost all young. Of course, this may not have been an average season, and in any event it probably differed in its breeding results from 1945 and 1946.

These and many other similar figures are not of very much use by themselves, but over a period of years might lead to most interesting conclusions. The addition of ringing on a large scale which it is hoped to develop at the New Grounds will greatly increase our understanding of the influences governing the annual fluctuations in numbers and the general decline amongst most species of wildfowl.

THE ROCKET NET

One of the objects of the Trust as laid down in the Rules is " the ringing of the wild geese on the marshes."

Although this Report is primarily concerned with the activities of the Trust during the year 1947, it seems that such an important development as the first attempt with the Trust's new rocket nets for ringing the wild geese should be included although it took place early in 1948, so that Members can be informed of the latest developments at the New Grounds. The following account of the first trial has therefore been prepared by the Director. It proved that great possibilities lie ahead in the field of ringing wild geese.

Preparation

We have never been able to settle who thought of it first.[1] We had tried, with only moderate success, to catch geese with a net propelled by springs. We had found that the springs did not propel it far enough. We thought that rockets would propel it farther. And so during the summer we approached the old-established firm of Messrs. Schermuly Brothers, the inventors of the Schermuly Pistol Rocket Apparatus for saving life at sea. The nets, of various sizes, some made of flax and some of cotton, were netted to order, some by another old-established firm, Messrs. Gassons of Rye, and some by Mr. Baines, an elderly net-maker who has for many years made all the nets for Borough Fen Decoy.

On a sunny summer day the first tests were carried out in a grassy meadow at the proofing grounds of Messrs. Schermuly Brothers at Newdigate in Sussex, and we found that a net could be thrown to cover an area of 25 yards square. We found also that if any grass or thistles got into the net, it would not throw nearly so well ; and this turned out to be our most serious problem. But, all the same, if the net could be carefully furled in a suitable place frequented by the geese, and the rockets, satisfactorily hidden, could be fired electrically with a length of flex leading to a hide, we believed that we had some chance of success.

When the first opportunity came to try the net in practice, the winter flock of Whitefronts on the estuary was smaller than usual. Only about 1,300 geese

[1] The Director and our Council Member Mr. James Robertson Justice have both staked claims for their inventive genius. The idea seems to have had its origin during the war years ; perhaps two simultaneous origins.

down into the three-sided square of wire netting and barrage balloon fabric while the other two[1] hid themselves in the ditch about 50 yards away.

An Advancing Phalanx

About 300 geese came straight for the 100-acre and settled in the middle of the bare part of the wheat field. This was excellent, we thought, for they were directly down-wind of our net and seemed likely in a few hours to feed up to it. Meanwhile more geese came slipping in over the belt of trees in the background—skein after skein in an almost unbroken stream. They came with great confidence, flying low and setting their wings as soon as they reached the edge of the field. By the time that the sun rose, oval and orange red behind us, there were over a thousand geese feeding in a tight pack in front. Then came a startling development. A family party of geese rose from the great crowd and flew low towards the corner of the field—our corner. They settled about 40 yards in front of the net. They were followed by others, until a regular flight began. Bunch after bunch swept in and pitched in the ever-thickening crowd in front of our net. So far everything had gone unbelievably right. For the next hour we lay breathlessly in the hide as the phalanx of geese advanced into the " catching area." They were ten yards from the little clay cairns—five yards—two yards—passing between them, and then the cairns were swallowed up in the milling crowd of geese which advanced still closer to the net. Was all in readiness? The wireless battery, the leads—the leads, where were they? They were nowhere to be seen. Two feet of the end of the flex had been pulled under the edge of the hide in that hurried last minute but it was not there now. We peered out through the observation slit in the front of the hide. The black shiny insulated wire led towards us, but just outside the hide it turned off at right angles. While we had been camouflaging the hide someone must have kicked away the end of the lead ; it was outside the hide, on the same side of it as the geese. What were we to do? Slowly and dexterously we lifted a corner of the hide and reached out towards the lead. My fingers closed over grass stems, over a bramble, but not over the missing flex. One of my companions squinted down through the observation slit. " Another four inches and you'll reach it." At last I felt the flex and pulled it into the hide. The crisis was over, and the geese were another five yards closer to the net.

The slit in the hide was at a very awkward height, so that one could only use glasses through it by supporting oneself on the other arm, and then only for short periods. During one of these quick looks, however, I noticed a Pinkfoot, no doubt one of the three young birds which we have observed scattered among the Whitefronts all through the winter. As usual he was at the edge of the flock and in the forefront of those which crowded on towards the net.

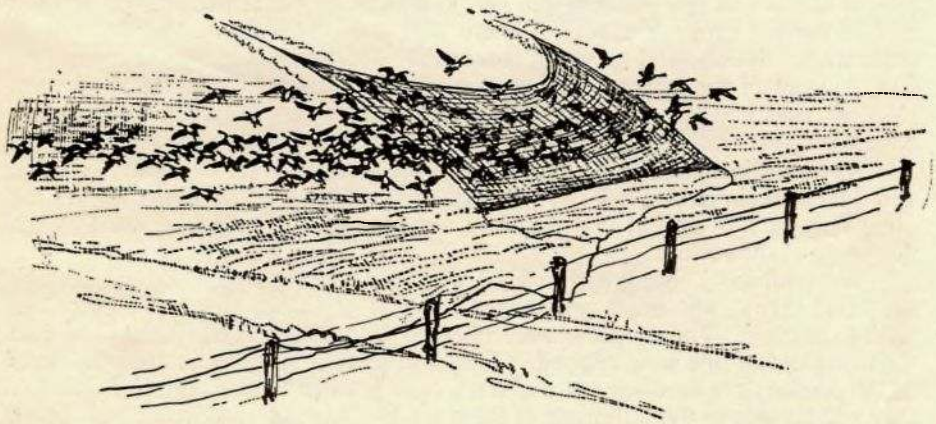
Now or Never

Now was the critical time. At what distance would the geese first see and keep away from the net? Would they turn about and walk quickly away from it once they had detected its presence? We watched anxiously. A feature of the advance of a flock of wild geese when feeding is that from time to time the more powerful and influential geese drive others away from them ; and so the leading edge of the flock keeps bulging where a bird or a family has run a few paces forward at the close approach of a quarrelsome gander. At length there came a time when the fugitive birds would no longer run forward. If pursued they turned and threaded their way back through the flock. They would not come nearer to the net than about four yards from it. The crowd in the " catching area " could not get any thicker. It had reached saturation point.

[1] Miss Eunice Overend—Assistant Curator.
Miss P. Talbot-Ponsonby—Assistant Secretary.

It was now or never. Mr. Harris got ready with his camera and Mr. Schermuly with the ends of his flex.

" All right, let her go ! " The circuit was made and the rockets fired ; simultaneously the whole flock of 1,300 geese rose into the air with the combined roar of wings and of voices. We all jumped up to watch. As the cloud rose we could see that a small patch of flapping geese remained on the wheat field. We had made a catch. I set off to run towards the net, straight down by the fence to ford the flash with my high boots on, whilst the rest came round by the shallower crossing farther up. I think the geese were more alarmed by the sudden appearance of seven people careering across the field in scattered formation than they were by the discharge of the rockets themselves, and on any future occasion we have planned to remain hidden until the uncaught birds are well clear.



As I came to the net I made a quick count, 32 geese. We had succeeded. We had made the first great catch of geese alive for ringing. It was a satisfying moment. Then began the laborious task of extricating the birds from the net. Almost before we had started one bird, however, extricated itself and flew off. But we lost no more. The Assistant Curator, armed with rings and pliers, and the Assistant Secretary, with notebook and pencil, started at one end of the net and ringed half the birds. Mr. Schermuly and I started at the other end putting the extricated birds into the sacks we had brought for those birds required for the collection, and Keith Shackleton and Peggy Cameron started to disentangle the ringed ones. Mr. Harris hovered round taking photographs. About the third bird at our end of the net turned out to be the Pinkfoot which we had seen advancing into the " catching area." Although he was at the end which was being kept for the collection, we had no need of more Pinkfeet and so he was ringed and released. Some of the birds were released one by one, but sometimes they were released in couples, which we thought to be the better way, as the two then flew off together. Fairly soon it became apparent that many of them could not be extricated from the net without cutting some of the meshes. It was astonishing to what extent the birds had become taffelled up in so short a time. It was astonishing, too, how docile and resigned the geese seemed to be, and how little they struggled while being extricated. One old gander was full of spirit and continuously pecked my knee while I was disentangling his neighbour and finally himself. We ringed several young birds including a family of five with their parents, but we made an error in not recording the breast markings of the adult birds we ringed. In this way it would have been possible to have known the ring numbers had we seen the birds later, and to have identified each without the necessity of recapturing it, for the

Whitefronts' black bars are, like finger prints, of different pattern in each individual adult.

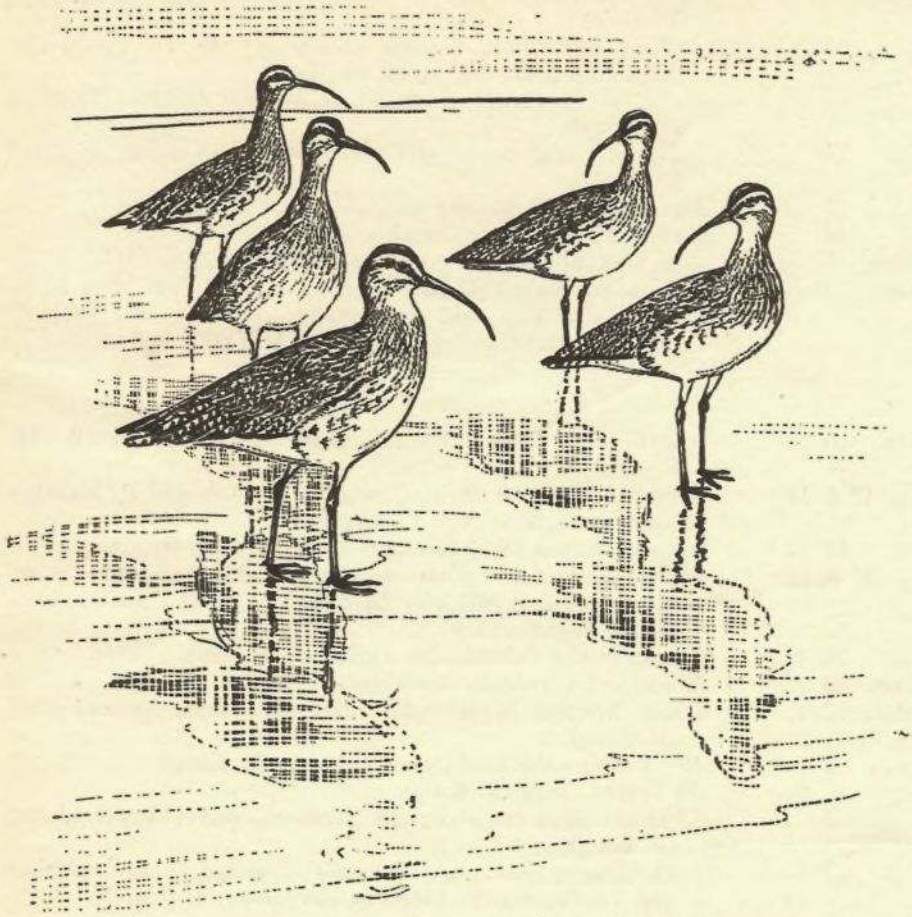
We had pulled the net at 8.40 a.m. and it was half-past nine by the time we had finished. Of our 31 geese, 15 Whitefronts and one Pinkfoot had been ringed and released at once, and 15 other Whitefronts had been put into the sacks for transporting to the pens. As soon as the work was completed we made a careful survey of the way in which the net had thrown. As on the previous evening, the rocket corner had gone over much farther than the centre of the net. In the middle, however, more than half of its 25 yards stretch still remained neatly furled as we had laid it before dawn. Fourteen yards of net still lay in a heap and only eleven yards had gone forward to catch our 31 geese. Had the throw been perfect at least twice that number would surely have been caught. But another snag had appeared. All the geese seemed to have been caught in the first few yards of the net, and those in the centre seemed to have pushed the net back up wind. It seems that however free one may become of grass stems, thistles, and lumps of frozen clay, the throw may yet be spoiled by one or more of the quarry. We are inclined to think that had the wind been stronger, and had the rockets been set to fire more vertically, the result might have been better, although as it was we were far from disappointed.

As we walked back to the hide some of the geese were returning to the fields, and a large skein circled low over the 100-acre. They did not settle, but on the other hand it was evident that they had not been disastrously frightened by the discharge of the rockets.

We returned home greatly elated with our success which, in spite of the net's bad throw, was much greater than any of us in our heart of hearts had been expecting. The 15 geese were released from their bags, ringed, and had the primaries of one wing clipped. They will remain in the pens until the stubs of the feathers are moulted out and fresh ones grow in the autumn. Thereafter they will be able to fly, but many of them are likely to stay and make their home with the Trust's collection in the paddocks round the decoy.

Soon after midday the main lot of the geese were feeding on the Dumbles at the Purton end, and we went to look them over. A new game had been discovered—hunting the rings—and already at the first glance we were able to pick up four of the birds we had had in our hands only a few hours before. Since that day it has been possible on all occasions to find one or two of the ringed 16, with the numbered and addressed aluminium ring on their right leg often shining brightly in the sun. On one occasion a bird was so close (about six yards) that with the binoculars focused right down we could read the number on the ring.

That is the story of our first attempt with the rocket net. It is only the beginning, but it may well lead to a new understanding of the migration of wild geese. Some may feel that this method could become a danger to the birds if it were attempted by irresponsible people catching for the markets. I do not believe this danger exists. The technical difficulties, the complicated equipment, the number of people required to set out the net, the great expense—all these are features of an attempt to catch geese *alive*, but unnecessary when taking geese for market. A fowler would be far better advised to set out a punt gun than a rocket net if he needed wild geese for the poulterer's shop. The idea of a hidden punt gun for wildfowl is nothing new. It is a method much practised in France, but in this country it has been largely discouraged by public opinion and the national conception of sportsmanship. It does not constitute a danger to our wildfowl and it is a vastly simpler and more efficient way of taking geese—unless your object is specifically to take them alive. It seems unlikely, therefore, that the rocket net will be exploited. Meanwhile, for ringing it is a modern method which may show us how best to help our European wildfowl in their struggle for existence in the modern world.



NOTABLE RECORDS OF OTHER BIRDS

1946

Summer of 1946	Brood of Hobbys (*Falco subbuteo subbuteo*) reared locally—2 young.
Aug. ..	Many Whimbrels (*Numenius phæopus phæopus*) on passage in small parties.
„ 11 ..	3 Turnstones (*Arenaria interpres interpres*) (B. King)—first New Grounds record.
„ 12 ..	About 400 Knots (*Calidris canutus canutus*) in one flock—the largest number yet seen on Severn—also 50 Sanderlings (*Crocethia alba*) (H. H. Davis).
„ 31 ..	3 Ruffs (*Philomachus pugnax*) (R. H. Poulding and Clive Wilson).
Sept. 1 ..	12 Black-tailed Godwits (*Limosa limosa limosa*) (H. C. Playne and H. H. Davis).
„ 1 ..	Greenshank (*Tringa nebularia*) (B. King and Clive Wilson).
„ 1 ..	12 Black Terns (*Chlidonias niger niger*) (B. King).
„ 14 & 15	2 Little Stints (*Calidris minuta*) (B. King and R. H. Poulding).
„ 15 ..	10 Curlew Sandpipers (*Calidris testacea*) (P. Scott).
„ 29 ..	5 Little Stints (B. King and H. H. Davis).

Oct. 5 ..	10 Bar-tailed Godwits (*Limosa lapponica lapponica*) (R. H. Poulding).
„ 5 ..	2 Grey Plover (*Squatarola squatarola*) (R. H. Poulding). Regularly present in small numbers.
„ 13 ..	Party of 10 Lesser Redpolls (*Carduelis flammea cabaret*) (B. King).
„ 14 ..	2 Drake Common Scoters (*Melanitta nigra nigra*) on river (P. Scott).
„ 20 ..	Hooded Crow—staying till Nov. 10 or later.
„ 24 ..	2 Grey Plover (K. D. Smith and H. H. Davis).
Nov. 3 ..	Green Sandpiper (*Tringa ochropus*) (R. H. Poulding).
Dec. 2 ..	2 Whooper Swans (*Cygnus cygnus*) in flight over river bank (quite certainly wild swans, and too large and long in necks for Bewicks)—(B. King, H. H. Davis and others).

1947

Jan. 10 ..	100 Golden Plover (*Pluvialis apricaria apricaria*) (R. H. Poulding).
„ 12 & 13	9 Tufted Duck (*Aythya fuligula*) (J. S. Ash and P. Scott)—usually scarce at New Grounds.
„ 14 ..	Injured Gannet (*Sula bassano*) found on New Grounds.
„ 16 & 18	Iceland Gull (*Larus glaucoides*) on Dumbles. There is some possibility that this may have been a small Glaucous Gull (*Larus hyperboreus*).
„ 26 ..	Merlin (*Falco columbarius æsalon*) (J. S. Ash).
Feb. 23 ..	Woodcock (*Scolopax rusticola*) (P. Scott).
Mar. 2 ..	Lesser Spotted Woodpecker (*Dryobates minor comminutus*) (B. King).
„ 2 ..	50 Common Pochard (*Aythya ferina*) (B. King).
„ 2 ..	30 Tufted Duck (B. King).
„ 2 ..	53 Great Black-backed Gulls (*Larus marinus*) (Mostly adults) (B. King).
„ 2 ..	3 Goldeneye (*Bucephala clangula clangula*) (1 adult drake) and 1 ♀ Goosander (*Mergus merganser merganser*).
„ 10 ..	Adult ♂ Merlin (R. E. Alley).
„ 16 ..	Black-tailed Godwit on flood in Top new piece.
„ 30 ..	Green Sandpiper (H. W. Neal).
„ 30 ..	Oyster-catcher (*Hæmatopus ostralegus occidentalis*) (B. King) —uncommon so far up Severn.
„ 30 ..	Ring Ouzel (*Turdus torquatus torquatus*) outside decoy.
	Peregrine (*Falco peregrinus peregrinus*) present all winter.
May 11 & 27	1 Hobby (J. S. Ash and R. H. Poulding).
„ 11 ..	4 Bar-tailed Godwits (J. S. Ash).
	Yellow Wagtail (*Motacilla flava flavissima*), Whinchat (*Saxicola rubetra*), and Redstart (*Phœnicurus phœnicurus phœnicurus*) all bred in Rushy pen. 2 nests of Long-tailed Tits (*Ægitholus caudatus rasaceus*) in decoy in spite of hard winter. Tree sparrows (*Passer montanus montanus*) appear to be resident, but no proof of nesting.
Aug. 30 ..	Ruff (M. J. Wotton).
Oct. 12 ..	Peregrine reappeared.
„ 19 ..	5 Common Scoters (P. Scott).
„ 26 ..	2 Peregrines on Dumbles.
„ 26 ..	Marsh Harrier (*Circus æruginosus æruginosus*) on Frampton Gravel pits 2 miles north-east of New Grounds—remained till Nov. 16 or later.

Nov.	9 ..	Common Buzzard (*Buteo buteo buteo*) (B. King and others).
„	15 ..	Merlin (C. A. Norris).
„	16 ..	93 Pochard in one flock on river. Second flock also seen—estimated further 50–60.
„	30 ..	2 Siskins (*Carduelis spinus*) round decoy pool (W. B. Alexander).
„	30 ..	Several Lesser Redpolls—decoy (W. B. Alexander).
Dec.	3 ..	Raven (*Corvus corax corax*) tormenting geese on Dumbles. Geese ran together in bunches and Raven hopped after them, obviously delighted with the jest.
„	7 ..	Merlin on Dumbles (P. Scott and others).
„	21 ..	104 Pochard (J. S. Ash).
„	26 ..	Peregrine harassing geese in high wind. Geese ran together in bunches as when chased by Raven. They never flew more than a few yards, and were obviously not really frightened.

surprised feeding in the small end of the west pipe and in April a pair of Garganey (*Anas querquedula*) appeared on the pool. They were carefully watched and eventually swam into the west pipe. When they had been driven down the female escaped through a hole in the net, but the drake was duly ringed, bringing the season's total to six birds.

The way in which a lead of birds may accumulate is rather strikingly shown by the Teal which spent the day on the New Pool during November. On 9th November the work of repairing the decoy finally ceased, and on 10th one drake Teal spent the day on the pool. Thereafter the numbers increased as follows :—

10th	..	1 Teal (drake)
11th	..	2 Teal (drakes)
12th	..	3 Teal (drakes)
13th	..	5 Teal (drakes)
14th	..	5 Teal (drakes)
15th	..	9 Teal (8 drakes)
16th	..	11 Teal (8 drakes)
17th	..	20 Teal (14 drakes)
18th	..	27 Teal
19th	..	27 Teal

Then came heavy rain and a minor flood.

20th	..	10 Teal
21st	..	9 Teal
22nd	..	20 Teal
23rd	..	8 Teal
24th	..	6 Teal
25th	..	None.

During the long frost the pool was frozen over and no wild birds came at all, and by the time the weather broke most of the ducks had left the neighbourhood.

In the summer a third pipe—the South—was dug out and entirely new hoops, nets and screens were put up. Some work was begun on opening up the fourth pipe at the east side of the pond which should be completed in the coming summer and will be known as the House pipe. This is the traditional name in most decoys for the pipe nearest to the decoyman's cottage.

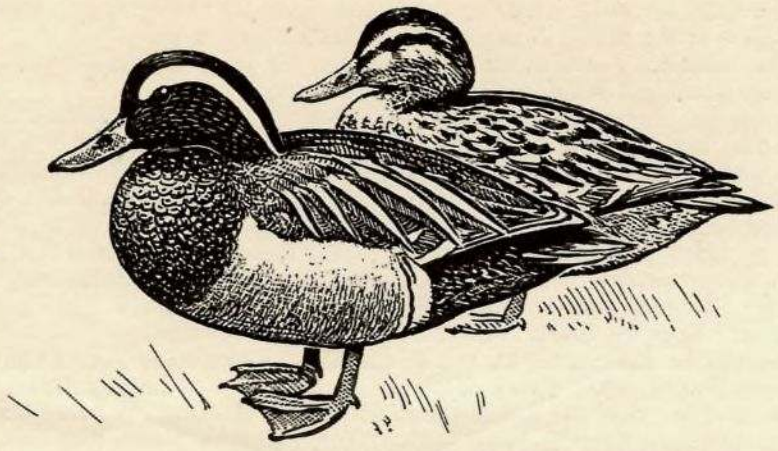
A dog was trained and call-ducks which had been presented by the Bristol Zoological Society were tamed and their young reared as decoy ducks. These birds were hybrid Mallard × Black East Indian so as to distinguish them from any wild Mallards which might frequent the pool.

The Start of the Second Season

On 23rd August a young female Garganey and a drake Teal were caught with the dog—our Curator Miss Overend's " Blondel." These birds were kept for the collection and the Garganey quickly became exceptionally tame.

The first birds to be ringed were four Teal caught on 17th September. At this time large flocks of Mallards were coming from the stubbles nightly to drink in the decoy, but never stayed by day. Some nights more than 200 birds arrived.

In September the Director visited Holland and was shown 22 different decoys in a week, several of them with annual takes of more than 10,000 ducks. In one, 40,000 Teal were said to have been caught in the season 1938-39. This insight into the finer points of decoying caused a change in the catching methods in the New Decoy soon after his return. Hitherto it had not been considered right to catch for less than a dozen or so birds and the only two catches made were regarded as mistakes undertaken in special circumstances. Now, however, it was decided to try to catch every duck which came to the pool—even one at a time.



The results were more satisfactory and by the end of October over 40 birds had been caught of six species—Mallard (*Anas platyrhyncha platyrhyncha*), Teal (*Anas crecca crecca*), Wigeon (*Anas penelope*), Shoveler (*Anas clypeata*), Pintail (*Anas acuta acuta*) and Garganey (*Anas querquedula*). On 22nd December a pair of Wigeon were caught which brought the total to 101.

It was still difficult to persuade the ducks to stay in the decoy by day, and there is no doubt that the extreme proximity of the farmyard with the tractors and lorries of the War Agricultural Executive Committee starting up and operating within less than 100 yards of the pool itself had much to do with this failure.

Results

The best catch was made by moonlight on 18th December when ten Mallards were run in the West pipe, and two in the South (although the drake escaped before being ringed). On 5th December nine Mallards were caught at daybreak, enticed in with the dog.

By the New Year, 106 catches had been made. But six of these were recaptures of birds which had been previously caught and ringed, and four had been kept alive for the waterfowl collection. Ninety-six ducks had therefore been ringed and six more in the previous season. Of these 102 birds nine have so far been reported.

These results are as follows :—

925951 Mallard ♀ ringed 10.11.46. Shot Boddington, near Cheltenham, 29.1.47.

925968 Mallard ♂ ringed 5.12.47. Shot Kerne Bridge, Hereford, 9.12.47.

926002 Mallard ♀ ringed 26.10.47. Shot Kings Stanley, Gloucester, " end November."

926004 Mallard ♀ ringed 26.10.47. Caught in Old Decoy 29.10.47 and released.

926014 Mallard ♂ ringed 20.12.47. Shot Longney, Glos., before 14.1.48.

904219 Shoveler Immature ♂ ringed 12.10.47. Shot Wexford Slob, Ireland, 3.12.47.

904221 Shoveler Immature ♂ ringed 12.10.47. Shot Josselin, Morbihan, France, 9.12.47.

904176 Teal Adult ♀ ringed 23.9.47. Shot near Whittlesey, Cambs, 17.1.48.

904222 Teal, Immature ♂ ringed 12.10.47. Shot at Framilode, Glos., " December."

The rings are those issued by the British Trust for Ornithology ; they bear the address of the British Museum of Natural History, London.

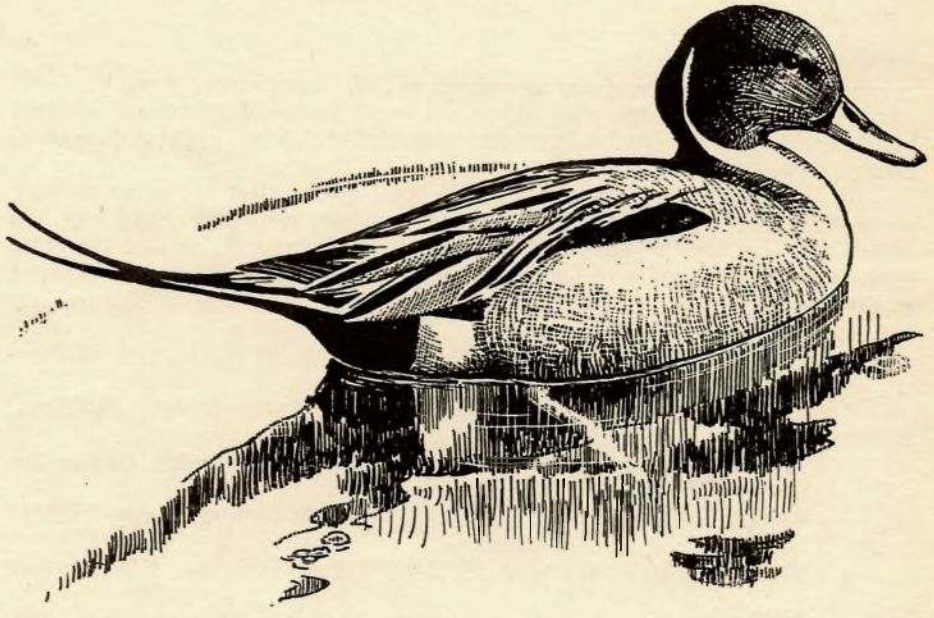
The Trust has joined in the overall scheme for ringing wildfowl sponsored by the International Wildfowl Enquiry Committee.

Although the current season's catch has not been outstanding,[1] it has shown that the decoy has great possibilities. During the summer it is hoped to rear a large number of call-ducks from pure Mallard stock which will replace the present half-bred Black East Indians. Experience in Holland has shown that wild ducks can be persuaded to remain on ponds even quite close to farmyards, provided a predominant number appear to be at ease. In a few weeks without disturbance the wild become accustomed to strange noises, learning from the tame. In turn they spread confidence among newcomers. At least 200 hand-reared birds are essential for the first nucleus.

In addition the fourth pipe will be completed and a small hut on stilts will be built to give Members a view of the pond without risk of causing disturbance.

Some of the trees are still too high to give the ducks a good access to the pool, and the low cover is being thickened by extensive planting of evergreen shrubs. It is hoped that the catch figures will once more exceed 1,000 in the season of 1948-49.

[1] The total catch from August, 1947, to April, 1948, was 133 ducks.



THE WATERFOWL COLLECTION

The accommodation for the tame waterfowl at the New Grounds consists, at present, of about 17 acres of low-lying rushy fields, which surround the duck decoy and through which runs a sluggish little stream or rhine. Round the perimeter an eight-foot fox-proof fence has been put up and ponds, fed from the rhine, have been dug in the various paddocks, with bulldozer and dragline.

Into the earliest of these enclosures the first birds were released on the 20th September, 1946. These consisted of about 50 geese which were lent to the Trust by Major Gavin Maxwell. The pride of this collection were two pairs of Emperor Geese (*Anser canagicus*). There were also such great rarities now as five Ross's Snow (*Anser rossii*), two Swan Geese (*Anser cygnoides*), a Red-breasted (*Branta ruficollis*), a Lesser Whitefront (*Anser erythropus*), a Magpie Goose (*Anseranas semipalmata*), and an Orinoco Goose (*Neochen jubata*) as well as a number of the commoner kinds—altogether some 18 species and sub-species. From then on the collection has steadily grown until today it consists of 440 birds of over 70 different species and sub-species.

As the enclosures are open to the public and as the objects of the Trust are scientific and educational, a small allocation of coupons for feeding-stuffs has been made but, luckily, the geese live mainly upon grass and the ditches grow a liberal supply of duck-weed, which forms a staple diet for many of the ducks.

Of the Director's fairly large pre-war private collection only a dozen birds survived. These, however, were sent to the New Grounds by those generous people who had been looking after them during the war. In addition a number of wild-caught birds of the commoner species were sent by wildfowlers from various parts of England during the winter.

Such were the beginnings of the collection which was placed under the loving care of the Trust's Curator, Mr. John Yealland.

During the long period of severe weather at the beginning of 1947 feeding was a difficult problem because the grass was snow-covered for so long, but, in spite of that, losses were very small. A Maned Goose (*Chenonetta jubata*) which died on the night of the lowest temperature was the only casualty directly attributable to the hard winter.

The female Magpie Goose and the female Orinoco (both species which feel the English winter) were shut up in a small thatched hut during the worst of the cold, and so well did they come through that the Orinoco made a nest in the hut and the first egg was laid on 1st April—only three weeks after the bird had been given the run of the whole pen. Eight eggs were laid but were infertile, of course, as there is no male of this species in Europe. We had been hoping to obtain a male from America before this breeding season, but meanwhile an accident occurred to her in the autumn when her left leg was dislocated, the bone breaking through the skin. For some weeks it was in plaster but she has made an excellent recovery and now walks with only a slight limp. An interesting feature of the Orinoco's nest was that the female Magpie Goose, who is an inseparable companion, shared the incubation of the eggs. Since the eggs were infertile the two birds were given two Mallard's eggs to hatch. Only one hatched and did not survive very long as it could not keep up with its long-legged foster mother. The bird has nested again in 1948, but she still has no mate.

The adults had previously always been feather cut and it was interesting that they are still considerably less expert at flying than their offspring. When their wings first grew they were surprisingly bad at it, and commonly tried to make down-wind landings, with disastrous results.

They did not normally fly far from the New Grounds, but early on, soon after they had learnt to fly, the four adults (as there then were) were blown up to the canal by a wind. One was caught up and brought back, a pair flew back on their own, but the fourth remained absent and was lost. Two days later the bird, which was ringed, was deliberately shot by a village youth who knew well enough where it had come from. He was prosecuted for larceny, pleaded guilty and was fined £5 and costs. He has since joined the Trust. Since then the full-winged Snow Geese have never strayed. They fly round daily looking very beautiful and free but they always settle again in the pen. Often they fly across the pen at feeding time and settle at one's feet.

Four Pinkfeet grew full wings in July and used to fly out to the Dumbles to feed, taking a full-winged Whitefront with them. The origin of this Whitefront was obscure as the register showed eight pinioned Whitefronts, yet this bird was the ninth and unpinioned. We were never able to discover how it got into the Rushy pen, but it had evidently moulted out there. This was the bird which brought a wild male into the pen, as described on page 41.

Three of the four Pinkfeet gradually joined up with the wild flock during October, but the fourth remained paired to a pinioned female and settled down in the pen.

Another full-winged bird was a Greylag (called Mabel) who was tame enough to stand on one's hand while one raised her from the ground. When she had finished feeding from the other hand she would fly down to the ground. Unfortunately she flew into the Egyptian Goose's (*Alopochen ægyptiaca*) pen and before she could go elsewhere she was so badly mauled that she died next day. Mabel was a serious loss to the collection, but with as many as 400 birds such occasional accidents are unavoidable.

The Pens

Before proceeding to a list of the waterfowl in the collection, a description of the pens completed during the Trust's first year should be given.

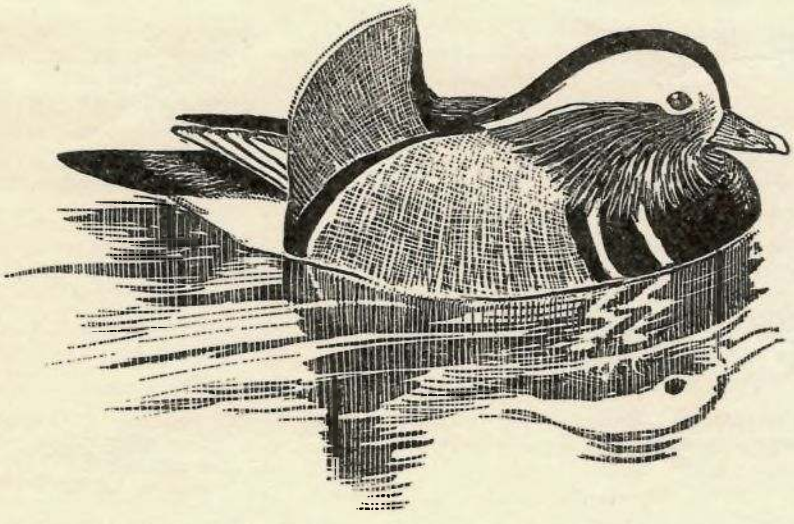
The largest enclosure is a long narrow strip of some ten acres running down the side of the decoy and beyond it. It contains a pool 30 yards across and a " corridor " of grass leading up to the Headquarters. There is also a system of ditches and low banks which enable various areas to be flooded at will by pumping. This pen contains most of the species of Grey Geese and Snow Geese and also a number of ducks.

Within this big pen is a row of six small pens bordering the decoy wood. Here the quarrelsome species are kept in pairs—Upland, Egyptian and Cereopsis Geese and some of the Shelducks. At the corner of the decoy wood and close to the cottages are three pens which have been made more or less rat and stoat resisting. The first of these is the " Orchard Pen " with a newly dug pond. In one corner of it stands the old duck house in which the decoy catch was previously kept, but which now houses food and equipment for the collection. The second pen is called " The Wood " ; this also has a new pond and rather thicker cover than the orchard. And the third is " The Jungle " which has very dense cover. In these three pens the smaller ducks are kept—the various Teal, the Mandarins (*Aix galericulata*) and the Carolinas (*Aix sponsa*) and a few of the small geese to keep down the grass.

On the other side of the lane leading to the sea-wall and the Dumbles is the " Rushy Pen." This is an enclosure of about five acres with two large ponds, one with two and one with one island. The larger of the two ponds

is seven feet deep and the smaller one five feet at its deepest, so in this pen live the diving ducks and a number of the geese as well. It was here that most of the geese bred last summer. The Rushy pen also contains some smaller enclosures including a range of " new arrival " pens walled with straw thatch.

Finally, at the back of the decoy itself the supply rhine has been divided into a series of long narrow enclosures suitable for a few geese. The accommodation of the birds in these separate paddocks is a complicated affair. Quarrelsome or rough birds must be segregated ; brothers and sisters must be divided to ensure unrelated pairs, and so, too, must nearly related species ; birds which have mated with the wrong species must be separated, and moved far enough to prevent the affair continuing through the wire netting from the next pen. Geese must, on occasion, be moved out of earshot. To satisfy all these requirements is often as complicated as a jig-saw puzzle.



Species	*Male*	*Sex Unknown*	*Female*	*Remarks*
Barred Upland Goose (*Chloephaga picta dispar*)	1	—	2	All young birds reared by the Duke of Bedford at Woburn.
Ashy-headed Goose (*Chloephaga poliocephala*)	2	—	1	The female is too young to breed.
Ruddyheaded Goose (*Chloephaga rubidiceps*)	2	—	2	Hand-reared but too young to breed. One pair reared at Leckford and one at Foxwarren.
Abyssinian Bluewinged Goose (*Cyanochen cyanoptera*)	3	—	3	All too young to breed. All hand-reared at Leckford.
Egyptian Goose (*Alopochen algyptiaca*)	1	—	1	Hand-reared. A good breeding female which should nest now that she is well mated.[1]
Orinoco Goose (*Neochen jubata*)	—	—	1	The only bird of her species in Europe. A male is urgently needed. One may be obtainable from California.
Cereopsis or Cape Barren Goose (*Cereopsis novaehollandiae*)	3	—	4	Two adult pairs, one of which laid in April, 1947, and in February, 1948. Two 1947 young were reared at New Grounds.
Common Shelduck (*Tadorna tadorna*)	1	—	1	Reared at New Grounds, 1947, from eggs taken locally.
Ruddy Shelduck (*Casarca ferruginea*)	3	—	3	Three wild-caught from Calcutta Zoo and rest hand-reared (1 from Whipsnade, 1 from Bristol Zoo).
Paradise or New Zealand Shelduck (*Casarca variegata*)	2	—	2	One female (" Maud ") with marked fixation for human beings, and therefore unlikely to breed. Other female from Whipsnade reared 1945, but male age unknown, may be too young to breed.
Australian Shelduck (*Casarca tadornoides*)	1	—	1	Male on loan from Leckford. Female from Whipsnade.
Spurwinged Goose (*Plectropterus gambensis*)	1	—	1	Male said to be 30 years old. Female reared Whipsnade 1933. War widow, mate killed by direct hit from bomb. Both feed from the hand by clumsy grabbing.
Magpie Goose (*Anseranas semipalmata*)	—	—	1	Wild-caught before war. Has lost several toes from frostbite.
Maned Goose (*Chenonetta jubata*)	1	—	1	A hand-reared pre-war pair from whom much is expected. There is only one other—a gander—in Europe. They are quite tame but the female is blind in one eye.

[1] Nested twice in March, 1948.

Species	*Male*	*Sex Unknown*	*Female*	*Remarks*
Mandarin Duck (*Aix galericulata*)	6	—	6	Mostly hand-reared young birds of 1947 which should breed in 1948.
Carolina Duck (*Aix sponsa*)	9	—	6	All hand-reared 1947 birds which should breed in 1948.
South African Yellowbill (*Anas undulata undulata*)	4	—	3	Two adult drakes and remainder hand-reared at Chattisham, 1947.
Abyssinian Yellowbill (*Anas undulata rupelli*)	2	—	—	Presented to the Trust. The only two in Britain.
Gadwall (*Anas strepera*)	2	—	1	One drake reared at New Grounds from egg from St. James's Park. One pair reared at New Grounds from Iceland eggs.
Falcated Duck (*Anas falcata*)	1	—	—	Presented to the Trust.
Common Wigeon (*Anas penelope*)	18	—	16	Six hand-reared birds from Colonel Lumsden at Sluie. The rest wild-caught from Borough Fen and Orwell Park decoys. One very fine drake with green eye-stripe and buff on cheeks as well as crown was caught in the decoy at New Grounds.
American Wigeon (*Anas americana*)	3	—	2	Two pairs were reared at Leckford in 1947. They feed from the hand. Will not breed in first year.
Chiloe Wigeon (*Anas sibilatrix*)	1	—	2	The drake is a young bird reared at Leckford in 1947. For some time it was thought to be a third female. There seems to be some chance of breeding in 1948 although the drakes only breed occasionally in the first year.
Common Shoveler (*Anas clypeata*)	2	—	5	These were wild-caught at Borough Fen decoy.
Garganey Teal (*Anas querquedula*)	—	—	1	A wild-caught juvenile female taken in the decoy at New Grounds in August. She has become amazingly tame and will feed regularly at one's feet.
Cinnamon Teal (*Anas cyanoptera cyanoptera*)	2	—	—	Both pre-war birds.
Common Teal (*Anas crecca*)	5	—	3	All wild-caught from Borough Fen and Boarstall decoys and one drake caught at same time as female Garganey.

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E. Cohen
C. S. Coke
J. B. Cole
E. Coles
Lieut.-Comdr. O. Collett
Mrs. E. M. Commeline
Mrs. B. A. Coney
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T. L. S. Dooly
R. V. Douglas
E. H. Down
P. M. Driver
Major C. Druce
Miss P. Dudfield
Lord Dulverton of Batsford, O.B.E.
D. H. Dumbell
S. Duncan
R. Duncanson
C. C. Duncune
E. E. Dunn
A. C. Dunsdon
Miss G. M. Eacott
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C. Eardley-Wilmot
The Hon. Terence Eden
V. S. Edwards
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G. A. Fuller
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