The book includes a brief but excellent description of each individual species, a very important matter when so many species, which are clearly marked in the text, are on the Protected List. The descriptions however suffer from the necessary brevity and may at times be misleading. For instance in the case of the Ferruginous Duck, the adult drake is described in heavy type, among other characteristics, as having the iris white. The adult duck is described as similar to the drake but darker and duller. One might understand from this that the iris of the duck is also white, which it is not. One feels too that greater importance might have been attached to learning the voice of the various species of geese. Geese are seldom silent birds and under average field and wildfowling conditions, the voice is usually the most reliable way of correctly identifying the species; it is more easily learnt and remembered, in the reviewer's opinion than, for instance, the voice of many warblers, so often only identified, unless in the hand, by their call.

The chapters on ringing, migration and distribution must be of special interest to the more enlightened wildfowler. He will realise that his is not a local or national problem but an international one and he should be grateful for the industry of the wildfowl-counters, many of them wildfowlers, who are accumulating so much valuable information, information which is likely to become more valuable over the years. The views of Professor Swanson, a professor of Conservation at Cornell University, are particularly instructive in the matter of British conservation, and one is impressed by his suggestion that we might, as is done in North America, make the sale of wildfowl illegal; big bags would then with the present price of cartridges become unprofitable, and wildfowling would remain a recreation, which it should be, and not a source of income, which present stocks will not allow.

The book is wholly admirable not only because of the exhaustive way with which it covers the subject, but also on account of its wisdom, foresight and constructive attitude to the future of wildfowling. One could only wish that the book, or at least the chapter on Etiquette, could be made a sort of Highway Code, compulsory reading for the L-wildfowler. One feels however that it will be read largely by the converted and the willing to be converted, by members of W.A.G.B.I. and members of the affiliated clubs. In many areas however, even among skilled and experienced wildfowlers, such men are still a minority. Nor is this book likely to do much to combat that unmitigated nuisance, still far too common on far too many saltings, who shoots at anything and at any range, a menace to wildfowling as much as to wildfowl, and the chief cause of the distressingly high percentage of wildfowl proved to be carrying shot. He does not as a rule last long as a wildfowler, but there always seems to be another to take his place.

With almost everyone owning a car few places in the British Isles remain undisturbed on account of their remoteness or inaccessibility. Areas, once frequented by a few locals and near-by visitors, now attract hordes of visitors from far afield, so that the sea wall looks like a car park at a race meeting; they are soon over-shot and no one is in the end any better off. One feels that the old days of "free for all" are in fact over. One would not wish to see this country subject to the stringent restrictions proved so necessary in North America, but it would appear that only by restraint on the part of wildfowlers, under the guidance of W.A.G.B.I. and on the lines laid down in this book, can the future of wildfowling be assured.

R. E. M. Pilcher

SHORT NOTES

A yellow-legged Bewick's Swan in Lancashire

On 14th January, 1962 a herd of eight Bewick's Swan *Cygnus columbianus bewickii* visited flooded land on Cockerham Moss, Lancashire. Seven were adults and the eighth bird an immature. As they waded, swam and grazed in the floods I was able to make a close approach behind a thick hawthorn hedge. One apparent adult standing out of the water had bright orange-yellow legs and feet—brighter on the outside of the tarsus than on the inside. Otherwise this bird was like the other adults, making allowance for variation in size and colour of the yellow bill patches. It was also apparently one parent of the single immature present, the other parent having the normal black legs and feet. The herd took to flight on the approach of other bird-watchers but the yellow-legged bird could be easily picked out in the air as it lacked the black V under the tail of the other birds caused by the position of the legs in flight.

Later in the day no less than seven more bird-watchers were able to approach the herd again and to verify the unusual leg and foot colouring of the bird. Towards dusk the herd flew seawards and did not return to the same area again.

H. Shorrock

Capture of German-ringed Geese at Deeping Lake

On 12th July, 1961 we saw eleven geese on Deeping Lake, Lincolnshire—ten Greylags *Anser anser rubrirostris* and one Bar-headed Goose *Anser indicus*. We managed to catch them all and found that nine of them were ringed. We took the geese to Peakirk to find out whether they had come from there. Mr. Noel Dudley examined the birds and the rings, which were all German, from Vogelwarte Radolfzell and Vogelwarte Helgoland. Finding that the geese did not belong to the Wildfowl Trust we took them back to the Lake and relased them. They did not stay and were not seen again.

Miss E. P. Leach, acting for the Bird Ringing Committee, kindly got in touch with the German ringing authorities and we learned that the geese had all come from Professor Konrad Lorenz's collection at the Max-Planck-Institut für Verhaltensphysiologie at Seewiesen in Upper Bavaria. Five of the ringed Greylags were reared at the Institut itself—one in 1953 when the Institute was still housed at Buldern in Westphalia and which had been moved to Seewiesen. The others, and probably the two unringed ones as well, were hatched in 1960 at a small lake in Fürstenfeld, 20 km. from the Institute, where 50 of their 200 geese are kept. Most of Professor Lorenz's geese are free flying, but these are the first known to have flown to England.

The Bar-headed Goose too came from Seewiesen though, curiously enough, it was originally reared at Slimbridge in 1955 and sent to Germany by Mr. Peter Scott in the following winter.

D. Dandridge

Brood-sizes of Ducks in North Iceland, July, 1961

THE Ulster North Iceland Expedition of 1961, whose primary object was the investigation of Harlequin Ducks (see p.000), collected a number of records of brood-sizes of ten species of ducks. Since data of this kind are surprisingly scarce on this side of the Atlantic they seem worth recording. We were camped on an island in the River Laxá, a mile and a half below Myvatn, from 7th to 15th July and were on the shores of the lake itself from 15th to 22nd.

		Brood-sizes												
		1	2	3	4	5	6	7	8	9	10	over 10	total broods	average brood size
Wigeon	L.					1							1	5
Mallard	L.		1	1	4	1	2	1	3					
	M.		1			1	2						16	5.1
Tufted Duck	L.	1	1		2	1	1	1		1	1			
	M.	1	3			2		2	2	1			20	5.2
Scaup	L.		3	1	3	3	2	1	2			one 13		
	M.		1			1		1			1		20	5.4
Common Scoter	L.			1		1	1						3	4.7
Harlequin Duck	L.					1		1					2	6
Long-tailed Duck	L.	2	2											
	M.			1								one 12	5	1.8
Barrow's Goldeneye	L.	1	1		3	4		2	1			two 11 one 14 one 22	16	6.6
Goosander	L.					1			1	1	1		4	8.0

L=seen on River Laxá; M=on Mývatn.

All the ducklings seen were very young, probably under a week old, except for the three Mallard broods on Mývatn, which were well grown.

Collecting of duck's eggs by local farmers is permitted in the Mývatn area, with the proviso that at least four eggs must be left in each nest. There is however no definite indication from these observations that the broods seen had been artificially reduced by egg-taking, except perhaps in the case of the Long-tailed Duck.

Red-breasted Merganser. We saw 24 groups of ducklings on Mývatn, in numbers varying from 1 to 52, averaging 11.2. The clutch-size does not normally exceed 12: if five groups larger than 12 are omitted, the average brood size is reduced to 118/19, or 6.2. This is likely to be an over-correction, since some of the smaller broods may have lost some of their number to crêches, rather than by death. On 16th July, near Reykjalid at the north-east corner of Mývatn, we counted 14 females with broods. Three days later these had resolved themselves into two ducks with broods of 33 and 52, and the majority of the original mothers had disappeared. When any other duck ventured too near either of these " nursery schools," the warden chased it away. This system was not (yet) in vogue in another bay a mile and a half south where eight " normal " broods were counted, each with a duck in attendance.

The mortality of merganser ducklings was evidently very high. We counted 27 dead, all just a few days old. Most of those we examined had many leeches, about half-an-inch long, in their nasal passages and some also among the body down. Several infested like this died in our hands.

J. Arnold Benington

Gadwall diving and submerging

ON 16th June, 1961, in one of the small bays at Chew Valley Reservoir, Somerset, I observed an unattached drake Gadwall *Anas strepera* swimming towards a pair which on a number of previous occasions had been seen in the more exposed shallow water of their breeding territory. As the intruder gradually came close both males, with heads stretched forward and bodies partly submerged, commenced to chase one another with considerable splashing and kicking up of surrounding water. Although only of short duration, this chasing resulted in the drakes plunging and completely submerging momentarily. Soon afterwards the aggressor departed, leaving the mated birds to their own devices. Fighting intense enough to include total submersion does not seem to have been recorded for the Gadwall, although B. W. Tucker drew attention to the regular occurrence of diving associated with chases in surface-feeding ducks in a footnote to an account of Shovelers diving (*British Birds* 43 : 19-20. 1950).

Bernard King

Courtship-feeding in the Red-crested Pochard

E. H. GILLHAM (*British Birds* 48 : 322-3. 1955) drew attention to courtship-feeding in the Red-crested Pochard *Netta rufina* living in a London park. The birds in which I first observed this display, several years ago, were pinioned birds, kept in Wiltshire on a private water of about one acre, with a maximum depth of four-and-a-half feet. I have since observed it in their full-winged descendants, and I have no reason to suppose that it is not normal to wild birds, which I have not seen in the breeding season.

The drake dives and brings up a skein of weed (mostly *Elodea* and *Myriophyllum*), and he then waits till the duck, who has been floating quietly near by, swims to him and feeds off it. He does not " offer " the weed to her, since it would be impossible for him to lift the whole saturated mass from the water, and probably very difficult to break off pieces for her. He does not therefore bring his bill to hers, but he does not attempt to eat any of the weed himself until she has done so. It is obvious that she is waiting for this to happen: she " expects " it, and he " intends " it, if these terms are permissible, and there is nothing accidental about the performance. It may be repeated several times in succession, and while this continues the duck never dives herself but sits in wait to swim to the drake when he surfaces a few feet from her. He in turn always waits for her to come to him and to feed before feeding himself (which he rarely does even when she seems content). The display is not associated with any other form of sexual behaviour, and it may take place any time from February to June.

The drakes described by Gillham differed from mine in actually sharing a bill-full of a green alga *Rhizoclonium hieroglyphicum* with their mates. Dr. Paul Johnsgard tells me that he has also seen courtship feeding and that in his view it takes place only between mated birds and is analogous to mutual nibbling in Wood and Mandarin Ducks. He has also seen inedible material, such as waterlogged branches, being brought to the surface.

Gillham saw females with young, a month or more old, bring up green matter for them in a similar way. Swans *Cygnus* sp. and Magpie Geese *Anseranas semipalmata*, which also feed their young, do not seem to include feeding in their courtship behaviour.

E. J. M. Buxton

Copulation and display of Red-breasted Merganser

On 25th June, 1957 at Clickhimin Loch, near Lerwick, Shetland, I was fortunate enough to see a pair of Red-breasted Merganser *Mergus serrator* copulating on the water. The act was followed by the display described below. Since this differed considerably from that described by Adams (1947) and is not recorded by Curth (1954) or Johnsgard (1960) it seems worth noting.

When first seen the male was swimming rapidly after the female only a short distance behind, the chin and head were raised at an angle of about 65 degrees above the horizontal and the crest was depressed. The male suddenly spurted forwards and mounted the back of the female, holding her by the crest, and copulation took place. Following the act of copulation the male dismounted and both birds swam side by side for a few moments. The male then stretched the head and neck upwards into an almost vertical position with the bill partly opened, no sound being uttered. The female reciprocated by writhing the head and neck about without opening her bill. This action continued for a minute or so, then the male dived very rapidly and emerged a short distance away in an almost vertical position, resembling very closely the "ghost dive" of the Great Crested Grebe *Podiceps cristatus*. This was followed immediately by vigorous flapping of the wings and preening of the body plumage. The female ceased neck writhing when the male dived and immediately commenced preening. Some ten minutes after the beginning of the whole display and act of pairing both birds were swimming normally side by side, and no further display was witnessed.

Bryan L. Sage

References

Adams, R. G. 1947. Mating behaviour of Wigeon and Red-breasted Merganser. *Brit. Birds* 40 : 186-7.

Curth, P. 1954. *Der Mittelsäger*. 102 pp. Wittenberg Lutherstadt.

Johnsgard, P. A. 1960. Classification and evolutionary relationships of the sea ducks. *Condor* 62 : 426-33.

Raw meat as a food for Mute Swans

During a census of the fairly large non-breeding herd of Mute Swans *Cygnus olor*—about 80 to 90 birds—on the River Avon, Bath, Somerset, on 30th June, 1961, I came across two independent groups, of three and two swans, which appeared to be tugging at pieces of red coloured material. On closer inspection I discovered that they had found pieces of fatty raw meat, about ten inches by seven, and half an inch thick, which were floating on the surface and had apparently recently been discharged into the river. As the swans pulled fiercely with their bills at the meat the food gradually disintegrated and all was eventually swallowed.

Bernard King

Mallard taking fish

That Mallard *Anas platyrhynchos* very occasionally take small fish has been recorded by various authors from the time of Yarrell and MacGillivray. The rarity of fish-eating has been borne out by the work of Mr. P. J. S. Olney (personal communication): in analyses of over 560 Mallard viscera obtained during the shooting seasons 1957-61, he has found no trace of fish remains.

It seems unlikely that a dabbling duck such as a Mallard would be capable of catching many healthy fish and probable that those which they do eat are weakened in some way. This is borne out by some observations made on a Sevenoaks gravel pit in 1957 when a group of Mallard were watched diving repeatedly near the exit of a large suction pipe used for extracting sand and gravel from the bottom of the gravel pit. The reason for diving was that they were feeding on injured Three-spined Sticklebacks *Gasterosteus aculeatus,* which had passed through the suction pipes.

On 23rd August, 1961 another Mallard was watched at the Kent Sand and Ballast Company's gravel pit at Sevenoaks, with a small coarse fish in its bill, probably a Dace *Leuciscus vulgaris*; it was being chased by a second Mallard. The fish was obviously dead or nearly dead and as this water is used regularly by anglers for coarse fish, it is probable that the fish was one that had been hooked and then thrown back, which subsequently fell an easy victim to the Mallard.

James & Jeffery Harrison

Red-crested Pochard taking food from a Carp

DURING the autumn of 1958 a pinioned drake Red-crested Pochard *Netta rufina,* was present on the Kent Sand and Ballast Company's gravel pit near Sevenoaks. At that time the late Mr. G. C. Lake, one of the employees, was in the habit of feeding a 4-5 pound Carp *Cyprinus carpio* with large pellets of bread. The Red-crested Pochard also came up to be fed and soon discovered that the Carp held the bread in its mouth for some moments before swallowing it. The Pochard quickly learnt to take the bread from the Carp's mouth, either by up-ending or by diving when the Carp was lying deeper. The Carp made no effort to swallow its bread more quickly under this provocation and for some weeks the sight of the duck feeding out of the fish's mouth was seen by many people, until the Red-crested Pochard disappeared.

James & Jeffery Harrison

Goosanders " parasitised " by Black-headed Gulls

IN 1961 we witnessed some interesting " parasitisation " by Black-headed Gulls *Larus ridibundus* on Goosanders *Mergus merganser* on the Kent Sand and Ballast Company's gravel pit near Sevenoaks, Kent.

On 15th February a pair of red-headed Goosanders arrived and settled down on the water, feeding very actively, surfacing to swallow the fish that they were catching. Five days later, a number of Black-headed Gulls began to " parasitise " the Goosanders, each of which would be followed on the surface by four or five of the gulls, swimming vigorously to keep up. As soon as the Goosander dived, the gulls would take off and circle low overhead, swooping low over the Goosander as soon as it surfaced, forcing it to drop its fish and at one time the unfortunate birds seemed to be losing two out of three fish to the gulls. Each day after this, to find the Goosanders we looked for the escorting flotilla of Black-headed Gulls. On 26th February only one Goosander was present and the gulls, possibly in mistake, were also following a Great Crested Grebe *Podiceps cristatus* but very few fish were being caught, or else they were being eaten underwater. On 9th March both Goosanders were back

and they and a pair of Great Crested Grebes were under vigorous attack. The Goosanders were last seen on 11th March and on 14th a Moorhen *Gallinula chloropus* was attacked as it paddled harmlessly across the water and promptly dived. By 20th March almost all the Black-headed Gulls had ceased flighting to the gravel pit, so that we do not know if the gulls persisted in their skua-like habits, but it was interesting that none of the many Common, Herring or Greater Black-backed Gulls joined the Black-headed Gulls in this behaviour.

On 28th December, 1961 a further five red-headed Goosanders arrived on the water and two days later we were intrigued to see that the Black-headed Gull flotillas had already taken up their stations astern, although prior to this they had made no effort to " parasitise " any Great Crested Grebes, of which several had been on the water throughout the winter, but the grebe appears to swallow most of its food below the surface of the water and it must be the Goosanders habit of surfacing with its fish which attracts the gulls' attentions.

In the first quarter of 1962, parasitisation by Black-headed Gulls became much more frequent, with Coots *Fulica atra* as the most frequent victims and both Tufted Duck *Aythya fuligula* and Pochard *Aythya ferina* also victimised.

James & Jeffery Harrison

Thieving of this kind has become an unfortunate feature of the behaviour of gulls, especially Black-headed, in the Trust enclosures at Slimbridge, though in this case the fish stolen has been thrown into the water by someone feeding the ducks. Editors.

The pre-nuptial display of the Shoveler

LITTLE has been published on the pre-nuptial display of the Shoveler *Anas clypeata.* Lorenz (1951-1953) stated that, although all previous accounts denied the existence of social courtship display in Shovelers, he believed it must exist because of the highly developed breeding plumage. In fact a social courtship display does occur and has the same basic pattern as the pairing display of other surface feeding ducks. Special attention was given to this in North Kent during 1961 and 1962 when the display was observed on six occasions and many additional fragments of it were seen. In both years the bulk of pairing display was seen in January and February. Paired birds are met with, however, as early as November in most years, and are quite common after that. Social courtship appears to occur mainly on fresh water in this species and the following description is typical.

A number of drakes gather in a desultory manner around a female; the average is four, but up to eight have been seen: they do not form the neat circles of Teal *Anas crecca.* Usually the party are close to beds of old reeds or *Phragmites* stumps and as the female swims along the fleet or moves to one side of the group the males follow, stopping when she does, but remaining a few yards from her. After stopping, the drake nearest to the female " shows himself " to her by turning broadside or completely turning his back to her. No other display movement is made at that time. The drake then begins to swim slowly away looking back repeatedly and stopping from time to time to see whether the female is following. Sometimes the female follows a little way, but usually she does not. One after the other the drakes will try to lead the female away and display parties have been observed to last for more than twenty minutes without the female selecting a mate.

As the intensity of display increases a male will try to induce the female to fly after him by " showing himself," turning, and then jumping up from the water to make a short, formalised, fluttering flight of 5 yards or so. The flight used is very distinctive, it has a hovering quality and the wings are flapped quite slowly making a loud fluttering sound.

On 26th January, 1962 one male in a group of four was seen to " show himself " five times to a female and after each time make a short fluttering flight over a bed of *Phragmites* stumps. On landing the other side of the bed he would crane his neck to see if the female was following. When she did not, the drake flew back to re-commence the display. On 11th February a party of four males was observed displaying to a female on a rather open stretch of fleet. These males made fluttering flights continuously, one after the other during a fifteen minute period. On one occasion the female fluttered a short distance after one male.

Lorenz (1951-1953) mentioned the only display activity known to him as " a distinct turning of the back of the head of the female." This has definite affinities with the above display, but I have not found it possible to determine with certainty whether the drake's head feathers were " set " as described by Lorenz; several times I have thought they were.

An interesting example of transition from the pairing display period to a newly formed pair bond was recorded on 4th March, 1962 when a female was seen on salt water with three drakes, one of which she had paired with. On two occasions the female incited against the other drakes using exactly the same posture as Mallard *Anas platyrhynchos* and after one such display the paired drake jumped up with a typical fluttering flight. After going a few yards and seeing that the female was not following he landed and swam back to her. A minute or two later he again jumped up, but this time the female followed him and they flew off to feeding grounds some 400 yards away.

The " leading display " of Black Ducks *Anas rubripes*, described by Johnsgard (1960) bears obvious similarities to the above, but appears to differ in that male Black Ducks compete for the first or leading place in the display group. Shoveler drakes, by contrast, attempt to induce the female to follow them individually and in consequence they swim and flutter in various directions.

The " fluttering flights " described are clearly equal to the " jump flights " of Lebret (1958) and I agree with his descriptions. The significance of these flights in the Shoveler is now however apparent and further observations on Mallard may show that " Jump flights " in that species have the same relation to pairing display.

John Hori

References

HOCHBAUM, H. A. 1944. *The Canvasback on a Prairie Marsh.* Amer. Wildlife Inst. Washington D.C. 201 pp.

JOHNSGARD, P. A. 1960. A Quantitative Study of Sexual Behaviour of Mallards and Black Ducks. *Wils. Bull.* 72 : 133-55.

LEBRET, T. 1958. The " Jump Flight " of the Mallard, *Anas platyrhynchos*, the Teal, *Anas crecca* and the Shoveler, *Spatula clypeata*. *Ardea* 46 : 68-72.

LORENZ, K. Z. 1951-1953. Comparative Studies of the Behaviour of Anatinae. *Avic. Mag.* 57: 157-182, 58 : 8-17, 61-72, 86-94, 172-184 : 59 : 24-34, 80-91.

SOWLS, L. K. 1955. *Prairie Ducks. A Study of Their Behaviour, Ecology and Management.* Stackpole, Harrisburg. 184 pp.

Fourteenth Annual General Meeting

MINUTES

1. The fourteenth Annual General Meeting of the Wildfowl Trust was held at the Royal Geographical Society on Wednesday, 10th May, 1961.

2. The following Officers and Council Members were present together with about 70 Members:—

H.R.H. The Prince Philip, Duke of Edinburgh, K.G., K.T.	*President*
General Sir Gerald Lathbury, K.C.B., D.S.O., M.B.E.	*Vice-President*
Sir Percy Lister	*Vice-President*
Guy Benson, Esq.	*Hon. Treasurer*
Peter Scott, Esq., C.B.E., D.S.C.	*Hon. Director*
Michael Crichton, Esq.	
H. H. Davis, Esq.	
J. O. Death, Esq.	
K. Miller-Jones, Esq.	
R. E. M. Pilcher, Esq., F.R.C.S.	
Dr. G. Storey	
Miss P. Talbot-Ponsonby	
Major-General C. B. Wainwright, C.B.	

3. Apologies for absence were received from:—
The Duke of Beaufort
Captain R. G. W. Berkeley
Dr. James Robertson Justice
Minutes of the Thirteenth A.G.M. previously circulated with Report of Council were taken as read and signed by the President.

4. After reporting on the Trust's activities during the year the Hon. Director moved the adoption of the Report of Council and the Accounts for the year ending 31st December, 1960. The Hon. Treasurer seconded and the motion was carried unanimously.

5. Mr. A. Norris proposed and Mr. E. Cohen seconded the re-election to Council of the following Councillors retiring under Rule 13(1):—
R. J. Berkeley, Esq., J.P.
Dr. James Robertson Justice
Major-General C. B. Wainwright, C.B.
The motion was carried unanimously.

6. On the proposal of Sir Kenneth Swan, seconded by Mr. F. W. Perowne, the Council's nominees were elected Officers as follows:—

President:	H.R.H. The Prince Philip, Duke of Edinburgh, K.G., K.T.
Vice-Presidents:	Captain R. G. W. Berkeley The Rt. Hon. the Lord Howick of Glendale, G.C.M.G., K.C.V.O. General Sir Gerald Lathbury, K.C.B., D.S.O., M.B.E. Sir Percy Lister
Trustees:	His Grace the Duke of Beaufort, K.G., P.C., G.C.V.O. The Rt. Hon. the Earl of Mansfield, J.P.
Hon. Director:	Peter Scott, Esq., C.B.E., D.S.C.
Hon. Treasurer:	Guy Benson, Esq.

7. The Hon. Director proposed and Mr. K. Miller-Jones seconded the following alteration to the Rules of the Wildfowl Trust :

Rule 5 (4)(ii) : Delete first sentence and substitute:
" The Council shall have power to elect as Life Members persons whose association with the Trust may be considered advantageous or who shall have contributed a sum of not less than 50 guineas to the funds of the Trust."
Brigadier C. E. H. Sparrow proposed and Mr. K. Miller-Jones seconded the following alterations to the rules :

Rule 5 (4)(v). Last sentence :
Delete the words " on Saturdays and Sundays."

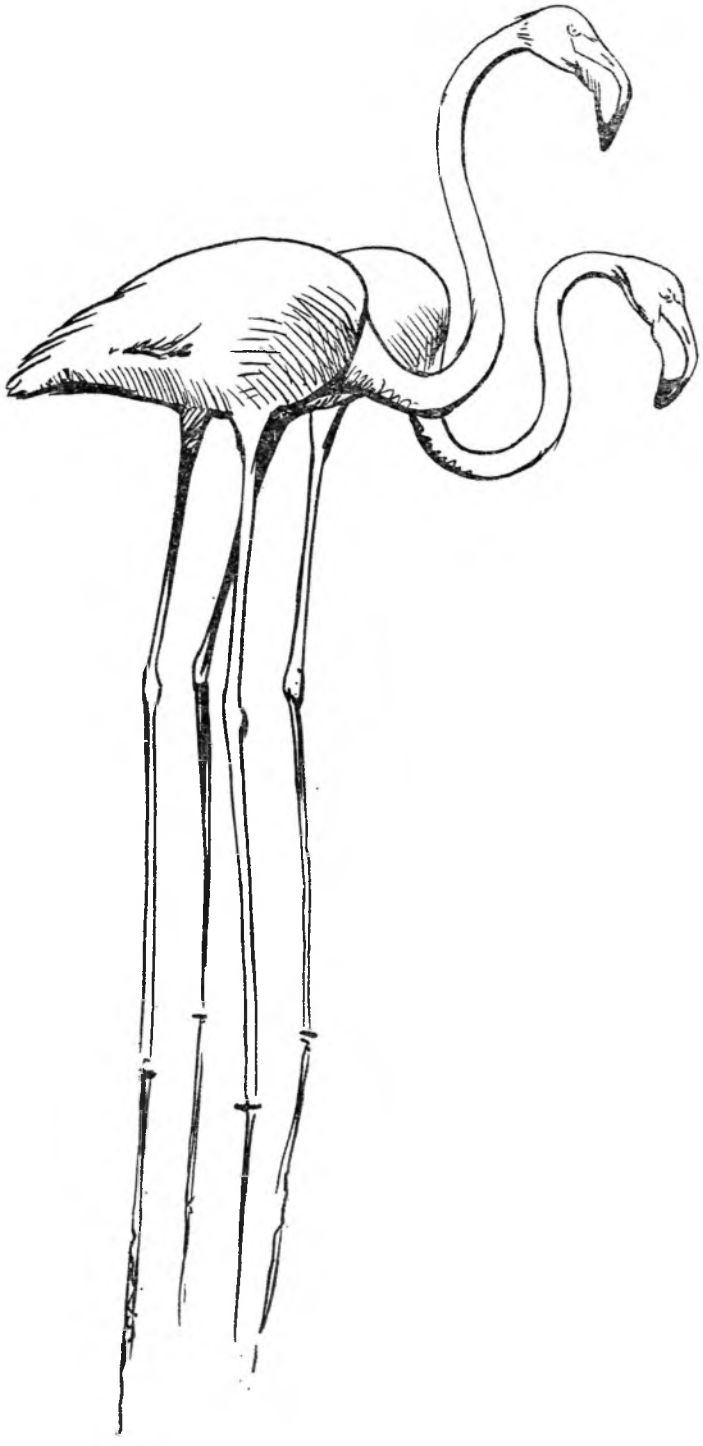
Rule 5 (4) (vi). Second sentence (as amended by 13th Annual General Meeting):
Delete and substitute:
" Admission to the Trust's collections for Corporate Members shall be on payment for each member of the party of the entrance fee in force at the time of the visit. Members of corporate bodies in parties of not less than 10 nor more than 35 shall be entitled at times previously arranged with the Gate House to a conducted tour of the enclosures at the New Grounds or at Peakirk and to access to the observation hides at the New Grounds in the company of a warden."

Rule 7(1) Line 3 :
For " January " substitute " May."
The above propositions were carried unanimously.

8. The Hon. Treasurer proposed that Messrs. S. J. Dudbridge and Sons of Stroud, Gloucestershire, be reappointed Auditors to the Wildfowl Trust for the ensuing year pursuant to Rule 19(1). Mr. M. Crichton seconded and the motion was carried unanimously.

9. The Chairman invited comments from the meeting and Mr. T. L. Outhwaite suggested that everything possible should be done to establish the Trust as a place that must be visited by tourists from abroad. The Hon. Director accepted this suggestion and said that ways and means of achieving this would be explored. At the same time steps were being taken to make the Trust's enclosures more attractive to visitors and the collection at the New Grounds now included flamingos and screamers.

10. Business being concluded the meeting was closed by the Chairman and the Hon. Director gave a talk on his recent visit to East Africa, illustrated by photographs taken by Mrs. Scott.



THE WILDFOWL TRUST

BALANCE SHEET, 31st DECEMBER, 1960

	LIABILITIES	£. s. d.	£. s. d.
7519	**Sundry Creditors**		10103 9 11
	Peterborough Provincial Benefit Building Society:—		
	Advanced on The Goshams at 1st January, 1960	1620 3 5	
	Less repaid	31 6 11	
—			1588 16 6
	Loan Accounts:—		
11313	Balance, 31st December, 1959 ..	12662 13 10	
4000	**Add** Further Advance	1500 0 0	
15313		14162 13 10	
2650	**Less** Repaid	1650 0 0	
12663			12512 13 10
	Reserve Account:—		
5000	Balance, 31st December, 1959 ..	5000 0 0	
	Less Transfer to Accumulated Fund	5000 0 0	
	Accumulated Fund:—		
	Transfer from Reserve Account ..	5000 0 0	
	Transfer from Income & Expenditure Account	5900 0 0	
—			10900 0 0
	Income and Expenditure Account:—		
5045	Balance per Account		61 14 1
20353			

	ASSETS	£. s. d.	£. s. d.
	Cash:—		
104	In Hand	125 4 8	
885	At Westminster Bank Limited ..	1816 10 6	
22	At Lloyds Bank Limited	37 2 1	
1011			1978 17 3
1091	**Sundry Debtors and Payments in Advance** ..		1507 11 8
	Valuation (as valued by the Honorary Director):—		
	Membership and Administration.		
300	Equipment	495 0 0	
	New Grounds and Peakirk:—		
8500	Wildfowl 8500 0 0		
580	Transport 750 0 0		
2872	Breeding Equipment, etc. 2901 0 0		
540	Hostel Equipment .. 490 0 0		
12492		12641 0 0	
	Gate Houses:—		
4521	Stock for re-sale	3176 0 0	
	Scientific and Educational:—		
740	Equipment	1009 0 0	
2300	**Longaston House** (see Freehold Properties)	— — —	
			17321 0 0

Freehold Properties :—

Longaston House at Valuation 31st December, 1959		2300 0 0	
Glinton Cottage, at cost		1525 10 0	
Patch Farm, at cost		1739 17 0	
The Goshams, at amount of Building Society Advance at 1st January, 1960		1620 3 5	
			7185 10 5

NOTE.—The above properties are vested in The Wildfowl Trust (Holdings) Ltd.

New Buildings, etc., New Grounds, Slimbridge, Gloucestershire :—

Amount, 31st December, 1959 ..		11362 13 10	
Less Written off to 31st December, 1959 ..	3591 2 7		
Written off in year ended 31st December, 1960 ..	597 16 3		
		4188 18 10	
7772			7173 15 0

NOTE.—The New Buildings, etc., to be written off over a period not exceeding that of the lease.

30227	£35166 14 4

30227	£35166 14 4

We have examined the above Balance Sheet of the Wildfowl Trust dated 31st December, 1960, together with the accompanying Income and Expenditure Account and find them to be in accordance with the Books and Vouchers produced to us and the information and explanations given to us.

STROUD, Gloucestershire.
27th March, 1961.

S. J. DUDBRIDGE & SONS.
Auditors.

THE WILDFOWL TRUST

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st DECEMBER, 1960

DR. EXPENDITURE		£. s. d.	£. s. d.
	To **Membership and Administration:—**		
2700	Salaries and National Insurance ..	3151 12 11	
269	Travelling	272 13 1	
754	Office Expenses, Postages, etc. ..	788 19 7	
1073	Printing and Stationery, General ..	1181 17 3	
512	Telephone	512 5 2	
277	Bank Charges, less Interest earned ..	309 16 11	
2409	Printing Annual Report	2149 12 7	
458	Expenses of Annual Dinner	180 1 6	
295	Miscellaneous	320 13 5	
95	Covenant Expenses	572 12 1	
8842			9440 4 6
	New Grounds and Peakirk:—		
8024	Salaries, Wages & National Insurance	8595 8 3	
522	Travelling	316 9 2	
1417	Purchases and Transport of Wildfowl and Eggs	732 5 1	
5976	Food for Wildfowl	6350 15 7	
1083	Rent, Rates, Water Rates & Insurance	1090 5 7	
1559	Materials, Repairs and Replacements	2287 7 2	
711	Transport and Mechanical Equipment and Maintenance	715 13 9	
954	Fuel and Power	1032 4 10	
144	Hatching Expenses	228 19 6	
911	Hostel Upkeep	648 19 10	
767	Miscellaneous	587 4 8	
22068			22585 13 5
	Gate Houses:—		
10611	Purchases for re-Sale	10186 6 9	
983	Royalties Coloured Key Publications	433 0 0	
1886	Salaries, Wages & National Insurance	2273 14 0	
13480			12893 0 9
	Scientific and Educational:—		
6094	Salaries and National Insurance ..	7405 17 11	
571	Travelling	773 13 11	
503	Rocket Netting	124 3 8	
880	Abberton Ringing Station	1148 12 5	
848	Borough Fen Decoy	957 2 6	
1027	Equipment and Maintenance ..	1141 3 4	
1468	Aerial Survey	974 4 5	
11291			

INCOME		£. s. d.	£. s. d. CR.
	By **Membership:—**		
7344	Subscriptions, Ordinary	7172 12 2	
457	Subscriptions, Life Members ..	549 15 0	
745	Donations	1075 19 7	
264	Receipts from Sale of Annual Reports	266 10 7	
450	Receipts from Annual Dinner ..	169 19 0	
2128	Income Tax repaid on Covenants ..	6292 2 10	
11388			15526 19 2
	New Grounds and Peakirk:—		
22394	Gate Takings	17998 16 6	
2763	Sales of Surplus Wildfowl ..	3029 16 3	
25157			21028 12 9
	Gate Houses:—		
15321	Sales, General	15011 7 9	
1707	Sales, Coloured Key Publications ..	1850 14 0	
17028			16862 1 9
	Scientific and Educational:—		
7367	The Nature Conservancy Grant ..	8250 0 0	
132	Nuffield Foundation Grant ..	132 10 0	
250	Bristol Zoo Grant	— — —	
263	Donations from Abberton Ringing Station	363 0 0	
509	Duck Adoption	530 7 8	
100	Fees and Collections from Lectures	— — —	
8621			9275 17 8
62194	**TOTAL INCOME FOR THE YEAR**		62693 11 4
20353	Valuation, 31st December, 1960		17321 0 0
	Transfer to Freehold Properties (per Balance Sheet):—		
	Longaston House at Valuation, 31st December, 1959	2300 0 0	
	Glinton Cottage, at cost	1525 10 0	
	Patch Farm, at cost	1739 17 0	
			5565 7 0

	Capital Expenditure:—					
	Office Equipment				255 3 3	
	New Grounds and Peakirk:—					
—	Lavatories	794	16	11		
59	Hostel Equipment ..	—	—	—		
834	New Area Development	17	0	0		
97	Quarantine	—	—	—		
86	Gate House Extension	—	—	—		
—	Silo	172	6	3		
—	Transport	349	13	0		
—	Equipment	303	17	1		
1076					1637 13 3	
	Scientific and Educational:—					
63	Coloured Film ..	185	8	6		
444	Equipment	63	5	11		
—	Borough Fen Perimeter Fence	412	0	0		
507					660 14 5	
	Properties:—					
53	Longaston House, expended thereon ..	—	—	—		
—	Glinton Cottage, at cost	1525	10	0		
—	Patch Farm, at cost ..	1739	17	0		
—	Do. expended thereon	450	0	0		
53					3715 7 0	
1636						6268 17 11
57417	**TOTAL EXPENDITURE FOR THE YEAR** ..					63712 14 9
21372	Valuation, 31st December, 1959					20353 0 0
598	Written off Leasehold Buildings					597 16 3
3000	Transfer to Reserve Account					— — —
160	Balance, carried down					916 7 4
82547						£85579 18 4
—	Transfer to Accumulated Fund:—					5900 0 0
5045	Balance, 31st December, 1960					61 14 1
						£5961 14 1

NOTE.—The figures in the margin are those for the year ended 31st December, 1959, and are given for the purpose of comparison.

82547		£85579 18 4
4885	Balance, 31st December, 1959	5045 6 9
160	Balance for year to 31st December, 1960, brought down	916 7 4
		£5961 14 1

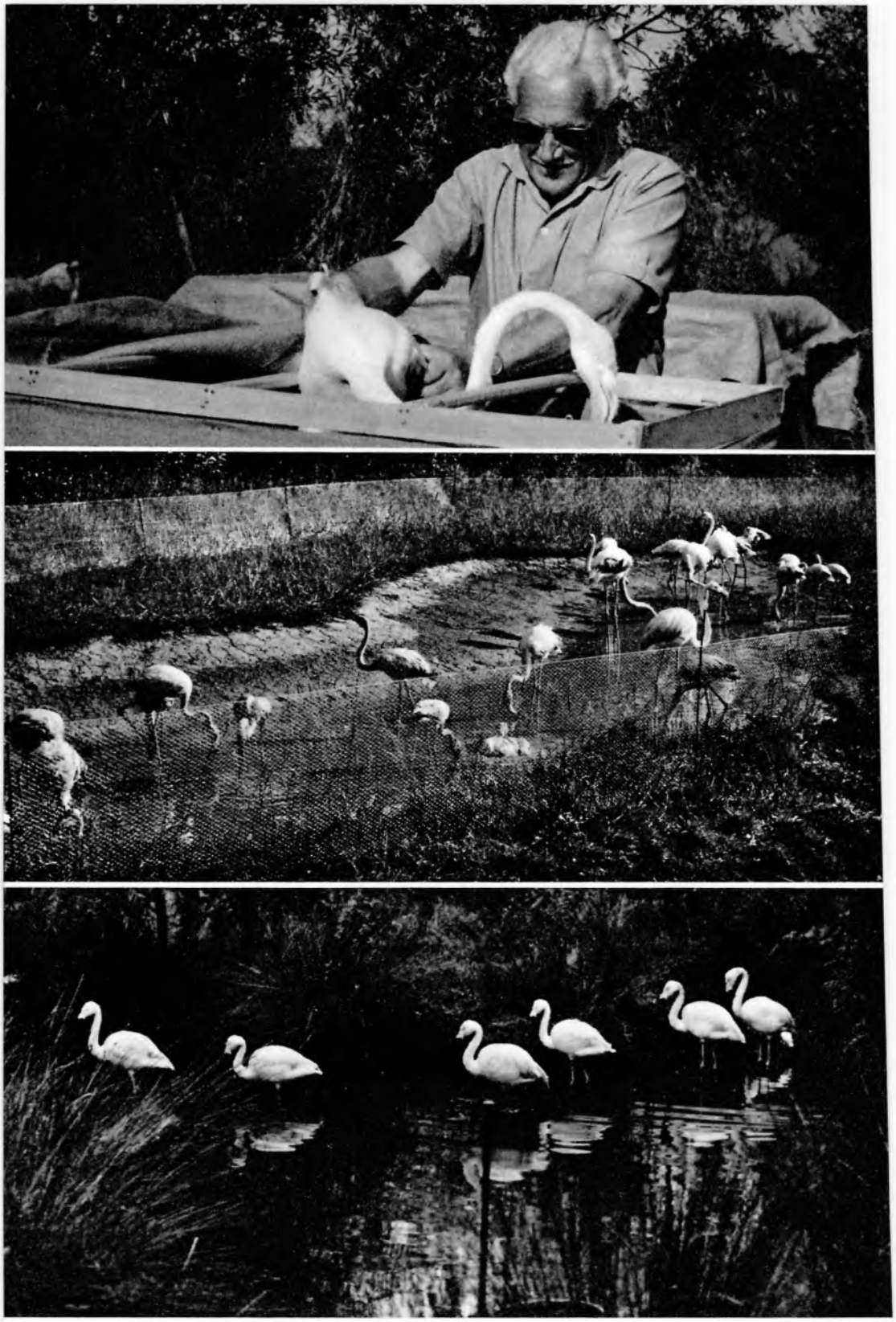
Photographs

The Trust is greatly indebted to the following for permission to reproduce the photographs they have taken: Dr. David G. Allen, F. Bailey & Son, J. Arnold Benington, Pamela Harrison, Professor Eric Kumari, Lady Jean Lathbury, Dr. R. Marris, Christopher Sellick, Dr. F. Steiniger, Miss P. Talbot-Ponsonby.

Three members of the staff—Dr. J. V. Beer. H. Boyd and Dr. S. K. Eltringham—have also provided illustrations.

Greater Flamingos *Phœnicopterus ruber roseus* at the New Grounds. Flamingos were added to the Collection for the first time in 1961.

P. Talbot-Ponsonby

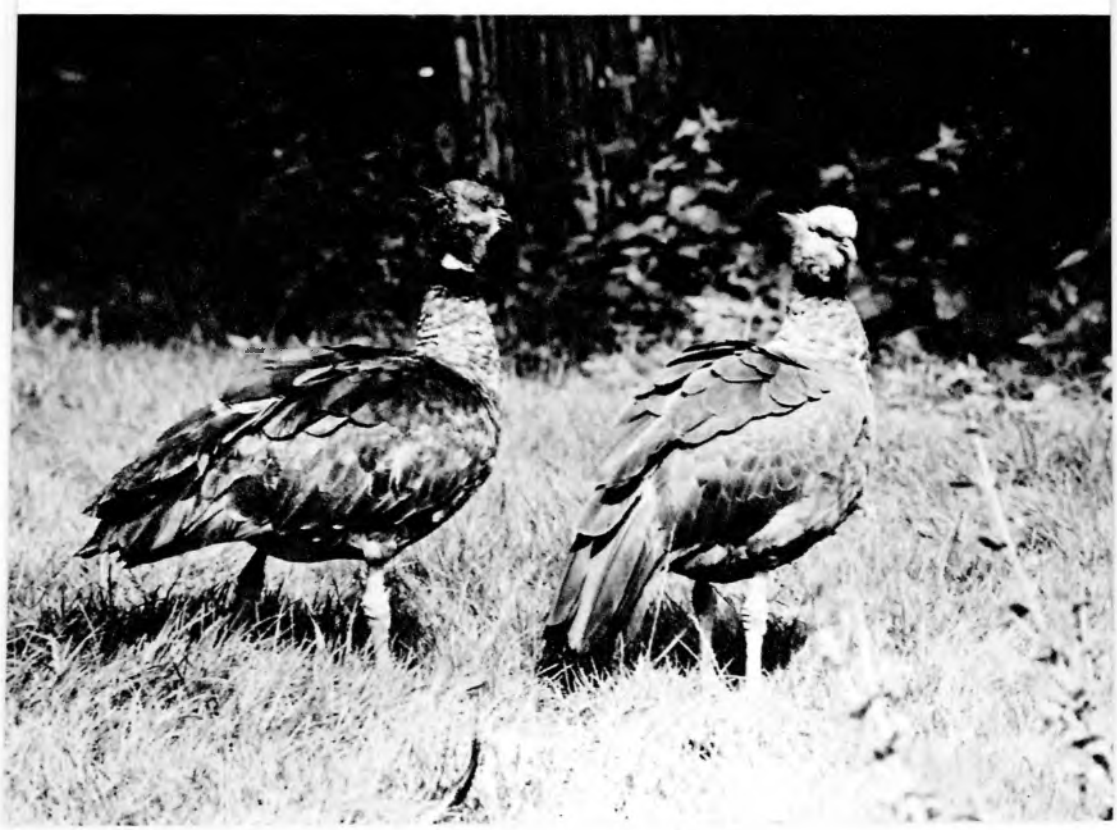


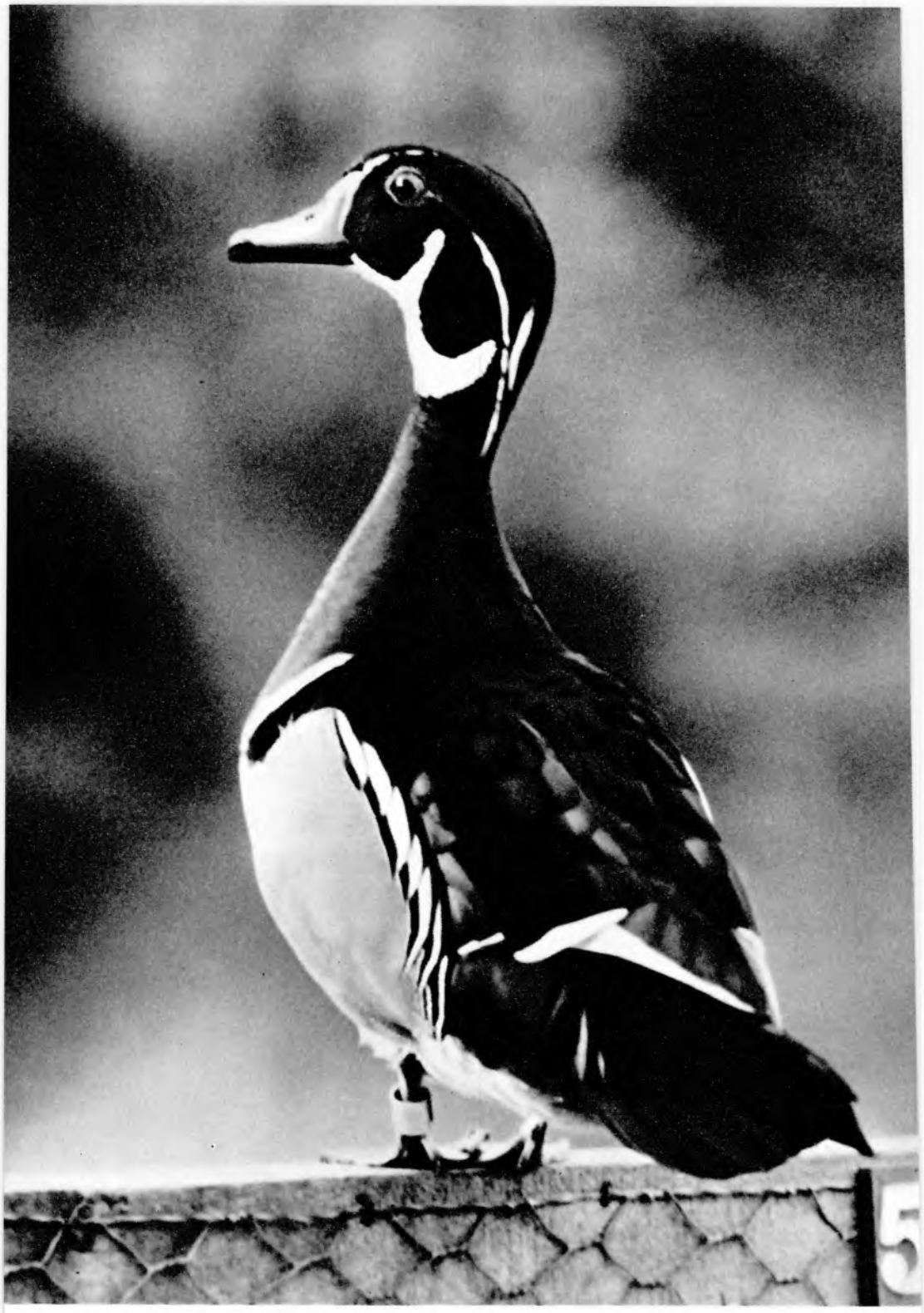
Greater Flamingos at the New Grounds. (*Top*) One being removed from a crate; (*Centre*) Soon after arrival; (*Bottom*) Comfortably established.

J. V. Beer

More recent additions to the Slimbridge Collection. (*Above*) Lesser Flamingos *Phœniconaias minor*, from Africa. (*Below*) Southern Screamers *Chauna torquata*, from South America.

P. Talbot-Ponsonby





Male Carolina, or North American Wood Duck *Aix sponsa*.
P. Talbot-Ponsonby

(*Above*) The visit of Her Majesty the Queen, H.R.H. Duke of Edinburgh (our President), the Prince of Wales and other members of the Royal Family to Slimbridge, 22nd April, 1961.

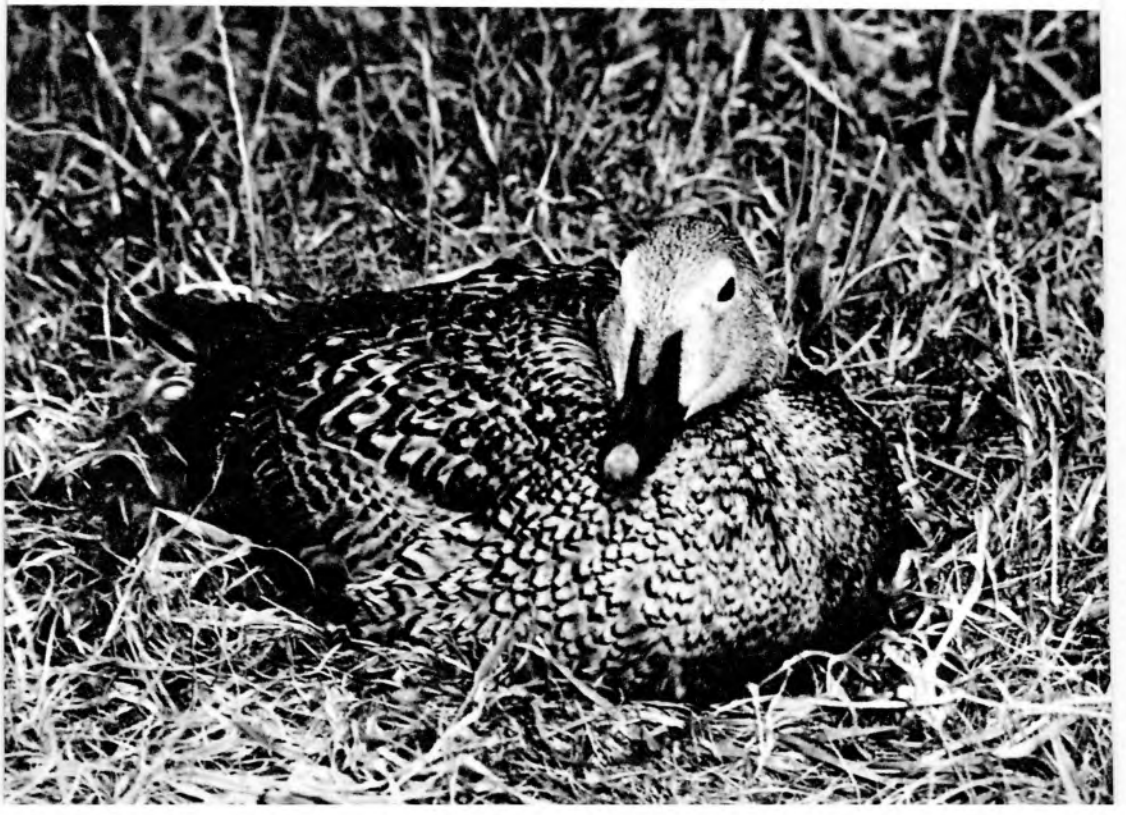
F. Bailey & Son

(*Below*) The new gate-hut at Slimbridge.

P. Talbot-Ponsonby

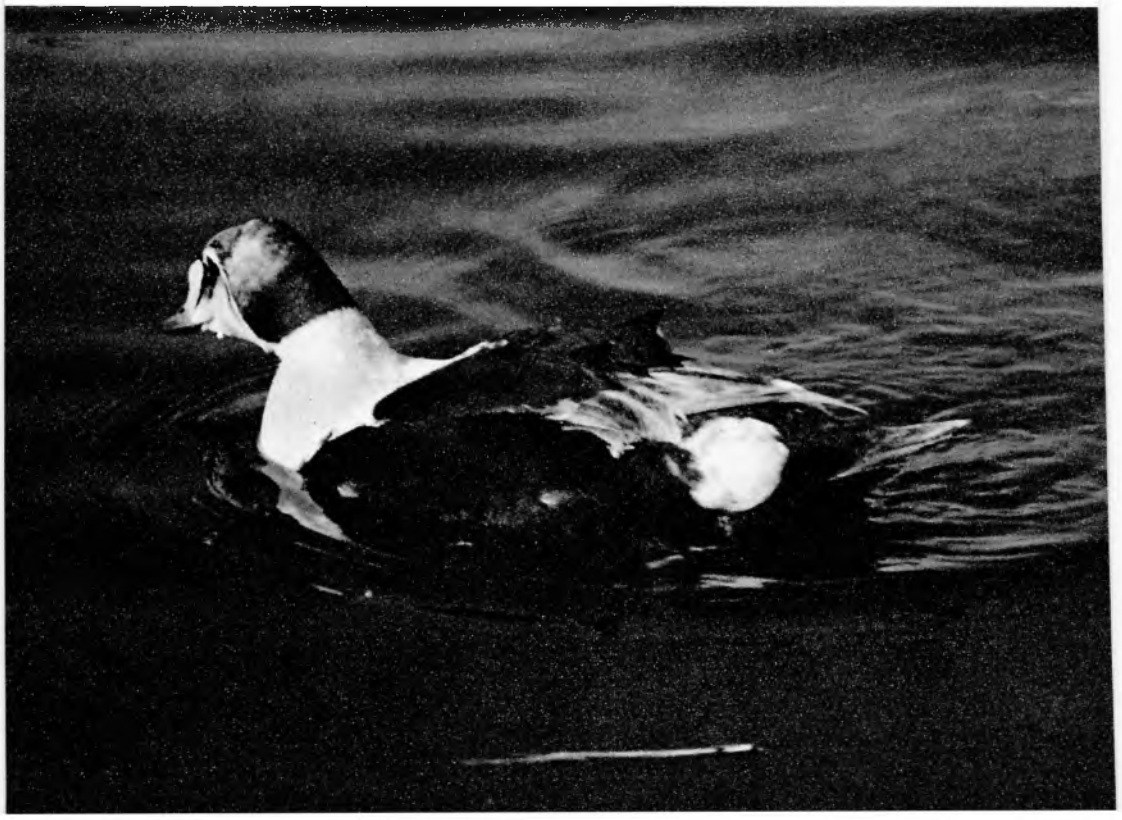
The King Eider *Somateria spectabilis* bred for the first time at Slimbridge in 1961. (*Left*) Three putative fathers. (*Below*) The female sitting. (*Opposite*) Three stages in the growth of the young.

Lady Jean Lathbury; P. Talbot-Ponsonby



King Eiders reared at Slimbridge. (*Above*) When fully-feathered. (*Below*) A male at eight months old.

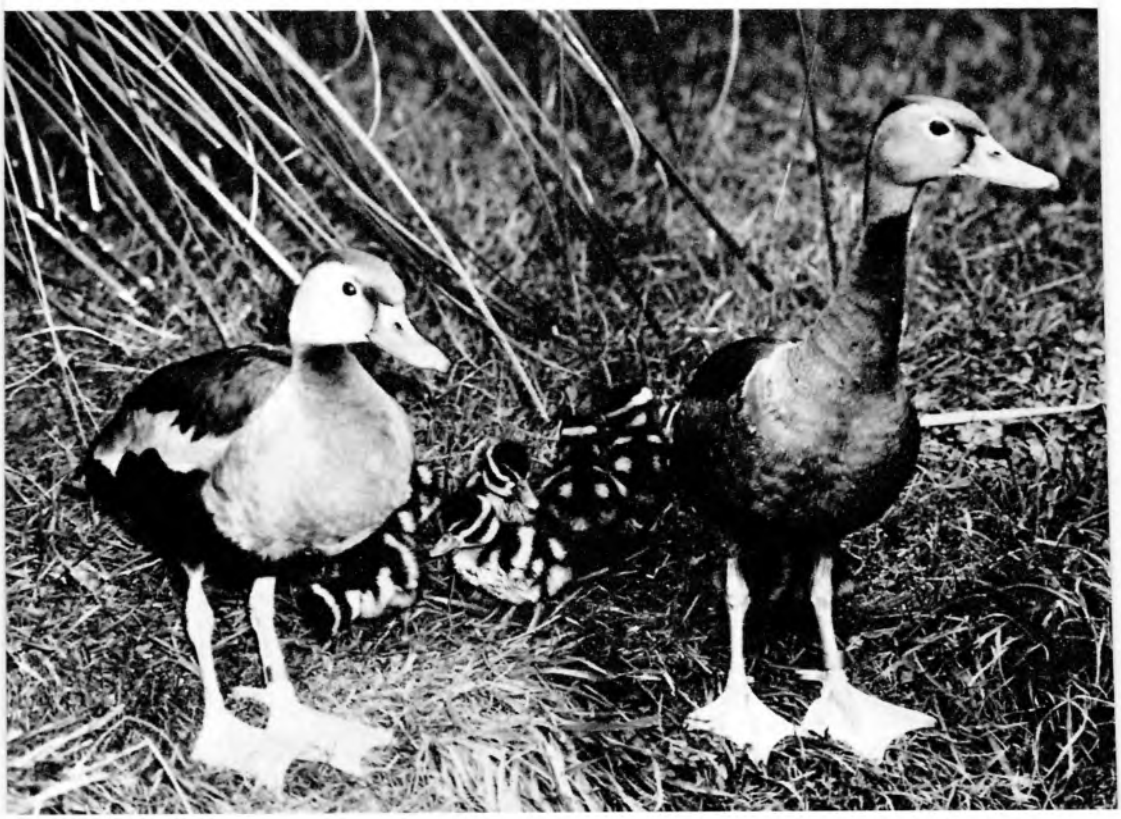
P. Talbot-Ponsonby; J. V. Beer

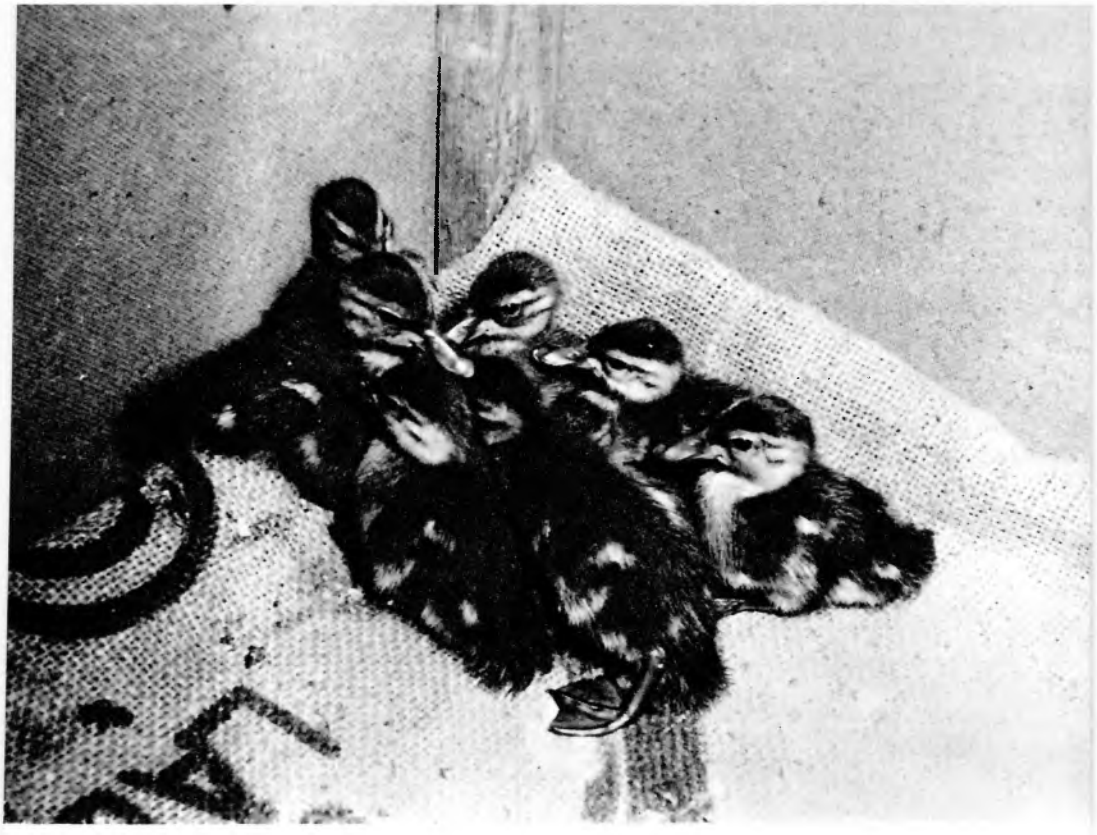


Ne-Nes, or Hawaiian Geese *Branta sandvicensis,* at Slimbridge. (*Above*) A crowd, with interlopers. (*Below*) A female brooding her young.

P. Talbot-Ponsonby

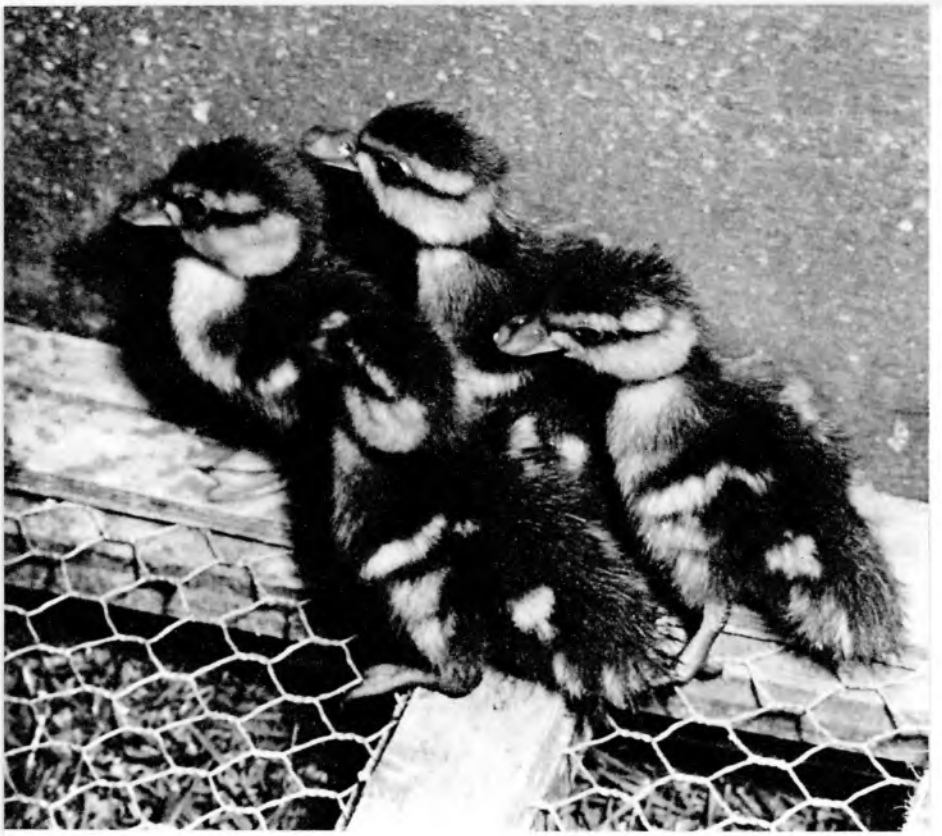
(*Above*) A Ne-Ne with very young goslings still at her nest in her winter-shelter.
(*Below*) A family of Red-billed Whistling Ducks *Dendrocygna autumnalis*.
P. Talbot-Ponsonby





New Zealand Shoveler *Anas rhynchotis variegata* bred for the first time at Slimbridge in 1961. (*Above*) The newly hatched ducklings. (*Below*) An adult pair.

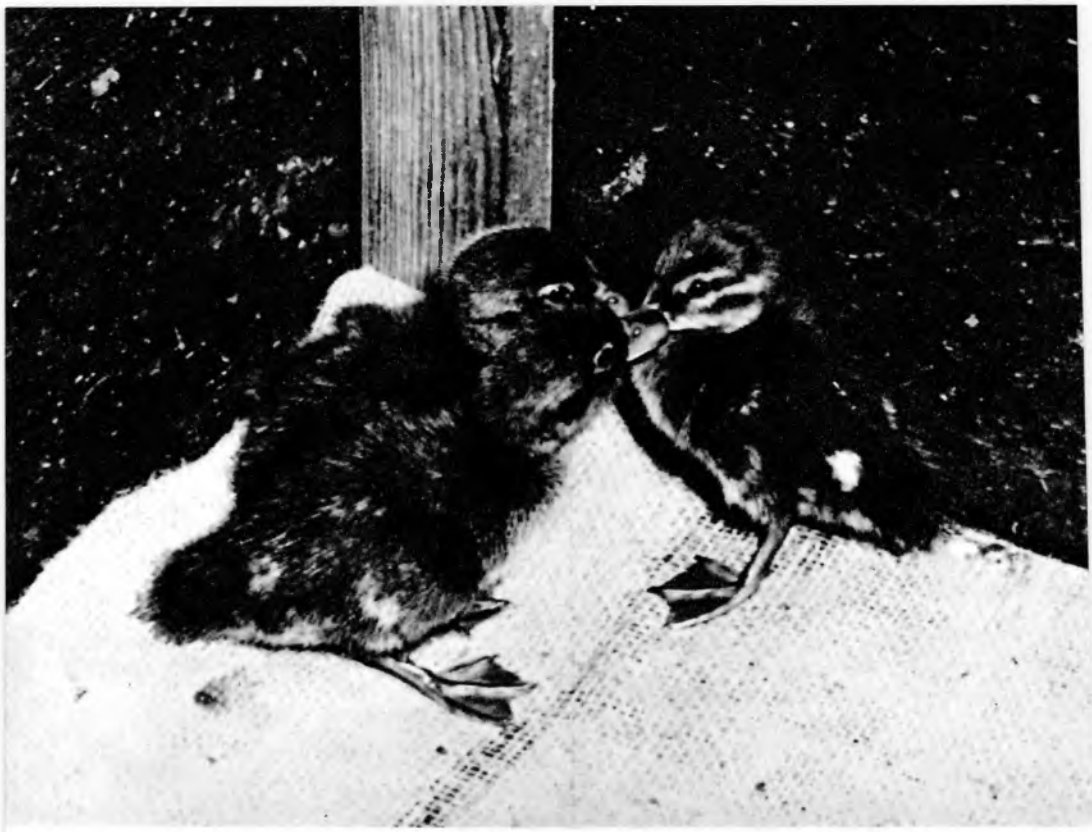
P. Talbot-Ponsonby



Newly-hatched Brazilian Teal *Amazonetta brasiliensis* (*Above*) and Laysan Teal *Anas platyrhynchos laysanensis*.

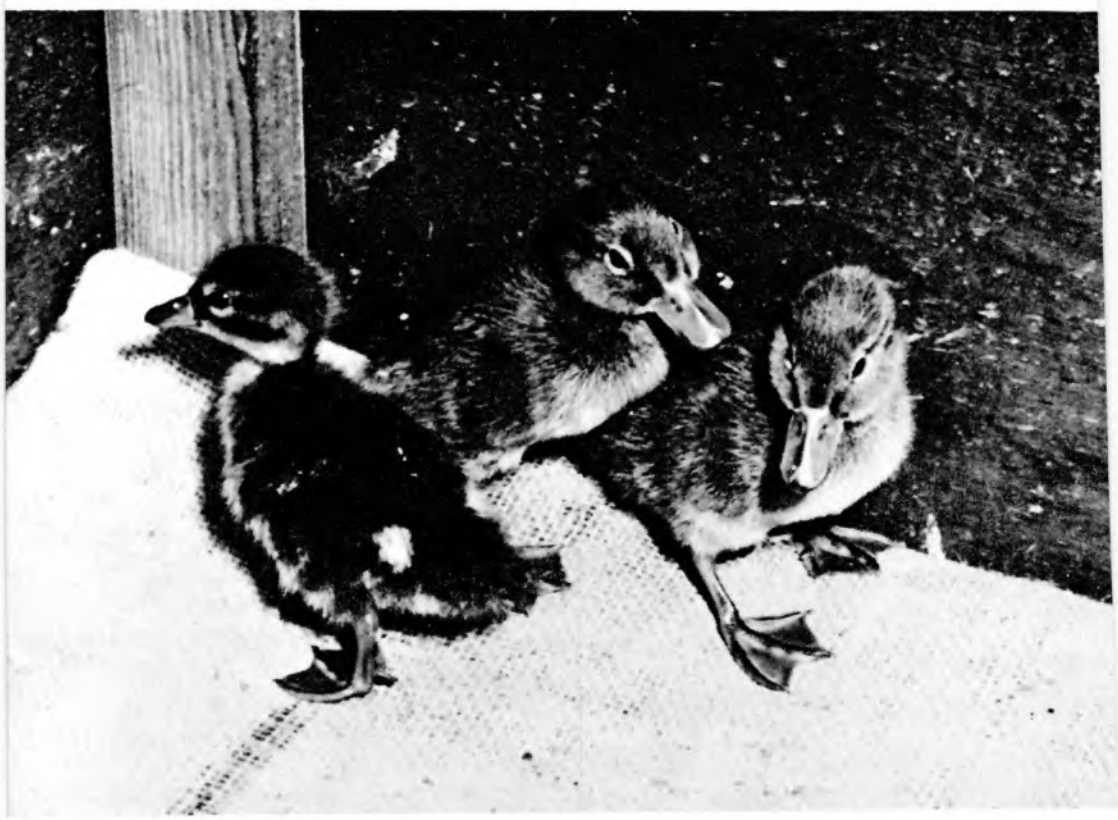
P. Talbot-Ponsonby

(*Right*) A drake Pintail *Anas a. acuta*



Two very small ducklings of the rare New Zealand Brown Duck *Anas aucklandica chlorotis* bred at Slimbridge in 1961, with a young Chestnut-breasted Teal *Anas castanea*. The relative lack of contrast in the patterning on the head of the Brown Duck is exceptional in *Anas*.

P. Talbot-Ponsonby



(*Above*) Red-billed Pintail *Anas erythrorhyncha* and (*Below*) Hottentot Teal *Anas punctata* two African dabbling ducks long represented in the Trust collections but not previously illustrated in an Annual Report.

P. Talbot-Ponsonby

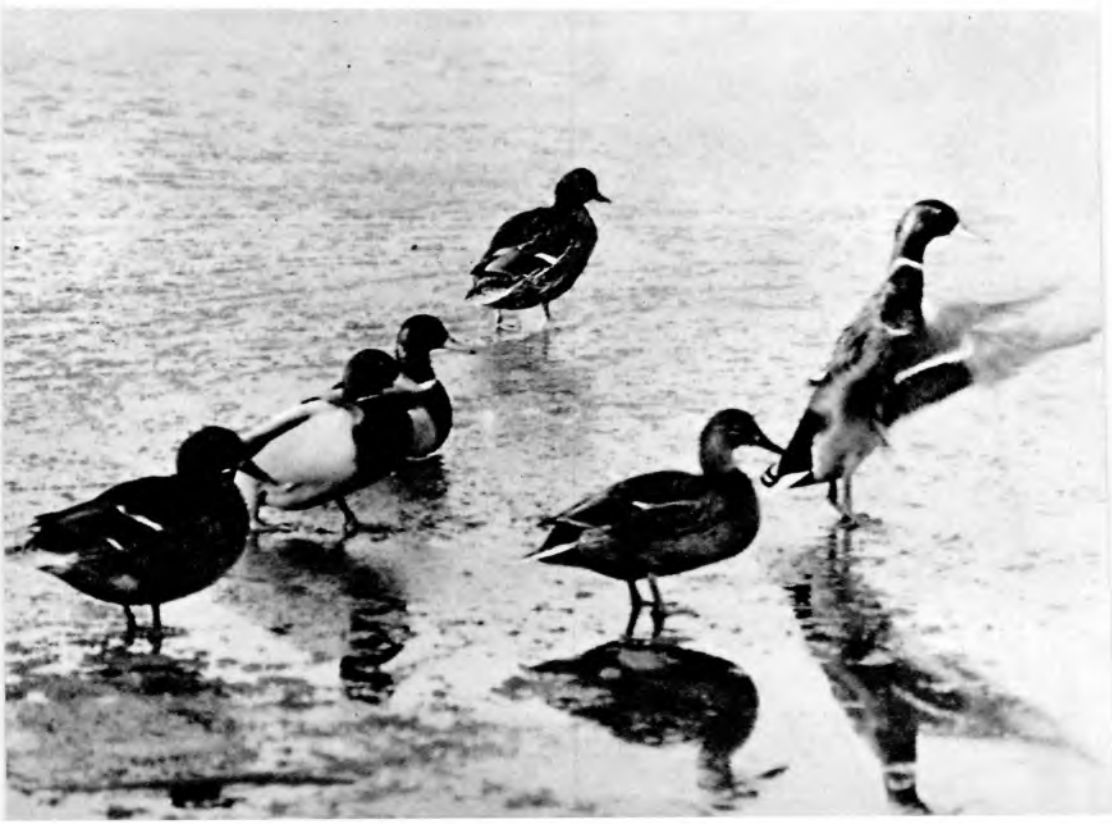
Two duck's-eye views of Berkeley New Decoy, Slimbridge. (*Above*) from above. (*Below*) The House Pipe and the Gazebo from below. Both in summer.

H. Boyd; J. V. Beer

(*Above*) Wild Bewick's Swans *Cygnus columbianus bewickii* alighting in the European Pen at the New Grounds. (*Below*) Canada Geese *Branta canadensis* flying over the Big Pen.

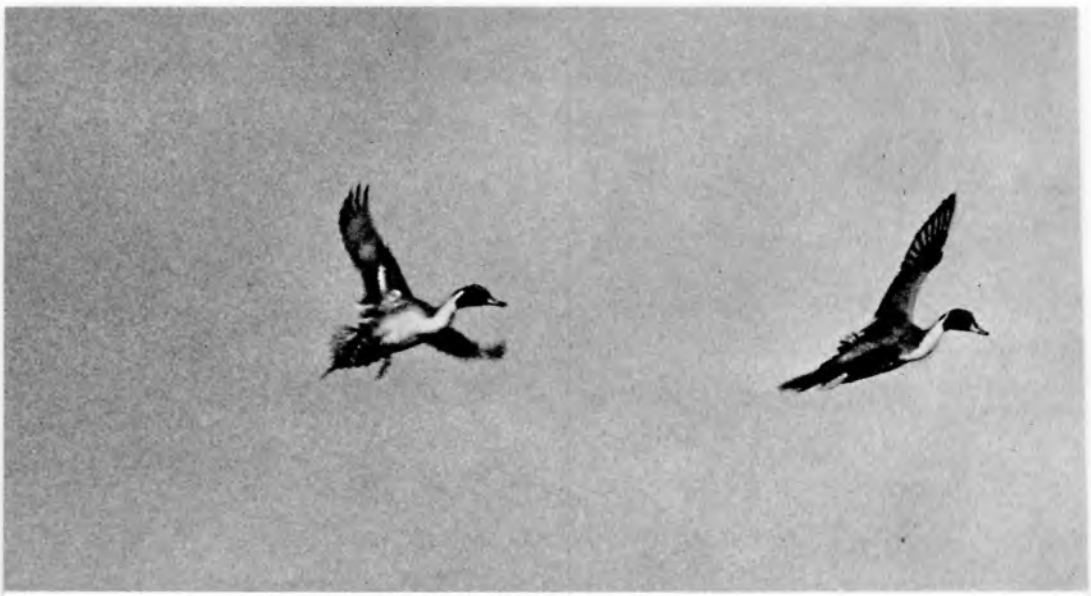
J. V. Beer

Winter at Slimbridge. (*Above*) a frosty morning. (*Below*) Mallard on ice.
P. Talbot-Ponsonby



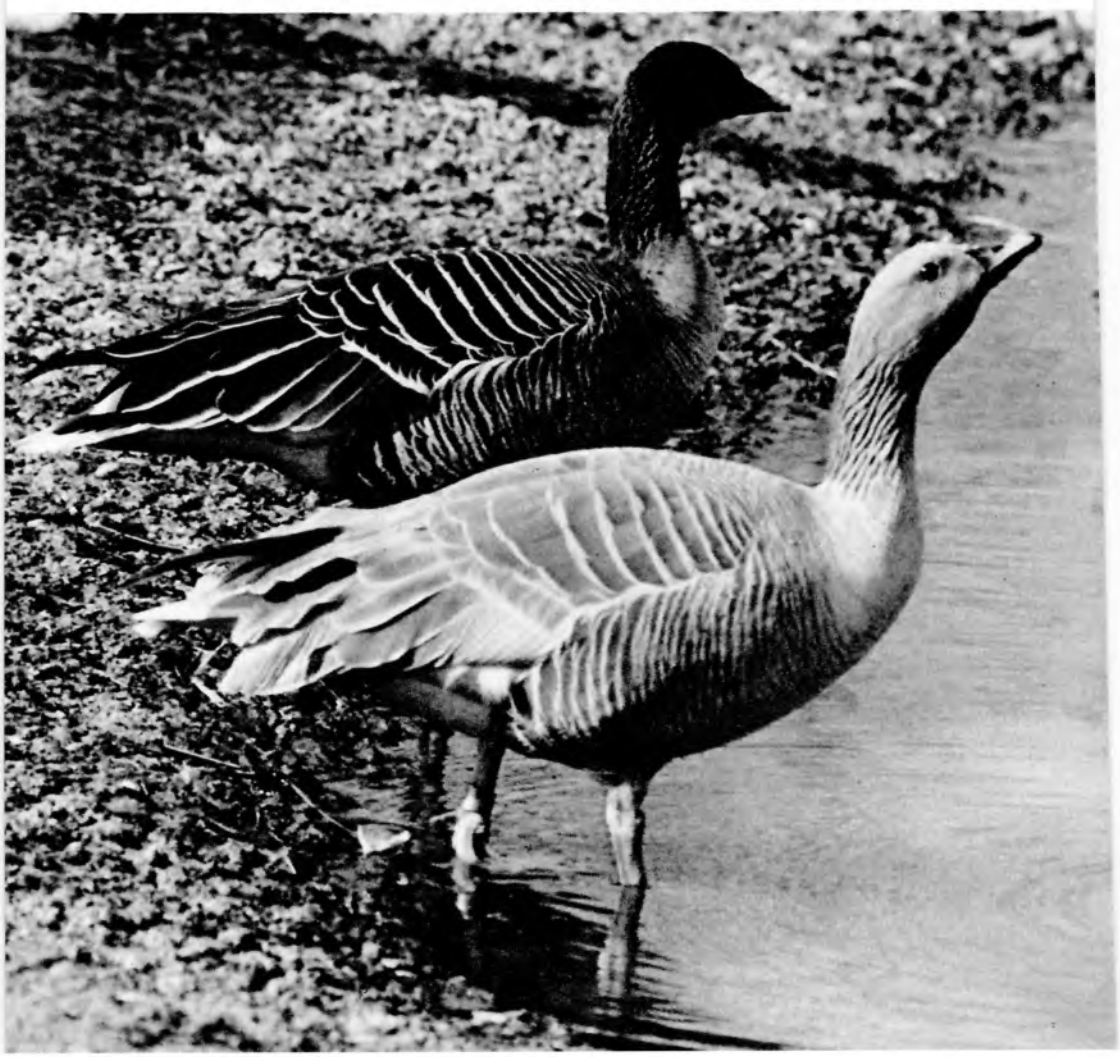
(*Above*) Wild ducks and gulls sharing the food outside the Studio window.
(*Below*) Wild Shoveler, Tufted Ducks and others with tame inhabitants of the Rushy Pen.

P. Talbot-Ponsonby



(*Above*) Pintail coming into the Rushy Pen. (*Below*) A pale, " leucistic " Pink-footed Goose *Anser brachyrhynchus* with a normally-coloured bird.

P. Talbot-Ponsonby

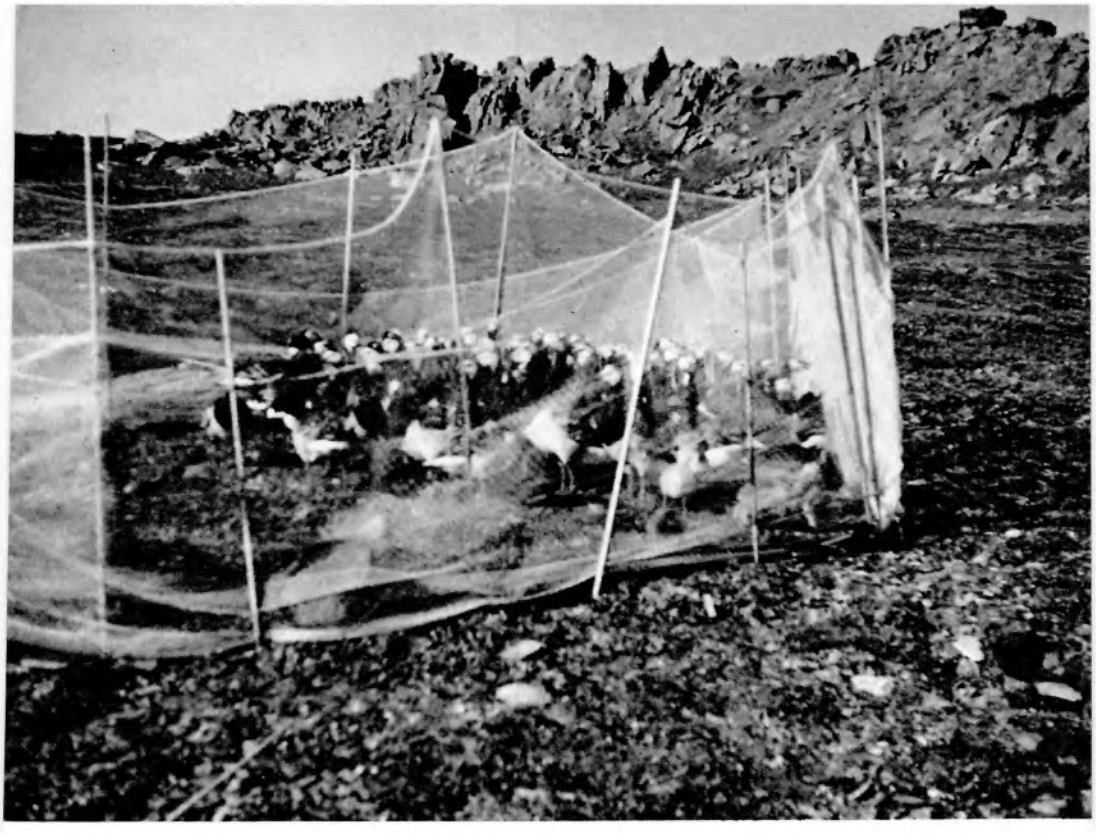


Drake Goldeneye *Bucephala clangula* displaying.

P. Talbot-Ponsonby

East Greenland Expedition, 1961. (*Above*) A view across Ørsteds-Dal. (*Below*) Pen containing 305 Barnacle Geese rounded-up in Fleming Dal, 1st August, 1961.

R. Marris



East Greenland Expedition, 1961. (*Above*) Catch of 92 Barnacle Geese on Ørsteds-Dal, 16th July, 1961. (*Below*) Part of a catch of 86 Barnacle Geese showing the coloured PVC neck bands.

R. Marris

A gravel-pit wildfowl reserve. (*Above*) a new pool and island, before planting. (*Below*) This pool with its two islands took four hours to construct and was planted in April, 1961, the photograph being taken in the following July.

Pamela Harrison

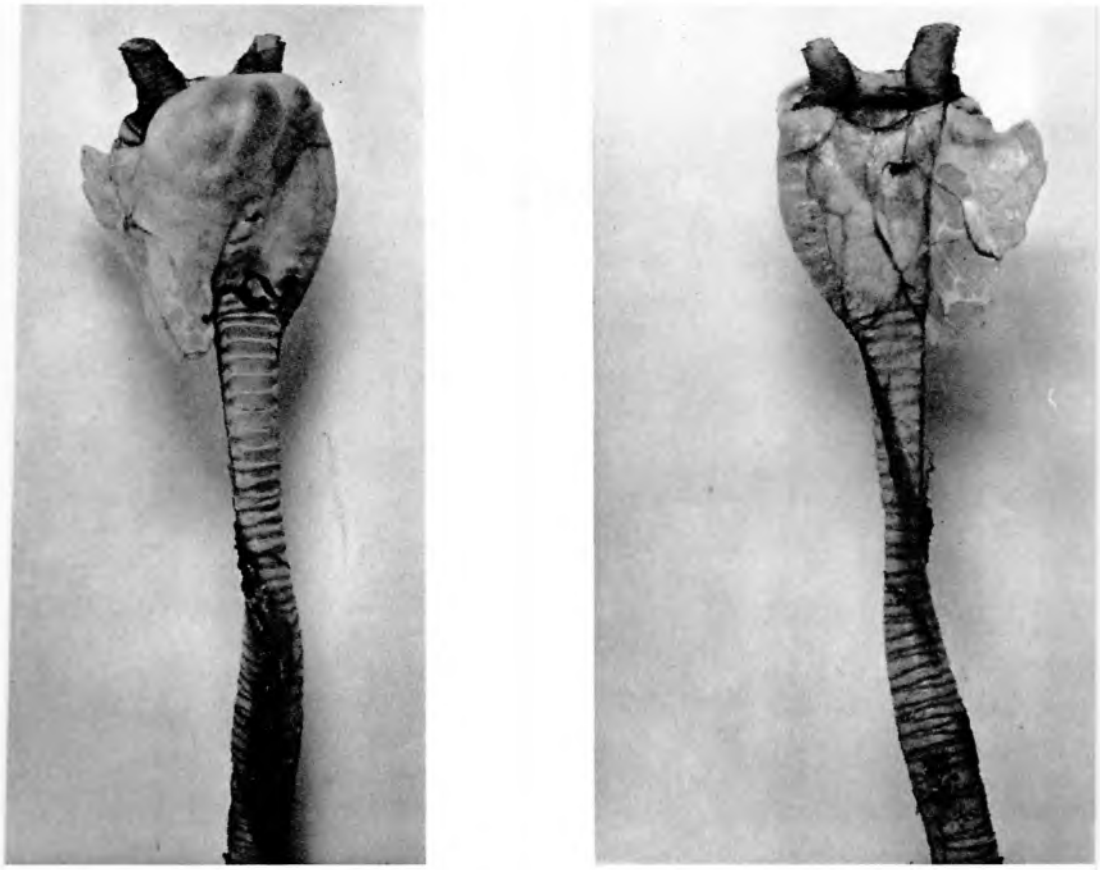
(*Above*) A pair of Canada Geese at their nest on a raft, on the gravel pit reserve.
(*Below*) Planting Silver Birch and Cedar trees around a new pool, November, 1961.
Pamela Harrison

In search of ducks in South America (*Opposite, above*) A typical haunt of the Bronze-winged Duck *Anas specularis*. (*Opposite, below*) A Bronze-wing in the hand. (*Right*) Setting a net for Black-headed Ducks. (*Below*) Preparing for nocturnal duck-catching by the gong-and-flare method.

Christopher Sellick

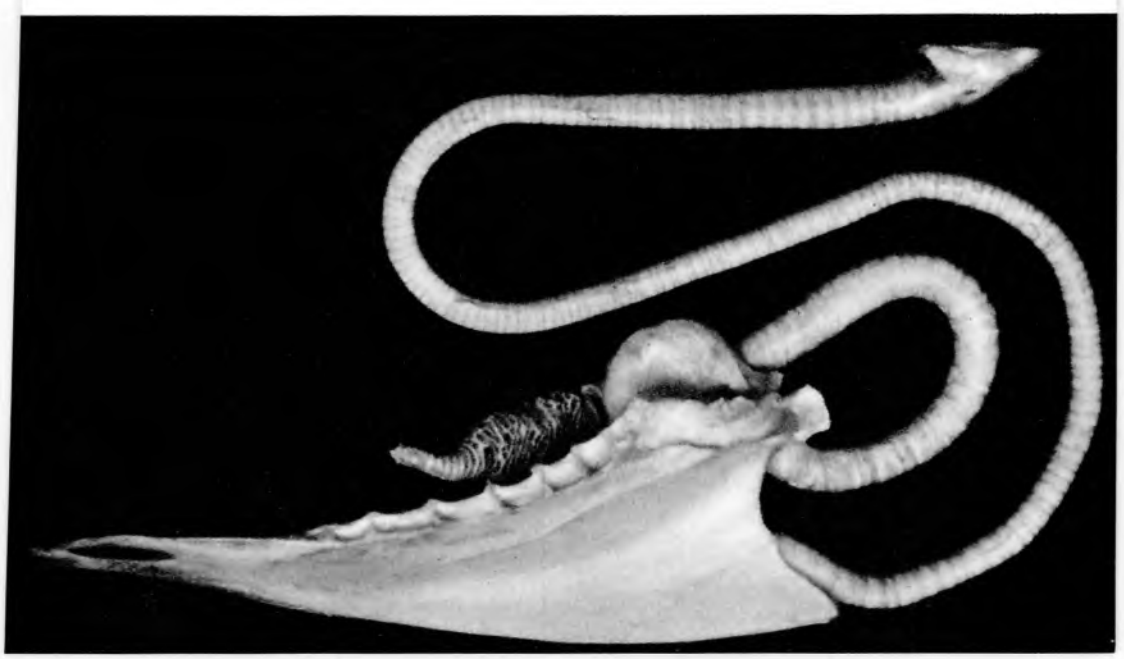
The nest-site, and a close-up of the nest, of a Greylag Goose *Anser anser* in reeds in the inner reaches of Matsalu Bay, Estonia.

E. Kumari



Notable tracheae (see P. A. Johnsgard, *Twelfth Annual Report*, pp. 58-69). (*Above*) Two views of a specimen from the probably-extinct Pink-headed Duck *Rhodonessa caryophyllacea* now in the collection of the British Museum (Natural History). (*Below*) Trachea and sternum of a Trumpeter Swan *Cygnus cygnus buccinator*.

J. V. Beer

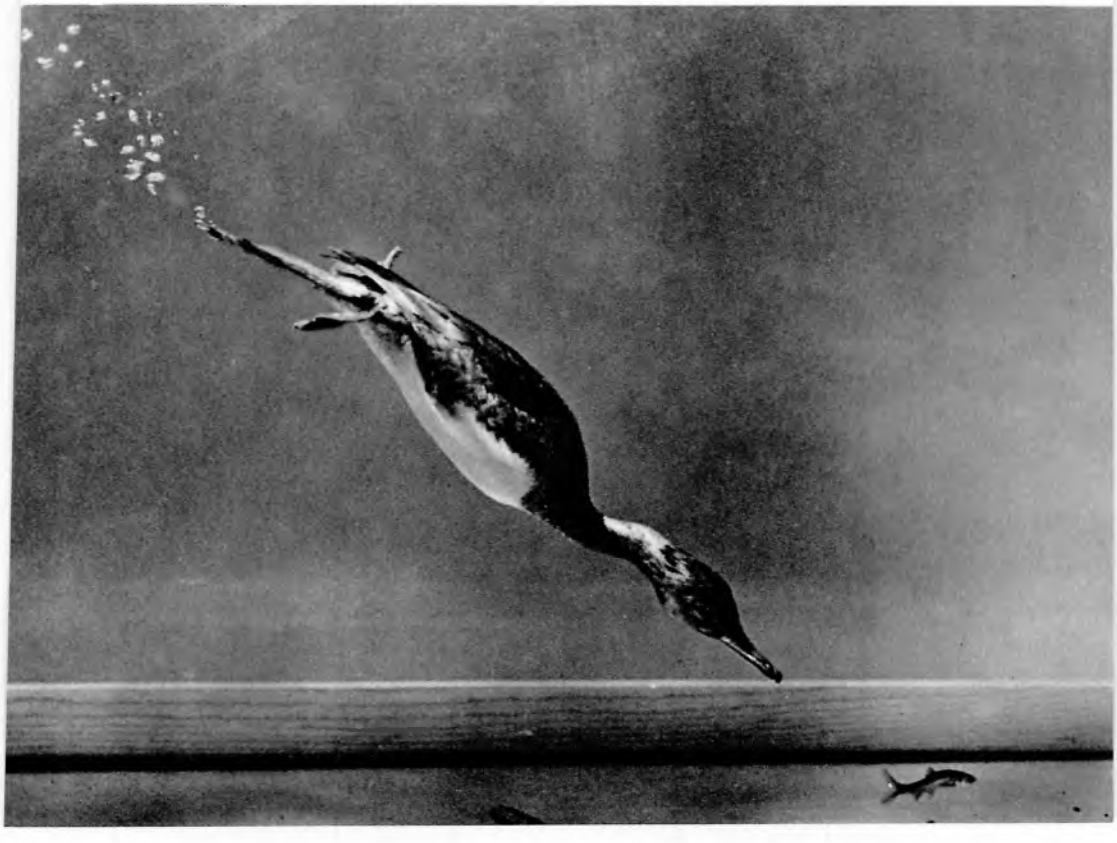


(*Above*) Harlequin ducklings *Histrionicus histrionicus* at a nest near Myvatn, north Iceland. (*Below*) A Great Black-backed Gull waiting for the next meal from ducks weakened by a bacterial infection. (*see page* 149)

J. Arnold Benington; F. Steiniger

Studies of ducks underwater, taken at the Laboratory of Ornithology, Cornell University. (*Above*) A Redhead *Aythya americana* watched by a Mallard. (*Below*) A female Hooded Merganser *Mergus cucullatus*.

David G. Allen



Coscorobas and Carolinas.

P. Talbot-Ponsonby