

## 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. Shorrocks

### 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 released 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										over	total broods	average brood size
		1	2	3	4	5	6	7	8	9	10	10		
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				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										
Barrow's Goldeneye	L.	1	1		3	4		2	1			one	12	5
												two	11	16
												one	14	6.6
												one	22	
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 crèches, rather than by death. On 16th July, near Reykjald 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 spurred 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

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## **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 Lebreton (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

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