

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 flying 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 Leuret (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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