

**BREEDING-HABITS AND NUMBERS OF
KINGFISHERS IN RENFREWSHIRE.**

BY

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THE breeding area of the Kingfisher (*Alcedo a. ispida*) on the White Cart, begins at Waterfoot and ends just before entering the town of Paisley, a distance of fourteen miles. Two miles pass through the south suburbs of Glasgow and are unsuitable for breeding birds. In 1933 twenty-one nests were situated on or near this waterway, and 120 young were reared. From Waterfoot to Cathcart is a distance of five miles as the crow flies, due north. At Cathcart the river turns at right angles and flows due west another five miles to Paisley, therefore all the nests were located in an approximate area of twenty-five square miles.

The White Cart, as its name implies, is particularly suited to the Kingfisher, having retained its cleanliness in spite of some filth going into it now and again. Its frequent and heavy spates in autumn and spring, and its ability to rise and fall very quickly, keep it perfectly clean.

Minnnows, sticklebacks, stone-loaches, shrimps and crustaceans such as the Kingfisher feeds on are all there in their thousands.

Regarding the nesting-sites, one flooded nest-hole was barely two feet above water-level, and the highest about 120 feet. The great majority, however, were from four to five feet above water-level. Most of the nest-holes were dug in various types of sand-bank, some soft and others hard, and one at least in solid clay, while two pairs of very industrious Kingfishers made homes for themselves in places where one would least expect to find them. One was in a very stony clay bank, and the other nesting-hole was hacked through earth, clay and rocks. These rocky nesting-holes were very short ones, one being only six inches in to the nesting-chamber, and the other about one foot. On the contrary three nesting-holes were excavated to the distance of four feet and more, two of these being in fairly hard sand, and one through solid clay. The average distance, however, was arm's length or about two feet.

I have known only one nest destroyed by flooding in this area. In two cases second broods have been reared from the same nest-holes the same year. Six in the first brood and seven in the second flew from one nest and six in the first and four in the second from the other, and a period of about forty and fifty days respectively elapsed between the first and second broods. These second broods left the nest on

August 30th and September 15th respectively. In previous years, young found by me during August were not second broods, but rather a third attempt at nesting.

During the past twelve years I have found about sixty nests, and none with more than seven eggs.

From an examination of a number of nests with a flash lamp I find the incubation-period is from twenty to twenty-one days and the fledging-period from twenty-three to twenty-six days. The following is an instance: March 31st, first egg; April 6th, seventh egg deposited; April 7th, bird sitting, but leaves the nest frequently and flies off with her mate. April 8th, incubation seriously begins, cock carrying fish to his sitting mate. April 27th, eggs hatching; April 28th, find hatched egg-shells beneath nesting-hole. May 18th, ringed young; May 22nd, young still in the nest; May 23rd, young fly. Period fifty-four days from the laying of the first egg to the flight of the young; fledging-period twenty-five days.

Another instance is as follows: May 22nd, incubation commenced. June 10th at mid-day I flashed a light on the nesting-chamber and found the female partly surrounded with hatched egg-shells. Immediately I withdrew, the cock appeared with a fish and entered the nesting-hole and came out carrying an egg-shell or possibly two, one within the other, and trailing another out with his feet. The female sat very tightly. June 11th, morning, there were no more traces of egg-shell either in the nesting-hole or chamber and the half egg-shell previously ejected was the only one in the vicinity of the nest-hole. The female heaved considerably and to all appearances all the eggs were hatched. July 3rd, the young flew. Fledging-period twenty-three days. This brood flew before their time probably owing to my having handled and photographed and ringed them the previous day.

In my experience all cock Kingfishers are very energetic in feeding their sitting mates, more especially when incubation has just commenced, and when the young are newly hatched. I have also watched them change places with their mates at dusk and dawn, and sometimes during the day, but their interest in family affairs appears to lag after the young are a few days old and the young are fed almost entirely by the hen. There was one cock, however, an exception to the rule, and it is the only instance in which I observed both birds brooding the young together. This they continued to do for a period of ten days, when unfortunately the nest-hole was destroyed by boys and the birds deserted their young. They

re-nested in the same district and successfully reared four young, the cock remaining with the hen and assisting in feeding the young till they left the nest.

I have seen many young ones capable of looking after themselves, and have noticed that they disappear very rapidly after leaving the nest, as do the parents at least from their breeding territory. A bird ringed by me with No. L.8583 as a nestling on May 19th, 1932, at Crookston, was found breeding at the beginning of July, 1933, on the tributary of the Kittoch, near where that stream joins the White Cart, and approximately eight miles from where it was reared, and exactly thirteen months after leaving the nest.

The extraordinary loud purring made by this bird's seven young when expecting food was distinctly audible at a distance of fifty yards. At this nest, when the young had flown, I observed a fight between two cock Kingfishers. Their mates were also witnesses and three young birds from the nest. It was obvious that the parents resented the intrusion of the other pair when their young had just flown. The cocks were perched on some roots overhanging deep water. From their upright attitudes and the way they faced each other at a distance of a few feet they resembled a couple of well-drilled soldiers. Now and again one would fly at the other attempting to knock his opponent off his perch, and if one turned his back for a moment the other immediately repeated the act. Finally they got a good grip of each other's bill, pulling and tugging as Gannets do, and collapsed in a heap into the water. Retaining their grip, they splashed about the water for about a minute before breaking loose, and shortly after the intruders vanished.

The number of Kingfishers now breeding in this district seems to me remarkable. In my boyhood days I always saw about six pairs of Dippers to a single Kingfisher on the White Cart; now I see about six Kingfishers to one Dipper, and at Cathcart I counted it a red letter day if I saw a pair of the birds, while now during an evening's walk from there to Netherlee, I can count on seeing about half a dozen.