

SOME BREEDING-HABITS OF THE
SPARROW-HAWK.

(5) GENERAL HABITS.

BY

J. H. OWEN.

By the time the young are ready to leave the nest, unless the weather has been wet or very windy, down again accumulates on the nest and in its neighbourhood. This time the down is from the young and not from the old bird.

The ways of the young when once they have left the nest become more and more difficult to follow. At first they return for meals to the nest, but this habit gradually ceases and other old nests are used. I have seen as many as seven Wood-Pigeons' nests used in one tiny copse. I think that the old birds seldom bring food for more than three weeks after the young have left the nest. Then the young have to find it for themselves, and so far as my observations go, the old give them very little, if any, training. The young hen birds seem to hang about the rides of the woods, and it is at this stage that they do most harm to game and chicken rearers. They cannot hunt properly yet, and find Pheasants in the rides an easy prey and will kill birds larger and much heavier than themselves. If disturbed they will return to the kill and can thus be easily trapped, but because a hawk is trapped by a Pheasant found dead, it does not follow that the hawk has killed it; for they will sometimes eat carrion. The young cocks, on the other hand, seem more often to leave the wood and select an area, usually intersected by large hedges and with running water, that can be worked easily from a small bunch of trees as headquarters.

In October, there seems to be considerable movement and migration. Afterwards one sees in the breeding

wood and district round it only the pair that bred there and often only a single bird. These return to the nest wood at night to roost. They come in pretty late and swish through once at a terrific pace, making a wild



Fig. 1. SPARROW-HAWK.

The hen takes up a position near the nest from which she watches after the brooding period is over.

(Photographed by J. H. Owen.)

call or shriek and then come in absolutely silently the second time. At this time of year they usually devour their prey where they kill it, but sometimes carry it to a low stump or mound in the wood and tear it up there. The usual catch is along the side of a fence and a collection of feathers on the ground by a fence is usually the sign that a Sparrow-Hawk has fed there. It is a

certainty if part of the skull is left. At times too, even in winter, they use old Pigeons' nests to feed on. Sometimes they construct very flimsy platforms late in December or early in January. These are quite flat and one can usually see through them easily from the ground. They are supposed to be used as dining-tables, but I feel convinced that this is not their sole use, as some which I have watched in progress of building have never had a trace of a meal on them afterwards. On the other hand, I have seen many used as dining tables, and on others I have seen birds deposited, as if in a larder, and removed later, but not eaten there. This, of course, may be the work of stoats and not hawks. Neither are these platforms used for roosting.

In February and early March, and even later, there is again movement on the part of the Sparrow-Hawks and all the vacant woods round Felsted become occupied, either by strangers or by birds which return to the neighbourhood in which they were reared. It should be possible to throw some light upon this question by ringing all the young within a certain area, and inducing keepers and others to report all they kill.

When the Hawks have appropriated a wood in March they select a nesting site almost at once and begin to build; sometimes both birds do the building, but I believe that the hen often builds the nest unaided. The rule in this neighbourhood is for birds to build new nests each year, not using an old nest of any kind for a foundation. If the eggs are taken and the nest removed, the birds usually resort for a second laying to an old Hawk's nest, if there is one in the wood, and just tidy it up a little and reline it. I have, however, in such a case, known an entirely new nest to be built in a different tree. If the eggs are taken during the laying period, the bird often continues to lay in the same nest and she may even lay a second clutch if the first is taken after incubation has started. In 1916 I had a curious experience. One of the birds I was watching was a very

late layer, and I had to go up to the nest more than once before I saw an egg. Then a Jay sucked each egg as it was laid, leaving the empty shell on the nest. The Hawk just pushed this out of the nest, sometimes only on to the brim, and deposited another egg. At last I removed the shells; cleaned the nest up a little and took the fresh egg. Later on the Hawk laid four eggs



Fig. 2. SPARROW-HAWK.

The old hen feeding at the nest after the young have left.

(*Photographed by J. H. Owen.*)

and raised three young in this nest. This case is interesting in that it shows that sometimes this species leaves the neighbourhood of the nest for at any rate parts of the day while laying is in progress.

The clutch varies from four to seven, but the usual number is five or six. The eggs are laid every other day and invariably before noon. If the clutch is taken when the bird has finished laying or begun to sit, the second clutch is usually a smaller one. I have only

one note of a bird following a six with a six; I have only twice known second sets contain five. Usually four, and often only three are laid. The fertility of the first set is at least 95 per cent.; my notes bring it out at about 97. In the second sets more than 25 per cent. are as a rule infertile, while in one case three out of five eggs were infertile.

The incubation period is five weeks. This is based on a very considerable amount of careful watching and calculation; at the same time, there is a variation in individual eggs of two days above and below this estimate. As eggs sometimes take as long as four days to hatch after they are chipped, this can easily be understood.

Elsewhere I have commented on the additions to the nest during the incubation and the nestling periods. In July 1916 I watched a hen arranging the twigs in the well of the nest, and generally shaking up the middle of the nest, a week after the young had left. The conclusion I arrived at was that the birds were continuing to roost on the nest, and probably this is the case for as long as the nest is used as a dining table.

I have also stated that the hen eats the egg-shells when the young hatch. This may be rather a rash generalization; it is based on the fact that I have watched two broods hatch and the egg-shells were eaten in each case, for I saw them eaten. The bird places them on the rim of the well and then munches them up at leisure. One shell was blown over to the ground by a gust of wind; perhaps this accounts for shells found sometimes just below nests. I have also found very fine fragments of egg-shell in the wells of other nests which we have not watched from a hut; these cases support the eating theory. It was not until late in July 1916 that I got certain evidence that the egg-shells are sometimes carried away and dropped. Yet this may be the usual thing after all, and the eating of the egg-shells which I witnessed may have been one of the effects of the hut.

This year, 1916, I have examined fourteen nests and measured several; I append some of the measurements, as the variations in size, etc., may interest others.

DETAILS OF SOME NESTS EXAMINED IN 1916.

	Tree.	Measurements in Inches.	Material.	Remarks.
1.	Oak, against bole.	Outside 14 × 13, depth 8½. Cup 6 × 6, depth 2.	Entirely new. All oak, lined with fine twigs and bits of oak bark.	5 eggs; first laying May 19.
2.	Oak, against bole.	Outside 20 × 14½ depth 12. Cup 9 × 7, depth 2½.	Entirely new. Chiefly oak, also lime, hazel and hornbeam; lined with fine twigs, oak bark and rotten oak wood.	5 eggs; first laying May 6.
3.	Hawthorn, about 12 feet from ground.	Outside 18 × 15½, depth 9. Cup 8 × 6½, depth 2½.	Mostly new or old Wood Pigeon's nest. Oak with a few lime twigs and old dead briar; lined with fine twigs and a great deal of oak bark.	Second nest of No. 2 May 30.
4.	Spruce, a yard from trunk on thin branch.	Outside 20 × 18, depth 8½. Cup 7 × 7, depth 1½.	Entirely new. Mostly Scotch and spruce; some larch; lined with fine twigs and bark of Scotch fir.	5 eggs; first laying May 7.
5.	Scotch fir, against bole.	Outside 19 × 15, depth 7½. Cup 9 × 8, depth 2½.	Entirely new. Larch, lined with fine twigs of larch and slabs of outer bark of Scotch fir.	5 eggs; May 7
6.	Oak, against bole.	Outside 18 × 17½, depth 6. Cup 6½ × 5¾, depth 2¾.	Entirely new. All oak, lined with small oak twigs and bits of oak bark.	4 eggs; second nest; May 27.
7.	Oak, where tree divided into three limbs.	Outside 21 × 10, depth 13. Cup 7 × 6½, depth 2½.	Entirely new. Very thick oak twigs on outside, becoming smaller towards middle; lined with fine oak twigs, oak bark and a few leaves.	5 eggs; second nest; July 26. This nest was built in March and deserted. and another nest made. That was robbed and the birds returned to this nest. Started to hatch July 24.

No account of the Sparrow-Hawk would be complete without some mention of the spring evolutions. These begin as early as mid-March and may be seen performed,

by both birds or the cock, as late as mid-May. It is possible, but improbable, that they are not performed by every pair of birds. It is extraordinary how few people have seen these flights. They take place both in the early morning about sunrise and in the evening about sunset, the earlier display being more prolonged. They are exceptionally interesting because the move-



Fig. 3. SPARROW-HAWK.

The hen preening her tail.

(*Photographed by J. H. Owen.*)

ments are diametrically opposed to the usual movements of Sparrow-Hawks. Ordinarily the Sparrow-Hawk flies low, never mounting and at a very good pace; in these evolutions the movements are slow and often conducted at a great altitude. The hawks rise above the nest-wood and fly to and fro, the length of it, sometimes along one side and back along the other. They maintain a horizontal course from end to end and rise at a very steep gradient at each turn. The movement of the wings is slow and measured and first one bird leads and

then the other. Occasionally, as they overtake one another, they seem to squabble and the pace increases for a short distance. They sometimes attain a tremendous altitude and then suddenly break off the movements and separate. At other times, after reaching a considerable height, they will suddenly descend like plummets to the wood and shortly afterwards resume the curious flight.



Fig. 4. SPARROW-HAWK.

The hen stretching a wing and the tail to their fullest extent.

(*Photographed by J. H. Owen.*)

It is strange that, so far as I can tell, no notice is taken of the wind, but the flights follow the length of the wood, in a narrow wood at any rate. The slow, measured wing-beats resemble the evening flight of the Jackdaw more than that of any other bird. The note used is generally the sibilant whistle. I have also seen such flights, sometimes across open ground, performed by single birds in late summer and early autumn.

Later on, as the time for laying approaches, the cock alone does these flights, while the hen remains perched

on some branch, which is not ordinarily used again for the same purpose. His movements are the same as those described above, and two or three times he descends to the hen at a terrific pace and then shortly resumes his flight. These must be courting displays. When the time for treading comes, he uses the same flight and



Fig. 5. SPARROW-HAWK.

A one wing stretch.

(Photographed by J. H. Owen.)

descends with a terrific swish straight to the hen without preliminary perching first. This is done on a branch, but it may occasionally occur actually on the nest, for I have seen a scuffle between the birds on the nest, but not well enough to be absolutely certain.

It is said that the Sparrow-Hawk never soars, but this is not true, although soaring is unusual and rare. In my experience the only true soaring is done when a

Sparrow-Hawk and Kestrel are playing; then both birds genuinely soar up to a tremendous height, first one and then the other getting uppermost. Now and then the Sparrow-Hawk makes a short dash at the Kestrel, which, however, easily evades the rush by a quick upward movement and the soaring continues in slow spirals. These occasions seem to be very rare, and I do not know what the climax is, as the birds have gone out of view, or some other misfortune has happened to prevent my seeing it.

It is my hope sometime to recast these notes in book form, and I shall be very grateful for candid criticism and help on points where my observations are faulty or deficient. I consider that the only way to get really accurate observations at the nest would be to construct an observation hut at least thirty feet from a nest, and watch proceedings with a powerful glass. It may be that on some future occasion I shall find a nest where such a proceeding is possible.