BIRD ROOSTS AND ROUTES.

BY

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The following paper does not pretend to be an exhaustive one, but is the result of my own observations during the past winter in the district of Barnstaple, North Devon.

All birds show considerable care in the choice of a secure roosting site, and in order to spare labour in looking for a fresh one every night, they frequently return to the same place continuously.

A great many of the small species roost in company, "cuddling," or keeping close together in a bunch for warmth. I have found four Wrens roosting in this way in a hole in a tree, and have disturbed several sleeping in their "cock" nests, but as far as my notes go, these are generally vacant. On one occasion last summer I noticed several Long-tailed Tits (probably a brood) on the top of their nest, which had become quite flattened and was covered with droppings. I expect, therefore, that they returned to the nest every night, and when they got too large, roosted on the top of it. Wrens up to the number of thirty at a time, Long-tailed Tits, and Golden-crested Wrens are recorded as roosting together in this "bunching" fashion by Mr. G. A. B. Dewar (in the Birds of Our Wood). One night I saw two Blue Tits embracing each other in this way in an apple tree. They looked like one large bird, so close to each other were they. This is not, however, the usual habit of this Tit, for it generally roosts in holes.

The Sparrow, as is well known, will occupy an old
House-Martin's nest, or will line a hole in a thatch with feathers. Partridges roost on the ground, while Pheasants and fowls prefer to roost in trees.

A Hedge-Sparrow which I had under observation, returned every evening last winter with the utmost regularity to a cranny among dead ivy on an elm. When driven out it would return in a few moments, first pitching on a branch of the tree, and then swiftly sneaking into the cranny, so that its return very frequently escaped my notice entirely.

Kestrels roost at the same spot, in a quarry for example, for many consecutive weeks.

The Pied Wagtail and the Grey Wagtail in the Barnstaple district collect in some numbers every evening, and roost in reed beds, like the Starlings. They drop in from all directions, but do not come from more than a mile distant. As a rule they collect on the ground, or telegraph wires, near the reed bed, before disappearing into the reeds, calling, and flying short distances in one flock. This flock increases as the birds come up one by one, and finally they drop into the reeds, where they are joined by Robins and Wrens.

A great many species of birds roost in company, notably Starlings. Others are: House-sparrows, Carrion Crows (especially in Devon and Somerset), Magpies (which I have observed near Barnstaple), Rooks, and Wood-Pigeons.

In North Devon, in the colder months of the year, the Rooks never roost in their rookery during, at all events, the months of November, December, January, February, and part of March, but they collect in large numbers and roost in a wood, perhaps two or three miles away from the rookery. In the morning the roost breaks up, and the members of each community make away, with the utmost regularity, to their respective rookeries. At the rookeries they stand about "talking," perhaps till nine o'clock, and then they disperse to feed and meet again in the evening at the roost. If the
morning is a frosty one they stay on the rookery trees longer than usual.

At Tapely Park, Instow, Jackdaws collect in prodigious quantities, numbering many thousands (though it is extremely difficult to judge the number), and roost in the beech trees. A roost of Rooks occupies the same group of trees. The interesting feature connected with these Jackdaws is that the birds, in going to and from their roost, always take exactly the same route. A large flock which, during part of its course, is forced to fly over the town of Bideford, always flies across exactly the same part of the town every evening. It was by watching and following up for several days another big flock (numbering 200 or 300), which fed daily in the fields at Braunton (about three and a half miles from the roost) throughout the whole of last winter, that I finally discovered this large roost. Every morning and every evening this flock as regularly as a Royal Mail performs this journey. They follow very carefully the same line of flight, even to the barest detail, but occasionally they fly very high, and they then appear to follow a more direct course, for it is noteworthy that these birds do not, as a rule, make a bee-line by any means. The reason why they sometimes fly at a great height I cannot imagine. I do not think that it has anything whatever to do with wind or weather. Arrived at the roost, the birds “rocket” down perpendicularly, dropping like plummets through space, and commence to “chock” for an hour or more before darkness falls. Starlings and Wood-Pigeons when dropping in to roost, “rocket” down in this same eccentric way, and many birds behave similarly at times, when they may be said to be “at play.” The habit with the roosting birds is, however, a constant one, and takes place every evening. I have found another big Jackdaw roost at Eggesford—in a very wooded district.

Far more striking evidence as to the use of flight-lines in these “miniature migrations” is to be seen in the
case of the Starling. A large Starling roost is a very imposing sight, and has attracted the attention of a great many writers. The very remarkable turns of flight displayed by these birds at roosting time constitute, perhaps, one of the most striking phenomena which British bird-life has to show.

In the Barnstaple district there are four or five such roosts. I have not discovered the birds travelling more than six miles to and from a roost. I have repeatedly noticed how strictly the birds keep to their arbitrarily prescribed line of flight. The best instance I can give is shown in the accompanying map.

The flocks sweep along this main course with astonishing regularity every night, flock succeeding flock, and each separate flock pursuing the same course, as a rule dividing at $x$, one half going to one roost, and the other half to another roost. They fly high—well above the neighbouring hills and valleys—although it will be noticed that they follow a valley for some distance; this route, moreover, was not merely roughly followed, but the birds
came accurately along a mathematically straight line, as far as $x$.

On February 19th I was at this spot watching the Starlings. I was particularly interested in one flock which never arrived along the usual, main, flight-line, but cut into it at right angles (as indicated in the sketch map). This flock, on this particular evening, however, appeared to have lost its bearings, for it wandered about, as I show in the sketch, as if trying to cross Coddon Hill, which the birds never did at any time; finally, it seemed to perceive its whereabouts, doubled back and went on, crossing the 400-foot ridge. On the 22nd, this same flock was making for the roost, flying against a heavy westerly gale. Hard weather and frost seems to make no diminution in numbers at the roosts. I may mention here that on every occasion that I have visited a Starling roost last winter (about seven times) there was always a Sparrow-Hawk flying close at hand, and I have repeatedly seen this Hawk harrying flocks as they came in to roost.

Individual flocks, when perhaps three miles away from their roost, and out of the main stream of "migration," followed, I found, in the few cases I had under observation, the same route every night. One small flock, for example, always crossed the River Taw at a certain point near a signal box, for several weeks last winter. Routes, however, like these, on the extreme periphery of the system, vary when the particular flock changes its feeding quarters.

Possibly some of the foregoing will have to be modified after more prolonged observation, but the main point will hold—the universal use of flight-lines by Starlings in going to and from their roost.

Whether birds, with their large semi-circular canals, have a sense of direction or whether their migrations are carried out by the aid of the sun or by the earth's magnetism or any other power is moot, yet one thing seems certain and that is that they possess a powerful
memory. I feel sure that however the migrational movement as a whole is effected, the way in which the Swallow returns year after year to the same old beam in the same old barn is simply memory—topographical knowledge of the chief natural features and the general mould of the country in the neighbourhood of its nesting home.