

## **Swallows in the Mill**

The 28th of April 1960 wasn't a particularly nice day but then ever since Aristotle we have known that one swallow doesn't make a spring day. But for me there was a particular significance in seeing the first swallow flying round the roof of Milton Mill on that April morning. For this was a warning that there was no time to lose in laying plans for the new film.

Ever since we had made a complete cine-film on one species of bird, the Reed Warblers of Minsmere Reserve in Suffolk, we had been encouraged to make another. It was clear that the intimate study of the complete story of a single species had great popular appeal, but the difficulty was to find another bird that would lend itself to this type of treatment.

While making our new film on Garden Birds we had been working on the common birds round the old Mill, and had realised that the swallows which come every year to nest in the woodstore in the upper storey of the old mill building provided the ideal subject. Here were birds everyone knows (we had been surprised how many people had not known what a Reed Warbler was) but which were likely to be tame enough to allow filming at very close quarters. Just how good a choice of subject this was we weren't to realise till much later.

For the first fortnight of May only a single bird was seen but by the 17th it found a mate and several birds were flying in and out of the woodstore. This has windows with no glass, and the shutters are always left open to allow the air in for seasoning the wood. Such an arrangement is of course ideal for the swallows which must have a dark place to nest with an ever-open access to the outside.

We have watched the swallows searching every corner of the mill, even swooping in and out of our garage during the few minutes the doors were open in the morning, but they always settled into the wood-store,

except for the year they nested just above the circular saw in the mill itself and reared a brood quite unperturbed by the frequent noise of wood-cutting. This year however they were clearly going to nest in the usual place which suited our purpose much better. We had already been granted permission to work in the wood-store by our landlord, and our neighbours who work on the estate gave us every possible help.

The first job was to find out exactly what the birds were up to. This is always true of bird photography - any job consists of as much study of the birds as time spent behind the camera, for one must learn to fit into the birds' routine and never try to make them suit one's own convenience.

At first it was all very confusing. Inside my rough hide on the rafters I watched at least four birds flying in and out of the windows, chasing, calling, singing, courting - but it was difficult to see any pattern to their behaviour and clearly they were still in the process of sorting themselves out into pairs.

The next day however one pair, presumably the early bird plus his new-found mate had already made up their minds and moreover decided on a nest-site. For on a beam over the door in the darkest corner of the loft were the first few mud-pellets carefully placed in a semi-circle where the nest was to be.

My next job therefore was to put up at once two canvas hides down by the stream where in previous years we had watched the birds coming back again and again to the same patch of wet mud for the material out of which their mud and straw nests were made. In fact half the attraction of Milton Mill as a location for making this particular film was that within 100 yards of each other were the two most interesting activities of the swallows at nest-building time. In the loft we could work with artificial light on the dull days; at the stream we could film the birds gathering their mud when the sun was right for colour-film. Or so we thought!

The problems soon became obvious. Indoors the process of acclimatising the swallows to the lights was slow; outdoors we found both our hides trampled flat the next morning by the local bullocks and one of them in the water. A barbed wire fence kept the cattle at bay, but we soon that our plan for using the dull weather indoors didn't work. For swallows are wise enough to know that mud doesn't harden in wet or cloudy weather so that they would only collect mud when the sun was out.

Progress with the lighting was very slow at the start for the first pair seemed to be put off by a weak 40-watt bulb hung on 21st May some distance from their chosen site. As we reckoned we would need at least 500 watts within a few feet of the nest for filming this looked hopeless.

By the 22nd building had stopped so we decided to leave them undisturbed for a few days. This did the trick for on the 24th they were hard at it again and the whole day was spent filming the birds coming again and again to the edge of the stream in exactly the right place and the same spot as last year, collecting great beak-fulls of mud.

As always when studying birds at close quarters we learnt many new things about them. The hen swallows seemed to do most of the work with the cock only accompanying her on each visit but seldom carrying material himself. The reason was clear enough too - he frequently sang to her from our barbed wire fence as she worked, and you can't sing with a mouthful of mud. Then we noticed how every pellet of mud was collected after a piece of straw or grass, or even a green blade of grass or a feather, had been picked up first. In good sunshine visits were made every two minutes for about half an hour, and then there was resting periods often of an hour or more.

The reasons for many of these observations became clear when we started watching and eventually filming the nest-building process indoors. Our first fears soon proved groundless and in fact the first pair

had almost finished their nest, built rather craftily on the remains of last year's by the time we had located it. But once they had settled into their routine of activity our lights had remarkably little effect on them, and we were quickly able to step up the power by stages until by the evening of 26th May we had two 275 watt bulbs on the nest and were able to take our first shots of the hen lining the cup with grass.

The second pair started their nest the next day and were fortunately much slower in building, as they started from scratch on a beam just below one of the windows. We watched them at very close quarters throughout the whole process and had them acclimatised to the light early enough to film every stage of the building process.

It was soon clear why the birds built in spurts of activity. Each pellet was placed wet and glistening on the rim of the nest and the ends of the reinforcing material through the centre of the mud tucked carefully into the centre of the wet pellets. After half an hour of this there was the risk of too much wet, new material to allow proper drying and hardening of the structure, so it was left to set for a while.

The whole system was a good engineering job, each pellet being vibrated into place by a rapid movement of the tongue in much the same way as concrete is settled in with vibrators in modern engineering practice. The result was a structure strong enough to take the weight a month later of five full-grown youngsters perched on the overhanging edge clamouring for food.

While we concentrated on the second pair and the progress of their nest, we watched the first pair lay their eggs, one each day and always at about dawn. My ambition was to film the hen of the second pair actually laying an egg. Although their nest was started with the first line of mud pellets stuck to the beam on 27th May, they started too quickly and most of it came adrift the next day. They were hard at it again on 29th but the 30th was a day of rain and no more mud was added. This gave us the time we needed to move the lights gradually closer so that

by 5th June when they had reached the stage of lining it with feathers, we had two 500 watt lamps at about four feet and enough light to film with powerful close-up lenses.

On the 7th their first egg was laid and the birds spent most of the day courting on the television aerial. I let her lay her second egg undisturbed on the 8th and I checked the time of laying - or rather I checked that by 6 o'clock it had already been laid. So that night at 10 p.m. the nest was visited and both birds found going to roost perched on the rim with still only two eggs in the cup.

At ten past four the next morning I was relieved to find there were still only two. In fact I had to wait until 5.58 a.m. exactly before she laid the third egg.

Filming the operation was technically difficult requiring a good deal of light but I was worried about disturbing her too much at such a crucial moment. There were several false alarms. Twice the hen went off with the cock. but eventually she returned. It was only just light outside but pitch dark round the nest. I used a hand torch to watch the bird, which fortunately she didn't mind at all, but it was still very hard to see what was happening.

Finally, I detected a rhythmical movement and switching on the lamps noticed that she was sitting tensed across the nest, heaving with the effort of laying her egg. I filmed for five, ten, fifteen seconds, but I didn't want to run out of film. I paused for five seconds - and in that time she suddenly tensed herself and I noticed that the third egg had already appeared. I started the camera running again and watched her turn round, tuck the new egg under her and settle down to recover from her exertions.

Although in the heat of the moment I had missed the actual laying of the egg, I was able later to examine on film this seldom recorded moment of travail in the bird world and the slow rhythmical pumping action by

which a bird's egg is laid.

We hope too that this moment will be one of interest in the final version of a film which will tell the full story of the breeding of these delightfully tame and co-operative birds. For we followed the birds right through until twenty young ones, two broods of five from each nest, had hatched and all successfully fledged. In fact it wasn't until well into September that the gathering on the electric cables at the back of the Mill took off one day about noon after several weeks of excited communal feeding and preening in preparation for the journey, and finally climbed in a twittering spiral of birds and lifted slowly off to the south.