

Spotted Flycatcher Project– Bredon Hill Villages – 2008

(Eighth year of local community-based survey of Spotted Flycatcher *Muscicapa striata*)

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Background

The survey again focussed on parts of 5 villages (plus 3 pairs in two others where house-owners helped with the monitoring), and as always relied heavily on the support of local people who reported sightings of Spotted Flycatcher in their area. Reports of nests in other villages were not followed up but where people monitored their own nests their data was recorded.

Nest Record cards were completed for all pairs in the survey – and from information received from observers elsewhere – and passed to the British Trust for Ornithology.

This year a milestone was passed in that we found the 300th Spotted Flycatcher nest in the project – the total now stands at 328 of which 317 have been monitored.

In addition to the normal survey – which involves studying the nests and breeding success – I carried out a survey of adult feeding behaviour at the nestling stage. Information gathered included number of nest visits per hour, approximate size of prey and feeding territories – as well as observations on behaviour and hunting success. This data will be collated before a separate report is produced.

Methodology

As usual the survey relied heavily on observations by the local community, backed up by co-ordinators and/or JC walking selected areas searching for Spotted Flycatchers. Known and potential sites were visited (cold searches) several times while reported sightings were investigated thoroughly. Once a pair was located the nest was found and monitored. Nest failures were followed by intensive searches to assess if and where the birds were making a further breeding attempt. Successful breeders' territories were monitored to check for second broods.

Results

A period of cool, damp and/or windy weather conditions in spring changed the feeding habits of a number of bird species – including the Spotted Flycatcher. The birds fed in the canopy of trees, rather than chasing down flying insects in the open and were thus difficult to locate. This behaviour made constant monitoring difficult when early nesting attempts failed and the birds moved to new territories.

The shortage of flying insects – particularly of larger species - appeared to continue well into July. Throughout the season there appeared to be extremely low numbers of ladybirds, honey bees, hoverflies, lacewings and 'brown' (ie non-white) butterflies.

Apart from a slight increase in numbers of hoverflies and brown butterflies in late July/early August this remained the case.

Statistics

22 pairs were located and monitored for at least part of the season.

37 nests were located and monitored.

15 nests failed – 10 predated (including 1 at nest stage, 5 at egg stage and 4 at young stage) and 5 apparently deserted – including 1 at nest-building stage – a 40.54% failure rate. Excluding the failures at nest stage – as per BTO data – the failure rate was 37.14%.

3 nests were deserted at egg stage and 1 at young stage. Causes are not known but may include disturbance, eggs failing to hatch or the death of a parent.

7 pairs made second breeding attempts after failing, with 2 going on to make a third attempt. Only 1 pair failed to breed. 7 pairs attempted second broods and 6 succeeded.

A minimum of 84 young were fledged but as continuous monitoring of all pairs was not possible the figure may well be higher. It represents an average breeding success rate of 3.82 young per pair – the second highest rate for the study.

Of the 37 nests 3 were in old Blackbird nests, 4 in small nest boxes and 18 in coconut shells.

One nest in this year's survey was almost certainly predated by Grey Squirrel. Observers from 3 sites in other areas reported seeing squirrels 'attacking' Spotted Flycatcher nests with the birds attempting to drive them off. Afterwards, all nests were reported damaged and empty. At one site mouse sp was the suspected predator as the eggs were taken over a 2-3 day period. Sparrowhawk is known to have predated one nest while Jay and Jackdaw are suspects in other instances.

Conclusions

Although nest-failure rates were high the breeding success (or productivity) was also high and this may be in part due to the apparently extended season, with more pairs than usual managing second broods.

The area covered by the survey for the past four years has been reduced. Taking that into consideration it is estimated that the numbers of pairs found per year has dropped from an average of 26 over the first four years to 22 during the second four – a fall of around 15%. With one exception (population usually 2 pairs) the number of pairs located in the other 4 villages in the study area has fallen in all cases. In some instances small, local populations or 'clusters' have disappeared. Unfortunately this

trend appears to be repeated elsewhere – reports from observers in other areas suggest that spotted flycatcher no longer breeds in a large number of sites.

Observations

It is quite usual in this survey to check nests after fledging for signs of success, dead young or un-hatched eggs. In fact it is extremely rare to find a dead young – the conclusion being that the parents remove them - and there has been evidence to support this. During this ongoing study the author has occasionally attempted to encourage a second brood by ‘tidying’ the nest – in three instances by removing an un-hatched egg. Whilst ‘tidying’ has been accepted and nests used for a second brood – the birds did not return to re-use a nest where the failed egg had been removed. Furthermore, it has now been noted that some pairs have re-used nests where a failed egg remains. This raises some interesting questions. For example, do the parents continue to visit the nest after fledging and if so, do they notice the loss of the egg and see it as ‘predation’? Does the remaining egg act as a stimulus to start laying again? Does this have implications for data collected by observers about the size of second broods? In 2008 I checked one such nest and found that the second clutch of 5 eggs included an un-hatched one from the previous clutch.

By the 19th May several pairs had started nest-building (one pair on the 10th), but the weather in late May was bad – gales and wet – and birds were difficult to locate as they switched from open hunting perches to feeding in the canopy of trees, joining other species such as tit spp., chaffinch and blackcap. Several of the traditional nest sites were very exposed as the early arrival of the birds coincided with the late start to the growing season.

Although the breeding (nesting) period started earlier than usual it continued later with 4 broods fledging during the first week in August, one c.16th and the last c.18th. The latter had been in territory since 10th May.

The preference shown by Spotted Flycatcher for a particular site has been mentioned in earlier reports. In 2008 one nest site was used by three pairs – as a first attempt (predated), as a second attempt for a second pair (predated but went elsewhere and succeeded), and for a second brood for a third pair which had nested c100m away. In another two sites a nest was used by two pairs this year.

One observer watched as a brood of young approached fledging and was certain that only one adult (watched feeding close to nest) was feeding the young for the last few days.

During feeding observations at one site (1 hour) a Sparrowhawk made two attacks on the nest (no other birds around at the time), flying straight in to the site which was well-hidden by foliage. Although driven off by me at the time the predator must have returned to take the last of three young. This behaviour appears to illustrate that Sparrowhawk are able to observe and locate a nest and ‘mark’ it precisely - then return repeatedly to take the young.

One observer noted that the nest rim was being built up during incubation (nest in coconut shell).

One observer reported that during a warm evening when thousands of ‘flying ants’ were emerging, his pair of flycatchers fed almost exclusively from the surface of the lawn – presumably exploiting the huge abundance of prey.

One observer reported watching flycatchers drinking at a bird bath some distance from the nest. Knowing that they have rarely been seen drinking during this study he placed a second bird bath nearer to the nest site and saw birds drinking on two occasions and bathing on one.

The same observer saw the pair mating on the morning that the last egg was laid.

A pair was watched feeding until 21.45 on 3rd July – 15 minutes before the local bats emerged.

Acknowledgements

This study could not be carried out without the cooperation of many local people – some of whom help to monitor their pairs of flycatchers whilst others provide freedom of access to their gardens. Although the survey is now smaller and concentrates on 5 main areas within villages it still relies heavily on the help of around 80 households. Several individuals carry out local searches to locate birds, contact the householder and me – and continue to provide observations on progress.

That we have now located 328 nests during the 8 years of the project is testament to the continuing support of the local community.

Special thanks are due to 12 householders who allowed me to sit in their gardens and carry out my one-hour feeding observations – usually twice!

Once again, thanks are due to other observers who sent in information from outside the study area.