

Projective Objectives

The Nest Record Scheme (NRS) gathers vital information on the breeding success of Britain's birds by asking volunteers to find and follow the progress of individual birds' nests. The data collected for the Nest Record Scheme is used to produce trends in breeding performance, which help us to identify species that may be declining because of problems at the nesting stage. The Nest Recording Scheme data also allow us to measure the impacts of pressures such as climate change on bird productivity.

Chesworth Farm was entered into the Nest Record Scheme this year in an attempt to monitor some of the breeding birds on the Farm, in particular birds that used boxes such as Blue and Great Tits, Starlings and Jackdaws. The principle idea was to set up 10 Tit-type nest boxes and two Starling/Jackdaw boxes around the Farm and monitor them throughout the breeding season (March to August).

Eddie Bew and I carried out four visits in total to each of the tit nest boxes to establish the following:

- Was the box occupied
- What species was using the box
- Accurate dates for:
 - nest building
 - nest completion
 - first egg laid
 - clutch size
 - incubation period
 - time to fledging
- Monitor growth rates
- Outcome (Success/Failure)



Figure 1 - Juvenile Blue Tit

As the project develops each year we will be able to collate the data collected on each visit and look at population trends as well as potential pressures on breeding success such as climate change, weather, food availability and site disturbance.

The decision was also made to ring the juvenile birds (pulli) produced and the adults if present, when carrying out the nest visits. The process of ringing involves trained personal fitting a small metal ring around the leg of the bird. Each ring has an individual alphanumeric code on which allows us to identify that particular bird for the rest of its life. Ringing is carried out in an attempt to establish where the birds move to once they have fledged the nest and also gives us an insight in later years as to whether adult birds have any site fidelity to a particular nest box or whether their selection is random.

By fitting any adults that are using the boxes with rings we will also be able to draw conclusions as to the productivity of each individual bird. We hope to be able to present this data in the future with the continued development of the nest box study.

2015 Breeding Season

Like 2014 breeding season 2015 started approximately two weeks earlier than 2014. The early unseasonably warm spring was clearly the right indicators for the bird populations around Chesworth Farm to start breeding.

The surveying season got under way with a first visit to the nest boxes on 10th April. At this stage 10 of the boxes nests had been built but were awaiting lining to complete the nest for laying. In addition to the 10 Tit type nest boxes the two Jackdaw/Starling nest boxes also had half completed nest but like 2014 these were not the intended occupants, again these being Great Tit and Blue Tit.



Figure 3 – Blue Tit Nest



Figure 2 - Great Tit Nest

The second visit to the boxes was made twenty days later on the 30th April. This time period was to allow the species time to complete the nest by lining them with a chosen material and to start the egg laying/incubation period. The material that was commonly used to complete the nest was much the same as 2014, but clearly the Blue tits on Chesworth Farm have a preference to luminous pink and yellow tennis ball fluff. As reported in 2014 Great Tits on the Farm tended to line the nest with a mixture of llama and sheep wool this continued in 2015.

The visit was the right time period for laying and incubation and the majority of the boxes had Adults on or near the nests. As not to disturb the Adults on the nest I recorded that the adults were at the nest but could not record the amount of eggs present. The nest boxes, that the adults were away from probably feeding themselves I did manage to record the number of eggs present and these eggs were warm to the touch and clearly still were more to be laid, typically a Blue tit can lay between 8-10 eggs and a Great tit can lay 7-9 eggs.



Figure 4 - Great Tit female on nest



Figure 5 – Blue Tit nestlings

The third visit was carried out on the 8th May, by this time point both species using the nest boxes had all finished laying their eggs and were at the latter stages of incubation/hatching stage. Both species has an incubation period of between 13-15 days.

The fourth visit was carried out on 17th May, the young were all hatched and developing really well which gave indications that the food was readily available and also indicated that both adult birds in each nest boxes were both alive finding food. The young at this point were ringed and recorded on nest record cards which are submitted to the British Trust Ornithology.

A couple of days after the fourth visit the weather drastically changed and the heavens opened producing long intensive spells of wet weather with a strong south westerly wind whipping up across the farm.

A final visit was carried out on 13th June this visit was to establish how well the birds had succeed in their breeding attempt with fledge youngsters. Also we can establish if any young had unfortunately died in the nest and also how many unhatched infertile eggs there were. Unfortunately we found 19 dead Great tit youngsters in 8 of the occupied boxes and 7 Blue Tit youngsters in the remaining 2 boxes. These deaths were sad due to the fact that these birds were so well developed and probably on the verge of fledging. Although these deaths are unfortunate we did have some success in seeing 16 Great Tit fledge and 12 Blue Tit. As reported last year both these species often have unfertilised eggs and again this was seen in both species Great Tits having 15 unfertilised eggs and Blue Tits having just the one.

Summary

Sadly for both species this was another bad breeding year. The unseasonably warm start to April gave all the good indications to both species to start their breeding attempt early. The drastic change in the weather I feel was a key reason on the untimely death of some of the young birds, as most of these young birds were on the verge of fledging and probably were due to leave within days. The excessive volume of rain fall and the high winds experienced probably lead to the small caterpillars that form key part of diet of the young birds being washed of the trees that the adults would be feeding on, this probably then lead to the young birds starving to death.

In summary of the twelve boxes erected, ten were occupied. Eight were taken by Great Tits and two by Blue Tits, two boxes were unused.

This year a total of twenty eight young fledged their respective nest boxes. There were 12 Blue Tit nestlings and 16 Great Tit nestlings ringed, as is expected not all of these birds made it to fledging which is reflected further in the table below. The table below explains in detail the successes and failures of the 2015 breeding season for the two species we found in the nest boxes:

	Eggs Laid	Eggs Hatched	Infertile Eggs	Dead Young	Fledged Young	Success
Blue Tit	20	19	1	7	12	60%
Great Tit	50	35	15	19	16	32%

Other breeding success around Chesworth Farm

As part of the nest recording scheme it is not just nest boxes we record. We also go out and painstakingly look for nests in a variety of different habitats and often in weird and wonderful places such as flower pots and life rings. One important nest that we came across was that of a pair of Linnets that inhabited the Gorse bushes in Back field. This pair managed to lay five eggs and these were monitored over a period of four visits. Two youngsters had hatched by the 2nd visit leaving 3 unhatched/infertile eggs. The 3rd visit was carried out and the two were a suitable size to ring. On the final visit both birds had fledged successfully.



Figure 6 – Linnet nest and eggs



Figure 7 – Linnet nestlings and unhatched egg



Figure 8 – Linnet Pulli

Barn Owl breeding over the last eight years

Chesworth Farm over the past eight years has been really fortunate to have a pair of Barn Owls breeding on it. The Barn Owl box was donated to the farm by Barrie Watson in 2007 and then replaced with a new one by the Sussex Ornithology Society (SOS). Barrie Watson conducts the Barn Owl breeding survey for Sussex and was the president of SOS up until the last couple of years. The box each year is inspected by Barrie and Horsham District Council staff to see how the Barn Owl have succeeded in their breeding attempt for that year. Below is a table showing how successful the Barn Owl have been over the last eight years.

Year	No of Barn Owls pulli
2008	4
2009	3
2010	5
2011	0
2012	0
2013	0
2014	6
2015	3



Figure 9 – Barn Owl pulli



Figure 10 – Barn Owl pulli

I would like to take this opportunity to thank the Friends of Chesworth Farm for their sponsorship of the rings which have been used on all the young birds this summer. This is a vital aspect of the project this would not be possible without the ongoing support of the Friends group. I would also like to thank Eddie Bew for his carpentry skills and maintenance of the nest boxes and Jonathan Brokenbrow for his expert ladders skills.