

Project 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 Record Scheme data also allows us to measure the impact 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 five 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 personnel fitting a small metal ring around the leg of the bird. Each ring has an individual alphanumeric code 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.

New Camera Box

The Friends of Chesworth Farm purchased a nest box camera which was installed on the Farm. Situated on the end of the Volunteer Centre this new addition will offer unique views of bird breeding behaviour and the development young birds. Although this camera was purchased and installed late on in the breeding season we were lucky enough to see a Blue Tit nest and five eggs. However the female unfortunately went missing from the nest box and was presumed predated whilst feeding away from nest site.

Swift Boxes

The Swift boxes situated on the Volunteer Centre were set up this year with the MP3 players and external speakers. The idea behind this is to play the Swift call and attempt to lure Swift down from high up in the sky to investigate these nest boxes. The sound is played from early morning through to dusk. Although Swifts were seen in the area so far they have been unsuccessful from a site breeding point of view. However, the small resident population of House Sparrow decided to take up one of the boxes and managed to raise 3 young which all fledged successfully.

2016 Breeding Season

The breeding season in 2016 was approximately 5 days earlier than 2015. Early spring proved to be another unseasonably warm period which was clearly evident from the early budding and flowering tree species around the farm. This warm period offered the indicators for the bird population around Chesworth Farm to start breeding.

The nest boxes around the Farm saw another good take up with resident birds. All the boxes were taken up with a large proportion of both Great Tit and Blue Tit featuring in them.

Species	Number of Nests	Total eggs	Total Pulli	Total Fledge	Eggs to Fledge survival %
Blue Tit	4	31	9	6	19.4%
Great Tit	8	57	32	14	24.6%

Breeding Timelines of Some of the Species Found on the Farm

Species	Clutch size (No of eggs)	Number of broods	Incubation period	Fledging period
Great Tit	7-9	1 (2)	13-15 days	18-21 days
Blue Tit	8-10	1(2)	13-25 days	18-21 days
Linnet	4-5	2(3)	13-14 days	13-14 days
Greenfinch	4-5	2	14-15 days	14-16 days
Reed Warbler	4	1-2	12 days	12-13 days
House Sparrow	4-5	2-3 (4)	13-15 days	15-17 days

Other Nest Sites around the Farm

Linnets were again found to be breeding in Back Field behind Niron House in the small Gorse bushes. Typically Linnet are double brooded which means they will have a second clutch of eggs, normally a couple of weeks after the first clutch of young have fledged. A Greenfinch nest was located in the Gorse patch too but unfortunately this was found by Magpies and the nest was destroyed killing all of the four pulli present. Another successful nest this year was a Reed Warblers nest found in Platt pond this nest produced four young which all fledged successfully.



Figure 2 - Linnet nest with 5 eggs



Figure 3 - 3 Linnet pulli



Figure 4 - Reed Warbler nest with 4 pulli

Box 1 Warren - Great Tit breeding cycle



Figure 5 - Female Great Tit sitting on eggs



Figure 6 - Warm eggs exposed



Figure 7 - Great Tit pulli

Summary

In summary, of the 12 boxes erected 12 were occupied. Eight were taken up by Great Tits and four by Blue Tits.

The 2016 breeding season saw all the nest boxes as part of scheme being used, but like 2015 the unseasonably warm start in April kick started the breeding season off early. However, the end of April saw changes in air temperature as cold winds came from the North dropping the temperature suddenly overnight. This was then followed by persistent rain fall in the beginning of May which would have made finding small Green Oak Tortrix caterpillars hard to find to feed young birds.

Overall this was a poor breeding season for Blue Tits and Great Tits on Chesworth Farm and this is something that has been seen across the country by the British Trust Ornithology.

Barn Owl Monitoring

Barn Owl continued to breed on the Farm in 2016 with 3 Barn Owl pulli being born; all three of these owls were a good size in weight which is a good indication that both adults were present throughout the early stages to feed them. I went back to the box in December and recorded that all the young Owls had fledged which is another great breeding success for Barn Owl on the Farm.

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 that 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.