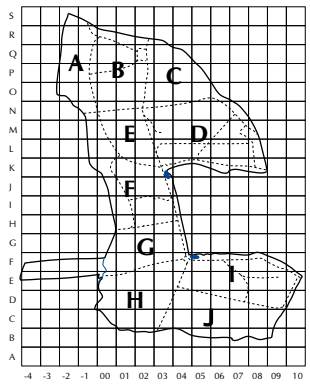


TWITTER

Treswell **W**ood - **I**nformation **T**o **T**ell **E**very **R**ecorder

October 2011 Treswell Wood IPM Group
(Integrated Population Monitoring)

All projects by permission of NWT

2011/4
Number
84

Project leaders:

CBC Pat Quinn-Catling

Nest Records Chris du Feu

Ringing John Clark & John McMeeking

The long, dry period continued through the late summer with too few showers to make any appreciable difference to the hard, dry Treswell soil. Unusually in such a dry summer, we did not see large numbers of birds coming to drink at the pond. Captures in standard nets have been well below average with a moderately low proportion of juvenile birds. It points to a generally poor breeding season. Catches towards the end of the interval have been boosted by the reasonably early arrival of our wintering Goldcrests. Captures of Blackbirds, Song Thrushes and Robins have been particularly low. A casual observer might wonder if the captures of four individual Sparrowhawks indicated an abundance of these predators which would, in turn, be responsible for mass culling of prey items, and thus the low bird capture numbers. This is probably not the case. These predators are just as much controlled by prey abundance as controlling it. With few prey present, the predators will move elsewhere. In fact, it could be a general lack of small birds that is driving these predators to move from place to place in search of food, moving on when they find hunting unproductive.

Away from the field, excellent progress has been made with data analysis. Our paper, with leading authors Jo Surgey and Charles Deeming, describing the results of the nest lining experiments, has been accepted for publication in Condor - a major US ornithological journal. The paper is *Use of artificial nest material provides insight into nest construction behaviour of tits*. The paper indicated that tits do not seem to have colour preferences for lining material. Normally they do not forage more than 200m from the nest site for material, with Great and Marsh Tits foraging further afield than Blue and Coal Tits. The nearer the source of the material to the nest, the more it was used. The work indicated strongly the opportunistic nature of tits' nest building behaviour.

After a number of false starts over the last 10 years, we have been taken in hand by Andrew MacColl at Nottingham University who has applied a statistically robust technique to our data relating capture rates to coppice age. This paper is now in draft form and we hope to submit it to an appropriate journal shortly. It supports earlier work by Rob Fuller and others which relates coppice age to densities of breeding birds. However, it extends the work to juveniles and adults outside the breeding season - something that cannot be done by territory mapping. We have shown how bird numbers respond to coppicing and subsequent regrowth in the wood. One unexplained, curious feature is that for some species classes (e.g. adult Blackbirds and Blackcaps in the breeding season) their densities decrease after an initial peak at coppice age of about seven years but, after around 20 years, seem to increase again with increasing coppice age. This seems a real effect rather than a statistical anomaly.

The Treswell Wood IPM Group conference - Saturday, 25th February 2012.

After 39 years of work in Treswell Wood, we thought it would be a good idea if everyone involved had a chance to meet all the others, learn about their activities, hear what is being done with some of the data and have a chance to influence future projects; so we are organising a gathering in Treswell Village Hall. Times will be confirmed but we expect to start at 09:30 and end by 17:00. We are delighted that Andy Clements, Director of the BTO, will be coming to open the conference and share his views on the work undertaken here.

The morning will be taken up by short presentations detailing the various operations in the wood - woodland management, census work, ringing, nest recording, and the dormouse project. There will be plenty of time to meet others over coffee and lunch and see some of the data brought to life on the computer screen. In the afternoon we will be able to learn more from Charles Deeming (Lincoln University) and Andrew MacColl (Nottingham University) about the studies they are doing using the Treswell Wood data.

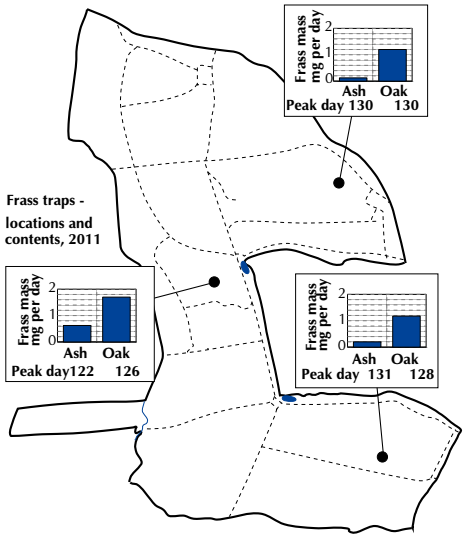
There will be several changes in the CBC team before the 2012 season. We hope that this event will provide an opportunity for the experienced census workers to meet the new volunteers who will need some induction before the 2012 season begins.

The cost of the day will be a mere £8 and this will include a drink on arrival, morning coffee, mid-day buffet meal and afternoon refreshments. Catering will be provided by Justine Bower of Hillcrest Farm (anyone who has tasted her special event cakes in the wood will want to come just for the catering).

We would like to stress that this meeting is open to everyone associated with the Treswell Wood operation in any way - and by receiving a copy of Twitter you are automatically associated. If you wish to come from afar, contact one of the locals and it should be possible to arrange overnight accommodation (and a ringing visit to the wood on the following day).

So, if you have ever wondered who else is involved with the wood and what they do, what other people think of the work done here and what else we should be doing, complete the form on the last page and send it to Neil now. We look forward to seeing you all on the day.

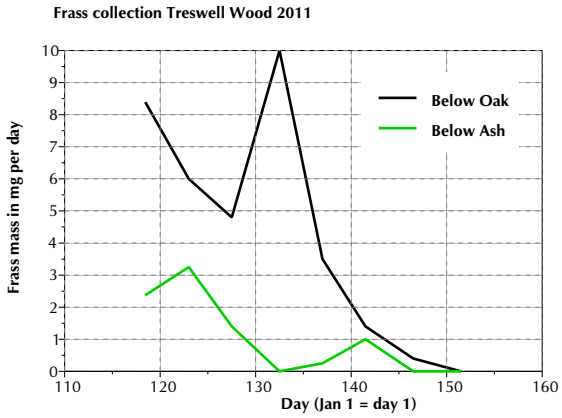
Frass collection



Thanks to Ken Smith (chairman of the BTO Ringing Committee) we have begun what we hope will be another long-term operation - measuring caterpillar abundance by collecting their frass (i.e. their droppings) in a standardised way. Ken has, very kindly, worked through this year's collection. Even with this single year, there are very interesting features to be seen. Until now, Ken has only studied the caterpillar crops under oak. In Treswell Wood this would not be entirely sensible as oak is so scarce in much of the wood. Thus we sited the 'frass traps' in pairs - one of each pair under an oak, the other under a nearby ash. The three pairs of collectors were placed in the south, centre and as far north in the wood as we could find any oaks.

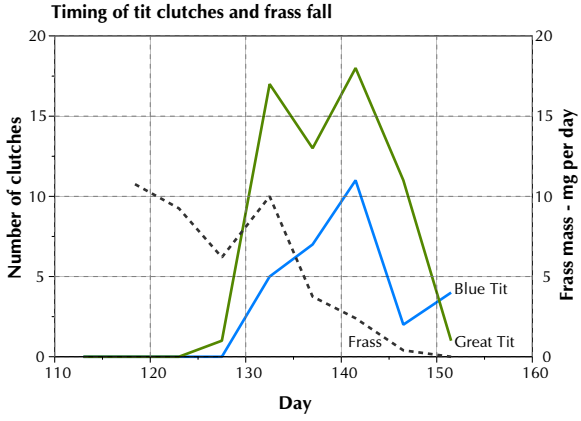
What have we found? First, we did note that the tits started nesting unusually early, probably because of the warm, early spring. Next we noted how much later to come into leaf was the ash than was the oak - ash leaves were barely open by the time the tit nesting season had ended. It was no surprise to find, therefore, that frass below ash was not abundant at all - caterpillars obviously cannot feed on the leaves which are not yet there.

The map above gives the locations of the three pairs of frass traps and gives the total mass of frass (in mg) collected from each trap under each of the two tree species. Also shown is the peak date of frass abundance. You do not have to be a statistical expert to realise that ash did not provide the same abundance as oak, but also that the timing of the crops on both species was not really much different. In all these calculations, the day is the day number in the year with January 1 counting as day 1 and May 1 is, therefore, day 121.

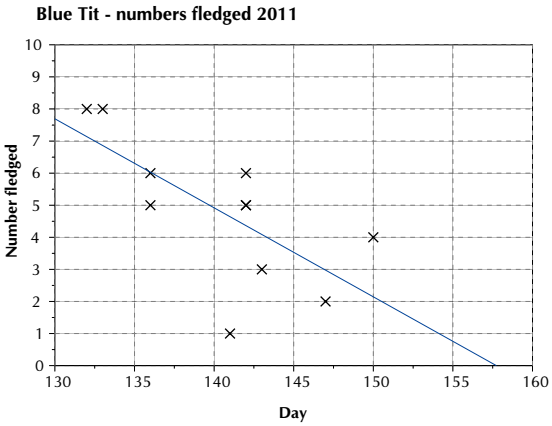


The first graph shows the timing of the frass through the season. For this the masses collected at the three stations for each tree have been combined to give separate species patterns. It is interesting to note that both species have two clear peaks - this could result from the crop consisting of two (or more) species which have slightly different timing or else from a change in weather which temporarily suppressed caterpillar activity. Further, the graphs clearly indicate that our frass collection began well after the caterpillars hatched - even though we installed the collecting trays earlier than Ken normally suggests.

But how did this match the tit season? The second graph compares the timings of the caterpillar crop and tit nesting. The peak food demand by nestling tits is when they are about 8 days old. The graph plots the pattern of 'peak demand days' for this year's tit nests together with the overall pattern of frass abundance. The peak demand day for a nest is calculated by adding the day the first egg was laid to the clutch size (giving the start of incubation day). Adding 14 to this gives the hatching date and adding another 8 gives the projected peak demand day. In this graph, all the nests in which full clutches were laid are counted, even if they failed during incubation. This is because tits have to lay their clutches so that peak food demand matches peak supply. Thus clutches must be laid well in advance of the very short period of caterpillar abundance. So, even if a nest has eggs predated during incubation, the clutch would have been laid in anticipation of the timing of the caterpillar crop. In the graph, the dotted line shows the frass abundance (total of ash and oak traps). Again, a statistical expert is not needed to observe the terrible discrepancy between peak demand and peak supply. But in spite of the earliness of the tit season, peak demand still came well after



peak supply. It seems as if the caterpillars were also operating even earlier, responding to weather very much more rapidly than either the trees or the birds. This would also explain the poverty of the frass crop. Ken's other studies in oak woods have shown peak frass rates in the range 40 - 10,000 mg per day per m^2. Our peaks, for ash and oak respectively, are 50 and 170 mg per day per m^2, well within the lowest part of Ken's previous ranges.



How does this affect nesting success? There were several Blue Tit nests, later in the season, where the young died for no apparent reason - and we can suspect it was lack of food. Of the nests where young did fledge successfully, for the Blue Tits there was a clear relationship between timing of peak demand day and number fledged. This is shown in the last graph. For Great Tits the relationship was not so strong but the pattern was unduly influenced by two late nests with a high success rate - possibly these two, both in the south-west of the wood, had come across some very local food source, later in the season, that enabled them to rear larger broods.

All very interesting - but it raises many more questions. When siting the frass traps we tried to find a suitable location in the north of the wood - the most northerly place was really more central than northern - the reason being the almost complete lack of mature oaks in the northern compartments of the wood. We had not realised, before, that oak was so lacking in the north. However, with such a clear difference in oak abundance in different parts of the wood, there is obviously room for a comparison of nesting success in different parts of the wood. We have records of about 1,200 Great Tit and 1,400 Blue Tit nests in boxes running from 1979 onwards. Each nest record has details of eggs laid, dates, numbers fledged etc. and, vitally, the location within the wood. We also have records of the age of coppice in these locations in each year. We are delighted that Charles Deeming is now working with us on this project.

Noteworthy Captures

Species	Age/sex	Ring	Date	Grid

Sparrowhawk **3M** **DK98423** **25/9/2011** **D03**

The fourth Sparrowhawk captured during the last ten weeks. All were, as so often, unringed young males - this number in such a short time is unprecedented. The other three birds were DK98422 age code 5 on 18/9/2011; DA51900 age code 5 on 28/8/2011 and DA51899 age code 3 on 14/8/2011.

Tawny Owl **3M** **GR24205** **25/9/2011** **E04**

After the three captures of the previous interval should we expect to continue the trend or should we be surprised to catch yet another? As with the previous three, this was an unringed bird.

Blue Tit **3J** **L327678** **8/9/2011** **Q02 Feeder**

This was the first of this year's 88 nestling-ringed Blue Tits to be retrapped. Since this capture, we have retrapped two more. This is a very low recapture rate indeed, just a whisker higher than the record low of 6 of the 171 by this time in 1982. Possibly low breeding success has been followed by high post-natal dispersal or mortality (or both).

Long-tailed Tit **2** **CXN499** **16/10/2011** **P00**

One of 42 we have caught during this interval. The plot thickens. We trapped a family party of individuals with very long tails. These were noted in the previous issue of Twitter. They were immediately detectable in the hand as being obviously, and then measurably, long. We are confident of our original measurements because we noticed that the tails were long, took the measurements carefully and double-checked them. Juvenile Long-tailed Tits undergo a complete summer moult so the tail feathers they have now are not the same as those they wore when they fledged. Since catching that family party, we have measured the tails of all birds of the species we have trapped and found no more very long tails. To our surprise, this bird is one of our Very-long-tailed Tits but we did not realise this until looking at the data later. Its new adult tail length was only 93 mm, compared to the juvenile tail of 103 mm. We have also retrapped another member of the party, CXN505. Again its adult tail was shorter - from 103 mm down to 88 mm. This is most unusual - normally adult feathers are longer than those of juveniles.

Treecreeper **4** **CXN070** **23/10/2011** **J03**

This particular bird is the oldest one trapped recently - but at just over two years since ringing, it needs to live another six years to break the species age record. After two very cold winters we might have expected Treecreeper numbers to be down - but it seems not so. We have caught a total of 19 during this ten-week interval, of which 13 were new juveniles, one a new adult and the remaining five were retrapped adults. Where have they come from?

Blackcap 3M L731364 16/10/2011 R-1
Either a very late-departing juvenile or a very early wintering arrival. It is probably the former - it was still undergoing post-juvenile moult when caught so unlikely to have travelled far from its natal site.

Garden Warbler 3J L731264 21/8/2011 J03
This bird was still in complete juvenile plumage so it would appear to be a very locally-reared bird. Not only was it the first Garden Warbler to be trapped in the wood this year, it is the first we have trapped since 2005. They have not been numerous in the wood since our records began, but they used to be caught annually, with a peak of 22 birds in 1989. In complete contrast to the Blackcap, this closely related species is not doing well at all.

Chiffchaff 4 CXN218 4/9/2011 Q02
A recapture of a bird ringed as a juvenile in the wood in 2010. On this capture it was in full moult - rather late for a bird which is likely to be flying southwards for the winter. Together with all our other Chiffchaff records, we have sent details of this bird to student Rike Kroener at Newcastle University who is studying moult in this species. He notes that northern populations in the UK seem to moult later than more southerly ones. This seems a little counter-intuitive as the northern birds will need to start moving south earlier than those in the south, suggesting they should complete moult earlier. We look forward to hearing Rike's full results in due course.

Goldcrest 3F CXN582 18/9/2011 N06
The first Goldcrest of the winter. We have already trapped 29 of them. As usual, almost all have been definite juveniles and all have been new birds.

Bullfinch 3M L731378 23/10/2011 J03
One of a party of three unringed juvenile Bullfinches. This species tends to be very late to moult and all three birds were still in moult, one with many of its juvenile brown head feathers still very clearly visible.

Goldfinch 3J L731309 8/9/2011 Q02 Feeder
Goldfinches continue to be trapped in small numbers, mainly at the feeding station. This is the first of four individuals to be trapped in the wood this autumn.

Controls and Recoveries

Species	Age/sex	Ring	Date	Grid

Blue Tit 4 X497853 25/9/2011 D02
In contrast to the Great Tits from Hillcrest farm noted below, this bird was ringed at the farm in the early spring - it had not been retrapped there nor in the wood until today.

Blue Tit 3J X497954 21/8/2011 J03
The first of a quintet of wanderers from Hillcrest Farm in Treswell. It was ringed there in late July. The other four birds were all Great Tits: X497916, X497924 and X497646, all juveniles ringed in July at the farm and retrapped in the wood in late September. The last of these Great Tits, TH29000 was ringed as a nestling at the farm earlier in the year.

Great Tit 3JM TR47832 8/9/2011 Q02 Feeder
One of our nestbox products from the south of the wood. It was trapped at Hillcrest Farm twice in late July and is now back in the wood.

Blackcap 4M X619688 10/7/2011 L05
In the last Twitter we produced maps of Blackcap movements to and from Treswell Wood. Murphy's Law dictates that, as soon as such maps are produced, another movement is reported which makes the maps obsolete. This is it. The bird was ringed as a juvenile at Eye Brook Reservoir in Leicestershire in September 2009, 86km south of the wood.

Great Tit 2 TR47634 18/9/2011 N02 in Kestrel nest
The Kestrels fledged in June but, before we could check the box for prey remains, it was occupied by a pair of Stock Doves. These reared two successive broods. Only in September, when they had, at last, stopped nesting could we examine the contents of the Kestrel nest, now deeply buried in Stock Dove guano. Our reward was just one ring from a Great Tit. It was ringed as a nestling in the south of the wood in late May, so must have been taken by the Kestrel within the first four weeks after fledging.

10 Week Summary 2011 Interval 4, Captures in Standard Sites

	New Birds			Recaptures			Total
	Adult	5	3	Adult	5	3	
Sparrowhawk	.	1	2	.	.	.	3
Tawny Owl	.	.	1	.	.	.	1
Wren	2	.	14	1	1	2	20
Dunnock	.	.	2	.	.	.	2
Robin	2	.	6	.	.	.	8
Blackbird	.	.	1	.	.	.	1
Song Thrush	.	.	1	.	.	.	1
Blackcap	4	.	6	1	.	.	11
Goldcrest	.	.	1	.	.	.	1
Long-tailed Tit	12	.	.	4	.	.	16
Marsh Tit	.	.	.	2	.	2	4
Coal Tit	.	.	5	1	.	1	7
Blue Tit	.	.	2	2	.	2	6
Great Tit	.	.	.	4	.	1	5
Nuthatch	.	.	2	2	.	1	5
Treecreeper	.	.	5	2	.	.	7
Chaffinch	.	.	1	.	.	.	1
Bullfinch	1	.	4	.	.	1	6
Totals	21	1	53	19	1	10	105

Booking form.

Treswell Wood IPM Group Conference - Saturday, 25th February 2012

Name: .....

email: .....

Any special dietary requirements: .....

I enclose a cheque for £8 payable to TWIG.

Please send this form and cheque to:

Neil Taylor,
11A Willingham Road,
Lea,
Gainsborough,
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DN21 5EN