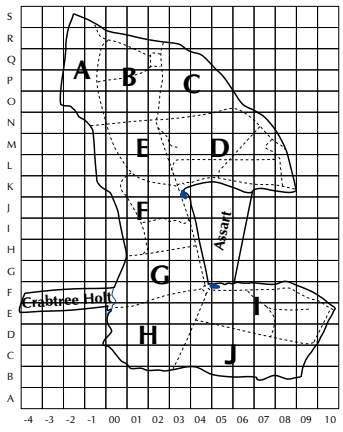

TWITTER

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

May 2017 Treswell Wood IPM Group

(Integrated Population Monitoring)

Project leaders:

CBC Pat Quinn-Catling

Nest Records Chris du Feu

Ringing John Clark

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2017/2
Number 112

www.treswellwoodipmg.org

We have enjoyed several very busy ringing sessions recently. Partly this has been because the nesting season has been fairly concentrated with a good deal of nestbox work needing to be done during mist-netting visits, rather than being spread over a longer period of time. However, this feeling of busyness proves to be justified by the captures. The standard site totals are the highest for any comparable period since we began the system in 1978. The total of 198 is comfortably ahead of the previous maximum of 185 and little short of double the previous average of 111. In fact, it is so high that this average figure for the 38 years has increased by 2 to 113 simply because of this exceptionally high total. It would be excellent to be able to explain exactly what is the cause. We can be fairly sure it is not the mediocre tit breeding seasons of the past couple of years. We know it is not through any change in catching technique, as that is one thing we are careful to maintain as fixed as possible. Perhaps the mild winter has benefited the small residents - Wrens, Robins, Treecreepers and Dunnocks - which feature prominently. The long dry spell of April and May seemed to threaten breeding success - it may have done - but it clearly has not had a negative effect on adult numbers. Tits do not usually appear in great numbers in constant effort nets but, for once, Blue Tits have done so. The warblers are interesting - both Willow Warbler and Whitethroat in the standard nets may indicate some wider influence. Chiffchaffs have arrived in very good numbers but, contrarily, Blackcap numbers are rather low. It seems unlikely any change in habitat in the wood is the cause because, overall, the habitat tends to remain constant in a coppiced regime. Any suggestions about the reason would be interesting. Of course, it could be just the result of chance.

Apart from being a very compact breeding season for the tits, it seems also to have been an early season. We have not yet assembled all the data from first egg dates etc., but it seems likely from the information so far, that it will prove to be much earlier than average. Our first Blue Tit egg, for instance, was laid only three days later than the earliest on record in the wood. Clutch sizes appear to be, on average, rather lower than usual and the weather - too dry for too long followed by very heavy rain for a few days - may be reducing fledging success a little. Predation, so far, has been limited to attacks in one area by a rogue Great Spotted Woodpecker and one instance of weasel predation.

The CBC season has now finished. Thanks to the stalwarts who have continued the work of maintaining this unbroken picture of breeding bird territories in the wood. In spite of comments above about the abundance of Blue Tits in the standard site captures, at least two of the CBC observers report an apparent lack of both Great and Blue Tits in their surveys.

In the previous Twitter we appealed for volunteers to do the CBC analysis in the future and also to curate the collection of photographs which we hold. Thanks to the several who volunteered for the CBC work - Ellen will be doing it now. The curator of photographs post is vacant - any offers?

The BTO ringing committee initiated some discussion about recording moult and this discussion is ongoing. However, it is a good thing to record the state of moult (strictly speaking the state of plumage) for each capture of every bird. We have been trying to do this since the discussions began. It is pleasing that, for almost every capture we have made since then, the moult state has been recorded. So far this year, the state of moult has, almost invariably, been O for Old plumage. This is changing as we now have juveniles with the J code and early nesting tits will start their main moult at any time. Thanks to all of you who are making the extra effort to give such a complete record of moult.

Kate Risely, who organises the BTO Garden BirdWatch, tells us that she has written an article about Great Tits for this month's issue of BBC Wildlife Magazine. In it she refers to the work we did with the coloured nest lining material, in order to find out how far birds travel when collecting nesting material.

Student projects

We have received dissertations from two undergraduate students who have been working on Great Tit data. Ayrton Cooper, from Nottingham University, examined various aspects of the influx of Great Tits in the spring. This is

something we have observed over the last 30 years but not yet analysed in detail. Simple tabulations of dates of captures of birds show that the influx begins slowly in January, and continues to a peak in March after which it drops away. Ayrton has looked at captures of all birds - not just birds at the feeding station where the influx is most apparent. The sex ratio varies between years and the average arrival time of males is slightly earlier (3 days) than that of females. These results are not surprising but it is the first time that thy have been analysed in any detail. What is new and unexpected is another result. The arrival times vary between different parts of the wood with the south-east part some three days earlier than the north-west. We would not have expected this because our impressions are coloured by the large numbers we see arriving at the feeding station whereas the smaller numbers we catch in ordinary mist nets elsewhere in the wood do not make the same impression. Ayrton suggests this may be related to a higher density of oak in that part of the wood. Perhaps it is the nearest part of the wood to a village? Perhaps something else? Perhaps several factors? Definitely more to look into here.

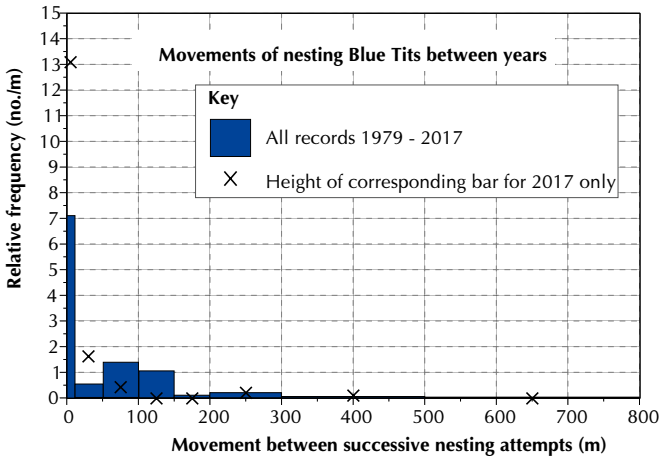
Russell Barnett of Exeter University has looked at breeding phenology of Great Tits. He has found, as we have, that laying dates have advanced with the years. However, he has also looked at various nesting parameters in relation to spring temperature. The link between spring temperature and laying date is very strong indeed. He has also looked at clutch size and hatching success and found these did not depend on spring temperature. His conclusion is that, in spite of possible mismatches between the timing of tree leafing, caterpillar activity and bird laying dates, the Great Tits have sufficient plasticity to cope with changes in the timing of spring. He notes, though, that there could be limits to this plasticity and changes in breeding phenology may be in quite unexpected directions.

Blue Tit movements between nesting attempts

We try to identify as many of the nesting female Blue Tits as we can - in the second week of incubation it is safe to lift them from the nest without danger of them deserting. We usually manage to find about 90% of them on our nestbox rounds. Many of our nesting females have been found nesting previously. This year it seemed that we were finding more with such a history, including some nesting in the same nestbox as before. Was it an unusually good year for such 'same-box' birds? Over the years we have recorded 767 female Blue Tits nesting in boxes, of these, 189 have been found nesting in boxes in two or more successive years (see Table). This gives us a chance to examine how much they move their nesting sites between years. The histogram illustrates this. The first, narrow, bar represents birds that have nested in exactly the same box as before. The second, slightly wider, bar represents those nesting in a different box but within the same grid square in the wood. Subsequent bars indicate longer movements. It can be seen that sometimes there are very long shifts in breeding site between years - the longest recorded is 750m which is most of the distance through the wood. However, these long movements are very rare indeed - a movement of over 500m has been recorded only about once every 5 years. The overall picture, though, is that these nesting tits do not change their nesting place very much - even if they travel widely outside the breeding season. The 2017 picture is also illustrated (with x marking the tops of the notional bars). It has been a good year for same-box birds with about twice as many as normally recorded. Again, we also have one non-conformist with a shift of about 650 m. What does it all show? It would be very interesting to examine nest histories of those which move and compare them with those that do not move. Does nest failure make a movement more likely?

Successive nesting attempts by female Blue Tits

Number of years	Number of birds
1	569
2	136
3	36
4	14
5	3



More on wing lengths

Two papers appear in the latest issue of *Ringing and Migration* which relate to things we have been thinking about recently - wing lengths: sexing and variation between years. The papers are: *Sexing of Phylloscopus based on multivariate probability of morphological traits* and *Influences of feather wear and age on wing lengths of Blue Tits.*

We are well known for not sexing individual birds on wing length for reasons which are well rehearsed and, we are sure, biologically and analytically very sound. However, knowing the sex ratios of birds is of interest. The first paper illustrates how sex ratios in a population can be calculated from wing lengths (but better from a combination of measurements). The statistical techniques used assign a probability of sex to each individual (e.g. in effect 'this bird is 90% male and 10% female - although the result of the analyses do not explicitly output such useless statements). These probabilities are used in the assessment of the sex ratios. We know from previous student work

on our nestling Blue Tits that the proportion of male nestlings increases as the season progresses. This depended on sexing individual nestlings using DNA techniques. The reason for the increase in the proportion of males was not clear. With data available now we are in a position to determine sex ratios analytically (see John Elliot's note below) and try to relate this to factors such as weather, laying dates, population size etc. There is clearly scope here for a serious study.

The second paper looked at a long-term data set from one site in Scotland where birds were ringed mainly through the autumn and winter. The aim was to examine change in wing lengths of individuals. As is expected, the wing length of juvenile Blue Tits is, typically, 1 mm lower than that of the same bird after it moults and grows its adult primary feathers. After that, feathers change little in length from one full moult to the next. We also know from a recent preliminary analysis (see Twitter December 2016) that our average wing lengths vary between years. This could be that individuals may grow feathers of a different length (as Ted Cowley found with Sand Martins which had shorter wings after encountering adverse conditions during their winter moult) or else that the population could become, on average, larger or smaller (as happened in one Dutch study when Great Tits rapidly became smaller through selective pressure after new nestboxes with slightly smaller holes were installed to replace the old ones). In addition to these variations, feathers wear once they have grown fully. For hole-nesting tits this wear can reduce the wing length by two or three millimetres between the completion of autumn moult and the end of the next breeding season. The Scottish study had insufficient data to look into this wing abrasion because almost all their catching took place before the breeding season. You will have realised what comes next. We have a long-term data set with data throughout the year, with large numbers of recaptures of individuals of several species. This opens the way for a similar study to that which has been published but, in addition, for other species and including the effects of breeding-season abrasion. A word of caution, though. The Scottish study was carried out almost exclusively by one person making the wing length measurements and so will have been very consistent. In Treswell Wood our measurements will be subject to variation between ringers making real differences slightly less easy to detect.

These two ideas - looking at sex ratios using wing length and looking at changes in wing lengths are somewhat connected. John Elliott, who rings on Hilbre Island off the Wirral peninsula, has been using statistical machinery to look at our Blue Tit wing lengths. He writes:

Treswell Wood Blue Tit Wing Length Analysis

I am an avid reader of Twitter (the original publication from Treswell Wood not the abomination from social media) and I have been examining a lot of Bird Observatory data on Willow Warbler wing lengths and wondering how I can best analyse them. I was delighted when I read in the December 2016 edition of Twitter that the Treswell Wood group is interested in Blue Tit wing lengths, in particular the variation between years, and wanted some support to process the data. I contacted Chris, who I had met during the early part of my ringing training, and volunteered to help. I am using the statistical programming language R, which has allowed me to examine male and female Willow Warblers and identify the mean wing lengths and proportions of each group in my samples. I have also read the Ringing & Migration paper by Chris and Richard , "No sex please, we're biased," as well as Graham Scott's paper advising that Blue Tits cannot be reliably sexed using Svensson's criteria. Assuming that male and female wing lengths are normally distributed and that the sample I have is a mixture of these two normal distributions, R gives the opportunity to analyse samples of Blue Tits and to say what are the wing lengths of males and females, and what proportion of the sample are males and what proportion are females, I looked at Treswell Wood first year Blue Tits and I can say that female wing lengths are, on average, 61.3 and males are 63.9 with a confidence interval of ±0.04. This compared with my own records of first year Blue Tits in the North West (from a smaller sample) that came out as 61.6 for females and 64.3 for males (confidence interval ±0.09). I was pleased with this but Chris suggested a further check. He felt that it would be a good idea to look at a sample of Great Tits that had been sexed in the normal way using plumage and to compare the results with those provided by R using the wing length analysis. The sample on which the following results are based was of 336 Great Tits on the Wirral:

Values resulting from sexing birds on plumage

Sex	Number	Proportion	Mean wing length (mm)
Male	145	0.432	75.3
Female	191	0.568	72.5

Values resulting from sexing birds on wing length in R

Sex	Number	Proportion	Mean wing length (mm)
Male	145	0.46	75.5
Female	191	0.54	72.2

The closeness of these values indicates that, for Great Tits, results using R are consistent with those found in the normal course of ringing. Thus it is worthwhile moving on to a multi-year analysis using R of the Treswell Wood Blue Tits. I am currently working on this task.

(We should also note that the R software, when used appropriately, is capable of assigning different mean wing lengths to males and females in different years, rather than always using the same values in all years. That would lead to incorrect sex ratios in years when birds were either larger, or smaller, than normal.)

Noteworthy Encounters

Species	Age/sex	Ring	Date	Grid

Tawny Owl 7F GR24217 30/4/2017 K00

The female in one of our two Tawny Owl nests this year. (There also seems to have been a third nest in the far east of compartment D although not in a nestbox.) The season started well with a stockpile of 15 small mammals - short-tailed vole, wood mouse, common and pygmy shrews. However, as last year there seemed to be a shortage of rodents during the dry spell of late April and early May and one of the chicks failed to survive - probably eaten by its larger sibling. The other nest has produced two young. Perhaps the most interesting mammal record from either nest is that of a mole. Before we envisage an adult Tawny Owl flying through a mole tunnel in search of its prey, we should remember it has been very dry and the ground is hard. Under such conditions moles may have to surface more often and will become rather easier prey for the Tawny Owls.

Great Spotted Woodpecker 4F CT95960 7/5/2017 Q03

At a mere seven years since ringing, this is not our oldest woodpecker (we suspect the oldest one is still with us and we have hopes of retrapping it again which would break the national longevity record). We have commented on ageing techniques for this species frequently - perhaps over-frequently. It is only contrast between adult and juvenile feathers **within** the inner part of the wing which enables separation of some young birds from older ones. This bird had a fairly clear difference between its jet black inner wing coverts and the greyer primary coverts. For most passerines species that would be an unequivocal indication of a young bird. For a Great Spotted Woodpecker, though, it is indication of nothing at all.

Wren 4 AVL448 19/3/2017 N03

It is always pleasing to recapture a bird ringed as a nestling; Wrens, of which we ring so many fewer than tits, particularly so. This bird was ringed in June 2015 in a nest built in a dormouse box. It has moved from its natal site, all of 200m to this capture point. Wrens are normally highly sedentary so it is odd that we have not retrapped this bird before, in spite of setting our nets in this place several times through the past 18 months.

Wren 6 EYD946 2/4/2017 R-2

Another nestling-ringed Wren from the 2015 cohort - but this one has behaved as we would expect - a relatively long movement from its natal site to its first capture after its post juvenile moult, followed by very little movement at all thereafter. It was ringed, again in a nest in a dormouse box, in the far east of compartment D in June 2015. In November 2015 it was retrapped about 350 m away on the north edge of the wood and, nearby, again in May 2016 where it was breeding. This capture, a year later at the start of the breeding season is just a few metres along the north edge of the wood from its November 2015 and 2016 locations.

Blackbird 6M CT84182 23/4/2017 Q04

This is not our oldest Blackbird record but at one month short of eight years since ringing as a newly-fledged juvenile in 2009 it is our oldest live recapture of a Blackbird. The oldest was found freshly dead, a road casualty, a month short of 9 years after ringing. The second longest was only found just 8 years after ringing but the body was not fresh and the bird had probably died weeks or months before it was found. This bird has always been caught in the north-east part of the wood and has been captured, since ringing, in 2012, 2014, 2016 and, now, in 2017.

Blackbird 3J LE35347 23/4/2017 P05

This is the first juvenile, of any species, to be ringed by us this year. Often it is the early-breeding Long-tailed Tits which win this race but this year that species has not been much in evidence in the wood.

Song Thrush 6M RS78290 16/4/2017 N01

Song Thrushes are being caught in higher numbers than in recent years and in much higher numbers than in the decade after 1995. There was a recovery after 2005 when numbers fell again. Let us hope this year, following last year's better numbers, marks the start of a continued recovery. This bird was ringed as an adult in 2011 and, at 5yr 8 mth since ringing is our second oldest on record by a mere three months. It was not seen in the wood between ringing and April 2016. On that occasion, as on this, it was caught in the same place near the main crossroads where we ring very frequently. That suggests it has changed its breeding territory between 2015 and 2016.

Lesser Whitethroat 4F Z782783 21/5/2017 R-1
What a surprise. This species is even less commonly seen in the wood than the Whitethroat - this is only the 33rd capture. Only 4 CBC territories in total have ever been recorded compared with 48 for the Whitethroat. The previous capture was in 2008 and before that one in 2000. The last time we ringed both Whitethroat species in the same year was 1989. The year with the highest total was 1976 when six were caught - most drinking at the pond during the drought of that year.

Goldcrest 4F EYD854 26/3/2017 E04
Goldcrests are mainly winter visitors to the wood with breeding territories determined by the CBC only about once every four years. This bird did not seem like a winter visitor - although not yet in breeding condition it was not carrying any fat reserves for a northward migration. It was retrapped, still here, a month later - definitely too late to migrate for the breeding season. Goldcrests have been heard throughout the season in various parts of the wood so it seems we have a good chance of them having bred here.

Whitethroat 5M Z782774 14/5/2017 H04
A most unexpected capture - just a couple of hours after the slightly less unexpected Willow Warbler, EYD896. Last time we captured a Whitethroat was in 2013 and since the mid 1990s our total annual catch has been only 3 individuals. They were never commonly caught in the wood (our highest number of 8 was in 1979 and we have only ever ringed 44) and they have rarely featured in the CBC breeding territory list since the 1980s. Whether it is just a chance capture or whether the development of the assart is beneficial to the species we do not know. It was in breeding condition.

Blackcap 4M Z782209 21/5/2017 Q01
A Blackcap behaving as it should do. It was ringed on the corresponding standard site visit to the wood in 2016 and retrapped in an adjacent net - less than 20 metres from last years capture position - and within an hour of the time too.

Chiffchaff 4 EYD399 16/4/2017 N02
A good example of returning to exactly the same place year after year. We presume this bird will have migrated at least to SW Iberia for the last two winters but, in spite of that, it has returned not only to the wood but to the same part of the wood. Its captures in these three breeding seasons have all been within 75m of each other on the same ride.

Willow Warbler 4F EYD896 14/5/2017 H04
Willow Warblers had been noted singing by CBC observers and others. It is nearly 20 years since we caught more than a handful in one year. Since then, most of those we have caught have been juveniles in late summer, presumably as they gradually move to the south coast before starting their long journey to wintering quarters. This one, like the adult we trapped last year in the same part of the wood, was in breeding condition.

Marsh Tit 4F D309487 24/4/2017 P-2
One of three Marsh Tits nesting in our boxes this year. Sadly this one was found by a Great Spotted Woodpecker, the nest broken into and the young eaten. It seems likely that this is our very old woodpecker as its approach to attacking boxes shows much more versatility than others of the species seem to. It has also predated a Blue Tit nest and Wren nest nearby - all three boxes requiring different angles of attack. What about the Marsh Tit? We do not know if it survived - we hope so. It has been in the wood since it was ringed as a juvenile in 2014.

Willow Tit 4F Z782469 1/5/2017 O03
This is the Willow Tit which we have been pleased to recapture several times since it first appeared as a juvenile in August 2016. Willow Tits normally excavate their own nest cavities but this bird decided to use an existing cavity in a 'stump' nestbox. (Twitter 1998/1 March 1998 which is now on our web site). Sadly the eggs failed to hatch but at least we know the species is attempting to breed in the wood. One mystery is that we have never caught its partner.

Blue Tit 5M S078612 9/4/2017 L00
Most of the tits which we find roosting over the winter are already carrying a ring - this is one of the very few which was unringed when we first encountered it roosting in November 2016. It was found roosting again in December and January and is still here, now in breeding condition.

Blue Tit 6 X649812 14/5/2017 I04
This is our oldest Blue Tit caught recently - 6 yr 8 mth since ringing as a juvenile in 2010. We have retrapped it in most years since then but, in spite of captures such as this in the breeding season, it has not shown any signs of breeding. Perhaps that is the secret of longevity - do not wear yourself out by rearing 10 offspring a year.

Great Tit 5F Z782421 2/4/2017 Q03
In the 1980s we retrapped tits fairly frequently that had been ringed in the wood in the summer, often as nestlings or juveniles, then been found elsewhere, not too far away, during the winter only to return to the wood in the spring. In recent years this pattern has not been so common. This bird is a welcome change. It was ringed as a juvenile in the wood in July 2016 and retrapped twice - the last time being at the end of August. It appeared in Retford in late November and was retrapped there again in early December. It is now back in the wood, probably here to breed.

Nuthatch 4F TR47562 1/5/2017 F08
This bird was captured nesting in a nestbox - this is only the third time we have recorded a nesting attempt by the species in a nestbox in Treswell Wood. The first attempt was in 1984 and ended in failure after the pair failed to bring enough mud to the owl nestbox to reduce the entrance size to suitable proportions. (The mud they used weighed 2kg after it had dried - no wonder they abandoned it - they probably needed about ten times as much to complete the job.) The next attempt, which was successful, was in 2011 with five young fledging. This year's nest, too, has been successful. These two successes have both been in boxes set at about 1.5 metres above ground. Conventional wisdom is that they like to nest higher. However, our attempt a few years ago to attract them to use high boxes resulted in a lot of work, several Great Tit nests but no Nuthatches. This bird was ringed as a juvenile in 2012 and we hope she now uses boxes again and also explains the benefits of nestboxes to her offspring.

Treecreeper 6M CXN774 21/5/017 R00
We have been dutifully photographing the primary coverts of all the Treecreepers we catch to build a record to aid with ageing of birds in the hand. This fine bird, which we ringed as a juvenile in 2012, has been captured at least once each year since ringing. It is now wearing the tiniest of pale spots on the primary coverts which indicate adult plumage. It has been captured all around compartment B even straying once as far as 25 metres eastwards into compartment C. This is rather smaller a home range than is typical for the species - but at nearly 5 years old it clearly knows this area so well it does not need to range more widely for food or shelter.

Jay 6F DK98429 23/4/2017 P01
The first Jay to be captured since 2015 when we retrapped one. The last one to be ringed in the wood was in 2014. This one was a retrap ringed in October 2013 as a juvenile and not retrapped since then. It is our third longest Jay recapture history but at 3yr 8 mth it is far younger than many small passerines, well under half way towards our longest lived Jay (7yr 8mth) and nowhere near the national record of 16yr 9mth.

Greenfinch 5F TT49304 2/4/2017 Q03
A relative rarity nowadays in the wood and much less common elsewhere than a decade ago. So far we have only caught two this year. The national outbreak of trichomonosis some years ago seems to be having a lasting impact.

10-Week Summary: 2017 Interval 2, Captures in Standard Sites

	New Birds			Recaptures			Total
	Adult	**5**	**3**	**Adult**	**5**	**3**	
Wren	2	14	.	9	8	.	33
Dunnock	2	3	.	7	3	.	15
Robin	2	6	.	6	2	.	16
Blackbird	2	7	.	6	2	.	17
Song Thrush	2	5	.	1	.	.	8
Whitethroat	.	1	.	.	.	.	1
Blackcap	7	.	.	5	.	.	12
Chiffchaff	18	2	.	8	.	.	28
Willow Warbler	1	.	.	.	.	.	1
Goldcrest	2	1	.	.	1	.	4
Long-tailed Tit	3	.	.	4	.	.	7
Marsh Tit	.	.	.	3	.	.	3
Coal Tit	.	.	.	1	1	.	2
Blue Tit	.	5	.	9	9	.	23
Great Tit	.	.	.	1	5	.	6
Nuthatch	1	.	.	.	.	.	1
Treecreeper	2	1	.	7	.	.	10
Chaffinch	.	2	.	3	.	.	5
Bullfinch	.	5	.	1	.	.	6
Totals	**44**	**52**	**.**	**71**	**31**	**.**	**198**