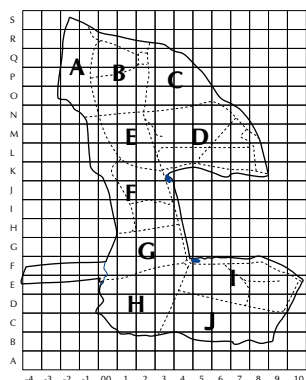


# TWITTER



Treswell Wood - Information To Tell Every Recorder

**October 2009 Treswell Wood IPM Group**

(Integrated Population Monitoring)

All projects by permission of NWT

**2009/4**

**Project leaders:**

**CBC** Pat Quinn-Catling

**Number 74**

**Nest Records** Chris du Feu

**Ringing** John McMeeking & John Clark



## Visit 2000, 100 years of BTO ringing, Treswell Wood on BBC Countryfile

For some reason big events, like accidents, often seem to happen in clusters (although a statistical analysis of such things might reveal nothing more than underlying randomness). In this 100<sup>th</sup> year of the BTO's ringing scheme we have managed to make our 2,000<sup>th</sup> mist-netting visit to the wood and appear on BBC Countryfile. Humans attach importance to numbers ending in zero, or multiple zeroes. There is nothing special about these numbers - they are entirely an unfortunate artefact of humans having ten fingers. However, meaningful or not, they do provide an opportunity for looking back at what has been done and forward to what can be done.

The BTO ringing centenary has concentrated very much on looking forward. Its current issue of *Ringing and Migration* has a set of reviews of what ringing can do preceded by a single article recounting the history of ringing in Britain and Ireland. The reviews cover many broad areas including the value of ringing for conservation and for science. Of course, understanding the science behind bird life processes, apart from being of intrinsic interest, will enable better conservation of birds and of the wider environment. Reviews include development of CES (now 25 years old in the BTO but 31 years in Treswell Wood and adopted in the USA and several European countries), dispersal, moult, population change, migration and population ecology. It is very pleasing to note that the Treswell Wood data set is contributing to most areas. Perhaps we make least contribution to migration studies - which were the main object of ringing in its early days. Very few of our birds are found in distant places. However, we have made fuller contributions to dispersal data, particularly for those birds such as the Treecreeper whose movements are generally so short that they are not recorded by national schemes. We also have a fine set of moult data - see the section below. And we have habitat data - again increasingly important in population studies - together with comprehensive nest record data for our hole-nesting species. All these data would be of little use were they not accessible to analysis - that means computerisation. Again we score well here thanks to efforts of several of the group members over the years. It is well worth reading the whole of this issue of *Ringing and Migration* - borrow one if you do not subscribe.

And visit 2000? After several visits with only mediocre catches we enjoyed a rather good day. This was not only because of the chocolate cake provided by Ben Bower's mum - much appreciated by all. The day's total included several birds of particular interest (listed in the Noteworthy Captures on 4/10/2009) but also provided a much larger total catch than recently. In addition, the weather was ideal and the assembled horde was able to enjoy the sight of six Buzzards and a Sparrowhawk soaring over the wood. Thanks to those of you who made a special visit on the day. Thanks also to Neil Taylor for arranging a celebratory meal the following Friday - much enjoyed by all.

Careful readers will have noted that John Clark's name now appears with John McMeeking's as ringing project leader. John (McM) used the celebratory evening to announce that John (C) had agreed to be first-in-line to the throne - but it will still be John (McM) who will be arm-twisting on a Saturday evening. Thanks to John (C) for taking this position.

BBC Television Countryfile was planning a visit to various places in Nottinghamshire and wished to include a feature related to the centenary of bird ringing in Britain. Countryfile was directed, by the NWT, to Treswell Wood where we put on an extra visit for them. We were joined on the day by Jacquie Clark, head of the BTO Ringing Scheme, who the BBC also wished to interview. Incidentally, Jacquie's very early ringing career included visits to Treswell Wood. All seemed to go well. We caught sufficient birds. The Countryfile presenter, Matt Baker, really did seem to enjoy handling the birds. The feature when shown was, of course, very much edited. We could not be sure, in advance, of what the BBC would choose to use. We were, however, very pleased with the results and feedback has been very positive indeed.

To complete our batch of special events, Charles Deeming from Lincoln University has reported news from his student, Susan Roche. She is engaged in a dormouse related project - you may have seen several bamboos with

white flags which mark her sampling quadrats in the southern part of the wood. The good news is that she has found some of this year's hazel nut shells with clear evidence of having been eaten by dormice. The elusive little creature is still with us. Thanks to Susan for her diligent nut hunting.

## BTO Constant Effort Sites Scheme, Treswell Wood, 2009

The CES recording season, ending on August 31<sup>st</sup>, gives an apparently far more promising picture than we saw last year. Again, it mirrors what the nest records have shown this year. We have more adults, more juveniles and, even with the extra juveniles, higher productivity. So far, so good. However, this much improved picture is only in contrast to a really bad year. This year has been only average - nevertheless a great improvement on the past two dismal years. Within the general improvement, we do have winners and losers. Blackcap, Chiffchaff, Blue Tit and Bullfinch have all-round increases. Treecreeper, Long-tailed Tit, Willow Tit and Coal Tit are losers. Robin - the species with the highest total number of captures - however, is well down in both juvenile captures and productivity.

## Constant Effort captures, Treswell Wood, 2009

Species	2008			2009			Change 2008 - 2009		
	Ad	Juv	Prod%	Ad	Juv	Prod%	Ad	Juv	Prod%
Great Spotted Woodpecker	1	0	0	1	0	0	=	=	X
Wren	22	17	77	18	21	117	-	+	+
Dunnock	6	3	50	13	6	46	+	+	-
Robin	18	35	194	17	26	153	-	-	-
Blackbird	28	4	14	26	13	50	-	+	+
Song Thrush	5	0	0	7	1	14	+	+	+
Mistle Thrush	2	0	0	3	3	100	+	+	+
Lesser Whitethroat	1	0	0	0	0	X	-	=	X
Blackcap	23	6	26	26	8	31	+	+	+
Chiffchaff	11	3	27	13	4	31	+	+	+
Willow Warbler	1	0	0	2	0	0	+	=	=
Spotted Flycatcher	1	0	0	2	0	0	+	=	=
Long-tailed Tit	7	2	29	2	0	0	-	-	-
Marsh Tit	3	1	33	3	6	200	+	+	+
Willow Tit	0	1	X	0	0	X	=	-	X
Coal Tit	1	1	100	2	0	0	+	-	-
Blue Tit	3	0	0	5	6	120	+	+	+
Great Tit	9	1	11	13	11	85	+	+	+
Nuthatch	2	0	0	0	0	X	-	=	X
Treecreeper	5	9	180	2	1	50	-	-	-
Chaffinch	14	1	7	7	1	14	-	=	+
Bullfinch	12	1	8	15	4	27	+	+	+
<b>Totals</b>	<b>175</b>	<b>85</b>	<b>49</b>	<b>177</b>	<b>110</b>	<b>62</b>	<b>+</b>	<b>+</b>	<b>+</b>

**Key** Ad - adults caught Juv - juveniles caught  
 Prod% - productivity (Juv/Ad) - down, + up, = no change, X not calculable

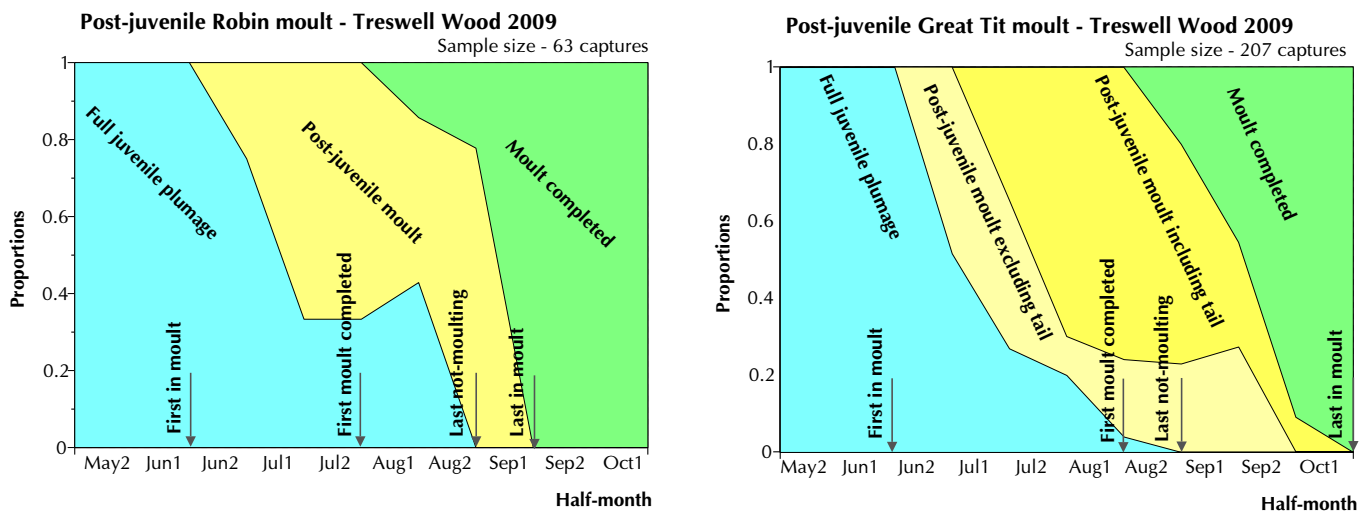
## BTO Atlas Project

The Atlas project has entered its third winter season out of four. For the latest national results, look at [www.bto.org/birdatlas](http://www.bto.org/birdatlas). You will recall that we are sponsoring the Treecreeper for which we have promised to raise £2,000. Donations can be made directly to the BTO at [www.justgiving.com/bto\\_atlas](http://www.justgiving.com/bto_atlas). If you look at this web site you will see we are 20% of the way there - still a long way to go. We hope that many more old and current members will contribute to make it a real team effort and not leave a few of us to make up the remaining balance. All contributions (electronically or by cheque to the BTO) will be very welcome. If you send a cheque to the BTO please state it is for the Treecreeper sponsorship and mark it for the attention of Graham Appleton. Many thanks, in advance.

## Recording moult

One review in the current issue of *Ringing and Migration* centred on studies of moult. Although often overlooked, moult is, in fact, one of the major features of the annual cycle of bird life - as important and demanding as breeding and migration. In full moult the entire outer vestments of the bird are replaced putting great demands on the bird's food intake at a time when it may have impaired flying ability and reduced thermal insulation. The article concludes that, for a widespread study of moult, the most useful thing to record is just whether each bird has not started moult, was in moult, or had completed moult. In the BTO data coding scheme this code is just a single letter - very quick and easy to assess and record in the field. We have scored very well on this count in recent years - thanks to all the diligent recorders for that. Whereas fuller moult data, such as the ten primary scores or even full conventional 'moult card' records, are useful, the single letter moult code for all birds during the long moulting season is vital.

A national, computerised set of moult records will tell us a great deal. But what about records from a single site? For many species and age/sex classes, data from a single site may not be able to give a coherent picture. However, if captures are sufficiently numerous, we can tell a great deal. The two graphs show the progress of post-juvenile moult for two of our most commonly caught species - Robin and Great Tit. Captures have been clustered into half-month intervals and, for each of these intervals, the proportions of juveniles in each category are shown. Note that the numbers captured in these intervals differ - it is the proportions that are indicated. Many Great Tits moulted their tail as part of post-juvenile moult. This category is shown by the darker shading in the active moult bands. We have not recorded any juvenile Robins moulting tails this year.



What can we tell? Moult begins at approximately the same time for both species but is far more prolonged in the Great Tit. This seems surprising because Great Tits are almost exclusively single brooded. Robins, with two or three broods will produce late fledging juveniles so we might expect these to start, and complete, moult later than others. This does not appear to be the case. The non-moulting peak in August for Robins appeared, at first sight, to be an artefact resulting from a small sample size. However, the Great Tits also have a peak of birds engaged in the conventional moult which retains the tail. It may be the case that these peaks both result from birds which have started moult late - perhaps late fledging birds. In both species, some individuals have completed their post-juvenile moult before some others have begun. The Great Tit graph also shows the short interval between the first birds moulting and the first signs of tail moulting. Clearly this tail moult is not an afterthought, but something initiated early in the process. I think this is the first time we have looked at moult in this way. Our moult data stretches back to 1973 - plenty of opportunity for investigation into a much understudied aspect of bird life.

## Opportunities to fill long winter evenings

**Back data computerisation.** In spite of the continuing efforts to computerise our data, we have several years of our background notes which are still untouched. At present we have computerised well over half of these notes. It can be a tedious task sometimes, but what is the point of the job? We never know what we might need to know. Once the information is computerised, it is a matter of seconds to retrieve it using search facilities found on any word-processing software. Some years ago, we had a request for records of roe deer in the wood. It took some time turning pages of field sheets trying to find the note about a sighting of these elusive creatures. In fact, the note was more elusive than the deer themselves and it was not found. Compare that with the search for records of hornets. When we were asked about them, with computerised notes it took seconds to find all the records of these creatures. Another unforeseen use has emerged recently. The latest NWT policy on ringing on its reserves demands that ringers record the time spent - this information can be used in some match-funding grant applications. Again,

we have a record of time spent over the years - which will be much more easily accessible on computer than in the paper files. Any volunteers? All you need is a computer.

**Mist-net mending.** Ringers will know how easy it is to make large holes in a mist net. (Incidentally, the late Chris Mead used to say that we were not making holes in mist nets, we were reducing the number of holes by joining many small holes into one large one.) Fewer ringers may realise how long it takes to repair such holes. Mending holes in mist nets is best done indoors and takes time and patience rather than high-level knitting skills. We now have a number of mist nets which we have re-rigged and just need holes mended before being ready for service again in the wood. Volunteers will be welcome. Training will be given if needed and volunteers will even be provided with a copy of the BTO guide, *Making and Mending Mist Nets*.

**Bird-bag manufacture.** Many of our bird bags and net bags have been in service for a long time and we could do with a new supply. Happily we have a large supply of suitable materials - one sort for bird bags and a brightly coloured material for net bags. (The bright colour is one useful way of helping ensure we do not lose either net bags or their contents.) Minimal sewing skills are required - bags are rectangular so there are no complications of darts or other technicalities. Would-be seamstresses (or seamsters) welcome. Remuneration is the same as for mist-net mending or data entry.

## Noteworthy Captures

Species	Age/sex	Ring	Date	Grid
<b>Green Woodpecker</b>	<b>4F</b>	<b>DS51895</b>	<b>31/8/2009</b>	<b>E00</b>

Caught at last! There is rarely a week which passes without some Green Woodpecker laughing at the ringers as it manages to evade them yet again. Not this time, though. It is only the second of the species we have ever trapped in the wood. We hope that it will not be another 14 years before we trap the next one.

<b>Robin</b>	<b>3J</b>	<b>X649225</b>	<b>30/8/2009</b>	<b>E01</b>
--------------	-----------	----------------	------------------	------------

We have two Nottingham students studying mite infestation on Robins - one as a third-year undergraduate project and the other for a Master's degree. This Robin provided our 1,200<sup>th</sup> record of mite infestation on the species. The first record in the wood was made on 6<sup>th</sup> September 1998 which is almost exactly 11 years earlier. For the record the right flight feathers on this bird carried just one single mite.

<b>Blackbird</b>	<b>4M</b>	<b>CT84161</b>	<b>4/10/2009</b>	<b>K04</b>
------------------	-----------	----------------	------------------	------------

We usually make notes about unusual features of the birds we handle. This bird was noted, on its first capture in March, as having bumblefoot - a large and very obvious lump on one foot. On its recapture over six months later it was, apparently, recovered. Good to know that such conditions are not always permanent or fatal.

<b>Blackbird</b>	<b>3M</b>	<b>CT84404</b>	<b>4/10/2009</b>	<b>K03</b>
------------------	-----------	----------------	------------------	------------

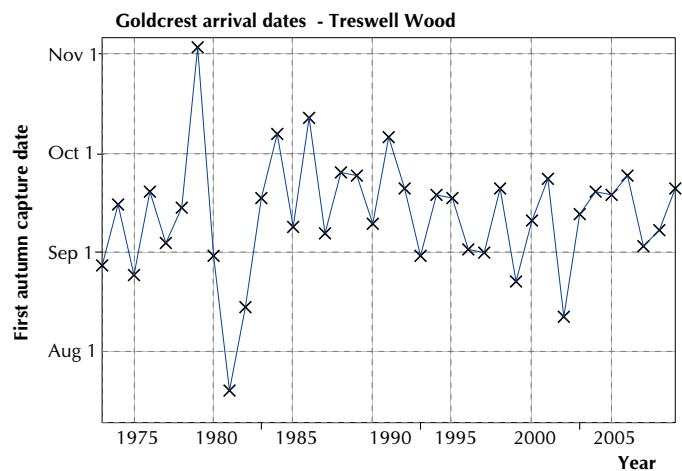
We have only ringed Blackbirds in one nest in the wood this year. This is our first recapture of any of the four young ringed. Post-natal dispersal distance so far? All of 300 metres.

<b>Goldcrest</b>	<b>3F</b>	<b>CXN109</b>	<b>20/9/2009</b>	<b>P-1</b>
------------------	-----------	---------------	------------------	------------

Our first of the species for the autumn - it seemed, at the time, rather early. But memory is not always a good indicator of the past. The arrival time data shows that this arrival was, if anything, a little later than average. We caught no more until the third week of October. Just as one Swallow does not make a summer, perhaps one Goldcrest does not guarantee an autumn.

<b>Blue Tit</b>	<b>4</b>	<b>R502745</b>	<b>18/10/2009</b>	<b>N03</b>
-----------------	----------	----------------	-------------------	------------

This bird is unprecedented. To recapture a Blue Tit which had been ringed by us just over 6 years previously is exceptional. But it was not only that. The bird had, apparently, stopped moulting for the year. However, even to a very untrained eye, some primary and tail feathers were obviously much older than the others. It is our first case of arrested moult in a Blue Tit. Outer primaries on both wings were unmoulted and in abraded, or very abraded condition. The central tail feathers were also unmoulted with little more than the shafts remaining. The moult was not quite symmetrical with four right and six left primaries unmoulted. Curiously, on both wings all secondaries were new except for the second outermost. The rest of the plumage was new, with only a few body feathers just still showing any waxy sheath.

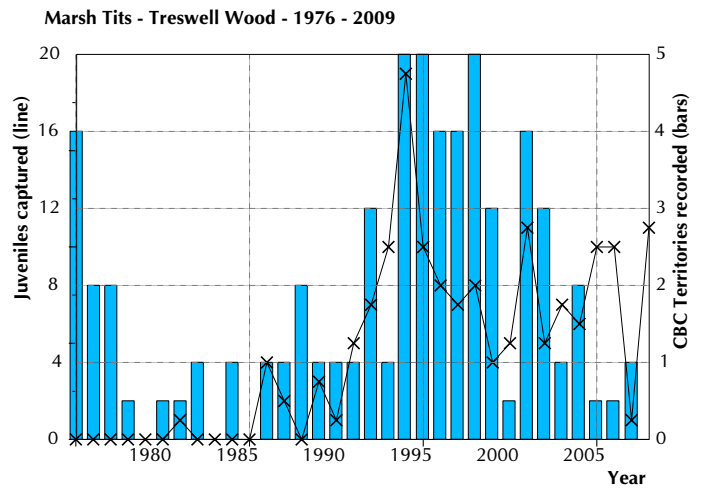




**Marsh Tit**                      **4**                      **R353934**                      **4/10/2009**                      **Q02 Feeder**

It is four and a half years since we ringed this bird as an adult - making him now at least 5 years old which is a good age for this species. Pleasingly we have caught 11 juvenile Marsh Tits this autumn. Most are non-nestbox ringed birds indicating that the Marsh Tit population in the wood is at least as high as normal. A pity we cannot say the same for our Willow Tits - we have only captured one juvenile this year.

The diagram shows the numbers of juvenile Marsh Tits captured each autumn since ringing began (line graph) together with the number of CBC territories recorded since 1976 when the first full census of the wood was undertaken (bar graph). (As usual, where Marsh Tits were observed but with too few observations to establish the presence of a breeding territory the graph gives 0.5 territories.) This year's captures are well above average but not unprecedented. From this year's ringing data it appears that Marsh Tits are far better established than they were in the 1970s although not as high as in the mid to late 1990s. The low 2008 capture number probably results from exceptional nest predation rather than lack of breeding attempts. The apparent similarity between that year and the data in the first years could result partly from better ageing techniques on the part of ringers. It is now known how to age Marsh Tits beyond their post juvenile moult with most being ageable until their first full moult after their first breeding season. Even so, in those years, no birds were caught as 3J birds in full, obvious juvenile plumage. This was in the days before nestboxes. Was breeding hampered by lack of natural holes and subsequent competition from the larger tits? Or was predation a major problem in those years too? If we could arrange a visit to the large hadron collider perhaps we might be able to travel back 40 years and discover.



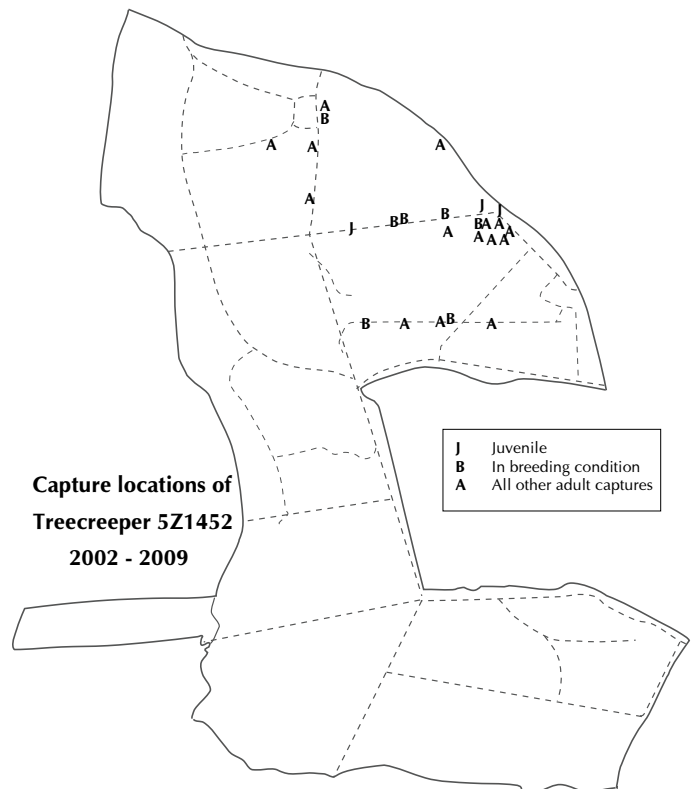
**Long-tailed Tit**                      **2**                      **ARB130**                      **18/10/2009**                      **N04**

October 18<sup>th</sup> brought a total of 20 Long-tailed Tit captures - a remarkably high number after the scarcity of the last few months. All the birds were new except for this individual - ringed by John Clark in December 2008 at Hillcrest Farm and trapped in the wood in March 2009. It is quite possible, of course, that 20 Long-tailed Tits could be roving as a single flock. However, the day's captures seemed to be in two separate parties, with some simultaneous captures in different net sites. Where have they been throughout the summer?

**Treecreeper**                      **4**                      **5Z1452**  
**18/10/2009 L06**

This is our second oldest Treecreeper ever - it now has to survive until the second week of December to take Treswell Wood's age record. After that it is only it will need survival (and recapture, of course) to the end of June 2010 to exceed the world age record for the species. We ringed it as a juvenile in June 2002. What chance has it of survival? Probably better than most other Treecreepers in the wood. Few small birds die of old age, most die through accident, starvation or predation. This is an experienced bird and knows its home range well. It should be able to secure the best roosting and feeding sites. In addition, intra-specific competition will be low because the Treecreeper population in the wood seems to be fairly low this year. A cold, wet winter will be the biggest threat to its survival - but even with adverse conditions, it is at least as well placed to survive as others in the wood.

The map shows where we have trapped it over the years. Like most Treecreepers it roves widely in a limited area but does not stray from that area. This is in contrast to many other small birds which have a smaller core range in the wood but travel more widely from that core from time to time.



**Nuthatch**                      **3F**                      **TJ49875**                      **4/10/2009**                      **J03**

Nuthatches come a close second to Green Woodpeckers in the battle to frustrate ringers. They are not often caught yet are nearly always heard in the wood. On this day, however, they were co-operative (perhaps in acknowledgement of visit 2000) and three new birds were captured in addition to a fourth being recaptured. All were juveniles.

**Chaffinch**                      **4F**                      **P400853**                      **4/10/2009**                      **Q02 Feeder**

A very pleasing capture of an old friend. We ringed her as a juvenile in June 2002 and have recaptured her at least once every year since then. She is now just over 7 years old. Of particular interest was that she is now clearly ageable as an adult. As recently as 2007 she carried no black making on her central tail feather tips.

## Controls and Recoveries

Species	Age/sex	Ring	Date	Notes
---------	---------	------	------	-------

<b>Long-tailed Tit</b>	<b>2</b>	<b>ARB152</b>	<b>11/10/2009</b>	<b>D02</b>
------------------------	----------	---------------	-------------------	------------

This was ringed by John Clark at Hillcrest farm in Treswell nine days before being captured in the wood. Long-tailed Tits do range widely in family parties so it is not surprising that we have such a movement. What is pleasing is that it was trapped with two others and there were a total of four others trapped on the same day. This came after an almost complete absence of the birds in the wood since the spring. We believe that, unlike most other tit species which breed later than these, their breeding season enjoyed less success.

<b>Blue Tit</b>	<b>3</b>	<b>V666764</b>	<b>4/10/2009</b>	<b>Q02 Feeder</b>
-----------------	----------	----------------	------------------	-------------------

One of our own nestling-ringed birds which we retrapped once in June. Two days before this second recapture within the wood, it was trapped at Hillcrest Farm in Treswell Village by John Clark.

<b>Blue Tit</b>	<b>3</b>	<b>V666833</b>	<b>2/10/2009</b>	<b>Hillcrest Farm, Treswell</b>
-----------------	----------	----------------	------------------	---------------------------------

Another nestling-ringed Blue Tit escapee to the nearby village. It has no recapture history within the wood. So far, this year's score for Treswell Wood nestling-ringed Blue Tits is Treswell Wood 3, Hillcrest Farm 5. The figures for Great Tits, on the other hand are completely different in both numbers and proportions with Treswell Wood 32, Hillcrest Farm 1. (Rampton has scored one point for each species.)

<b>Blue Tit</b>	<b>3J</b>	<b>V666906</b>	<b>8/10/2009</b>	<b>Rampton</b>
-----------------	-----------	----------------	------------------	----------------

Our first nestling-ringed Blue Tit to be found this year outside the parish of Treswell. It was from a late nest, the latest successful nest of the season. The eggs were laid some three weeks after the earliest nest of the season. To match this late start, when it was retrapped it was still moulting its juvenile plumage. (And thanks to Dan Bardsley for recording the moult state - it all adds to the national picture).

<b>Great Tit</b>	<b>4F</b>	<b>R558969</b>	<b>2/10/2009</b>	<b>Hillcrest Farm, Treswell</b>
------------------	-----------	----------------	------------------	---------------------------------

Unlike most of the birds recorded moving from the wood to the village, this individual has waited for nearly two years after being ringed - rather longer than the two-day movement of the Blue Tit V666764. In that time we have not retrapped it within the wood.

<b>Great Tit</b>	<b>3F</b>	<b>TJ49807</b>	<b>8/10/2009</b>	<b>Rampton</b>
------------------	-----------	----------------	------------------	----------------

Another fairly local dispersal movement of a nestling-ringed tit. It was ringed in May in the wood and (unusually for a Great Tit which has survived this long) has not been retrapped at the feeding station within the wood (or elsewhere in the wood either). Dan retrapped it again at Rampton on October 22<sup>nd</sup>.

<b>Great Tit</b>	<b>4M</b>	<b>V475759</b>	<b>25/9/2009</b>	<b>Hillcrest Farm, Treswell</b>
------------------	-----------	----------------	------------------	---------------------------------

Ringed as a juvenile in Treswell Wood in July 2008, this bird seemed to prefer Hillcrest Farm and was trapped there later in July and in August 2008. It has remained out of sight since then for over a year until appearing again at the farm.

<b>Chiffchaff</b>	<b>4M</b>	<b>CRH216</b>	<b>12/7/2009</b>	<b>D10</b>
-------------------	-----------	---------------	------------------	------------

Our 9<sup>th</sup> controlled Chiffchaff. This was ringed as a juvenile on 25/9/2008 at Icklesham on the south coast. We have had a similar control in the past with a bird ringed the previous autumn at Beachy Head. Other controls have been much more local. Four have involved birds ringed as juveniles being caught the following breeding season (birds from Rampton, Darlton, Gamston Wood and to Misson). The remaining three birds were all ringed as adults at Cottam Power Station and controlled in Treswell Wood (two in the same breeding season and the third in the subsequent season). Is there a pattern here?

## 10 Week Summary 2009 Interval 4, Captures in Standard Sites

	New Birds			Recaptures			Total
	Adult	5	3	Adult	5	3	
Wren	.	.	17	2	.	.	19
Dunnock	1	.	1	.	.	.	2
Robin	1	1	19	2	.	3	26
Blackbird	.	.	6	3	.	.	9
Blackcap	1	.	3	1	.	.	5
Chiffchaff	.	.	2	1	.	.	3
Marsh Tit	.	.	.	1	.	1	2
Blue Tit	.	.	2	1	.	.	3
Great Tit	.	.	4	3	.	1	8
Nuthatch	.	.	1	.	.	.	1
Treecreeper	.	.	1	.	.	.	1
Bullfinch	.	.	4	.	2	.	6
<b>Totals</b>	<b>3</b>	<b>1</b>	<b>60</b>	<b>14</b>	<b>2</b>	<b>5</b>	<b>85</b>

## Treswell Wood Standard Site Totals in 10-week periods - Summary table

Year	1	2	3	4	5	Total
1978	101	130	243	223	131	828
1979	97	115	211	109	123	655
1980	86	102	210	147	170	715
1981	102	110	288	187	177	864
1982	66	113	165	89	110	543
1983	82	139	143	185	128	677
1984	91	114	110	82	106	503
1985	103	88	135	118	88	532
1986	77	104	153	68	141	543
1987	95	112	196	209	124	736
1988	92	143	180	137	119	671
1989	124	137	282	145	103	791
1990	99	145	204	130	175	753
1991	65	57	98	74	127	421
1992	64	64	115	224	159	626
1993	81	70	112	158	126	547
1994	88	110	212	155	157	722
1995	91	124	240	253	104	812
1996	95	121	128	116	97	557
1997	59	99	126	98	98	480
1998	78	84	116	80	106	464
1999	88	96	140	113	163	600
2000	75	106	106	159	170	616
2001	57	33	94	121	59	364
2002	85	89	141	176	117	608
2003	117	116	146	104	114	597
2004	103	128	126	165	132	654
2005	107	140	150	88	133	618
2006	128	98	185	125	166	702
2007	107	110	138	73	92	520
2008	125	130	151	86	100	592
2009	57	131	156	<b>85</b>	.	<b>(429)</b>

**Summary Data** since standard site netting began in 1978

<b>Maximum</b>	128	145	288	253	177	865
<b>Minimum</b>	57	64	94	68	59	364
<b>Mean</b>	91	107	163	135	126	623

**10-year Averages** since standard site netting began in 1978

<b>1978 - 1987</b>	90	113	182	140	130	655
<b>1988 - 1997</b>	86	107	170	149	127	637
<b>1998 - 2007</b>	95	100	134	120	125	574