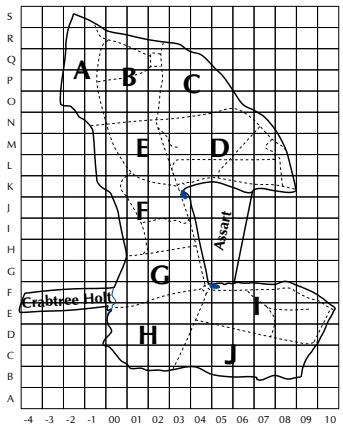

TWITTER

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

August 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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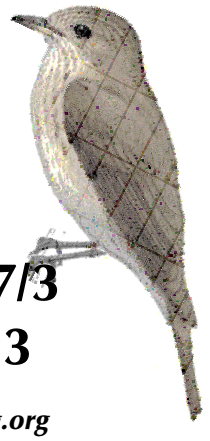


2017/3

Number 113

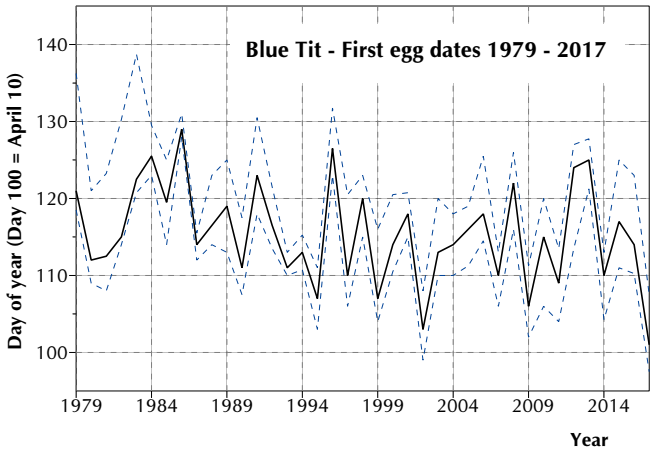
This breeding season has been somewhat better than most in recent years from many points of view. The number of nests recorded, almost exclusively in nestboxes as usual, was amongst the lowest. However, what matters is what comes out of the boxes - and here this year has been good. The 416 nestlings fledged is the highest number since 2010. What has contributed to this is a high nest success rate - equalling the high of 2010. During the critical parts of the nesting season we did not suffer the heavy downpours which often lead to nest failure. Predation, too, has generally been very low - the one exception to this was a spate of woodpecker attacks in a small area (presumably near the woodpecker nest) in the north-west of the wood.

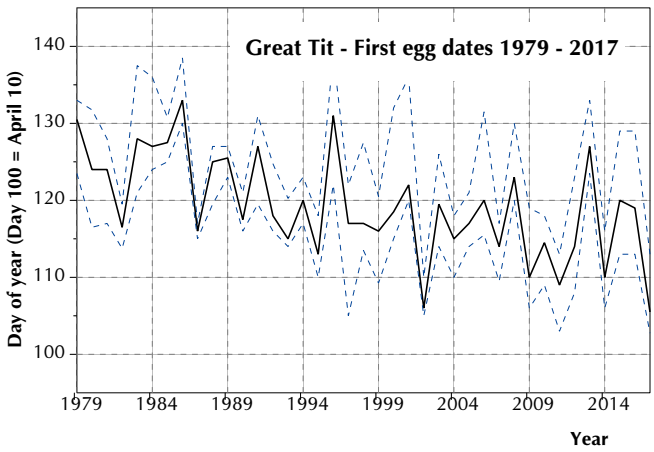
Events in Nestboxes - Treswell Wood, 2017

Species	Nests Recorded	Successful	Eggs laid	Adults caught on nests	Birds Nestlings fledged	Nestlings recaptured (to Aug. 25th)	% Success Rate Nests	Eggs
Tawny Owl	2	2	4	1	3	1	100	75
Stock Dove*	5	2	6	.	4	.	40	67
Wren	8	5	44	.	22	2	63	50
Robin	1	1	5	.	4	.	100	80
Blackbird	5	5	18	.	17	.	100	95
Coal Tit	1	1	11	.	11	1	100	100
Marsh Tit	4	3	35	3	24	7	75	69
Willow Tit	1	0	8	1	.	.	0	0
Blue Tit	44	36	403	33	227	14	82	57
Great Tit	32	20	199	13	98	20	63	49
Nuthatch	1	1	9	1	6	.	100	67
Chaffinch	1	0	5	.	.	.	0	0
Totals	**105**	**75**	**747**	**38**	**416**	**45**	**71**	**56**
2016	91	54	626	38	324	47	59	51
2015	102	59	633	41	283	33	58	45
2014	119	65	791	31	330	33	55	42
2013	80	51	484	26	314	76	64	65
2012	112	50	670	28	219	35	45	33
2011	111	62	796	32	310	29	56	39
2010	112	80	778	25	539	146	71	69
2009	118	54	648	26	300	38	46	46
2008	108	29	589	22	139	17	27	24
2007	129	64	922	52	313	35	50	34
2006	175	37	885	31	225	33	21	25
2005	153	49	852	47	245	22	32	29
2004	141	94	917	41	538	41	67	59
2003	133	41	769	29	213	17	31	28

Notes: Nests of species in italics were open nests found incidentally during the nestbox rounds or by other workers in the wood. Wren nests found in dormouse boxes are included in the table.
The numbers of nests recorded, for all species, exclude nests which were abandoned before any eggs were laid.
* Some Stock Dove nests are still active.

Long-term data allow analyses of changes in time - and it is quite some time since we have looked at the earliness of the breeding season for our two most abundant nesting species. The usual representative date for time of nesting is the first egg date - the day of the year on which the first egg is laid in the nest. Typically, there will be a handful of very early nesters with most birds laying in a relatively short time span, followed by a longer period with late nesting birds, replacement clutches for early failed nests and, occasionally, a genuine second brood. Because of the skewed distribution of first egg dates, the best average measure for the year is the median date. Similarly the best measure of spread of the season is the inter-quartile range. The two graphs below show how these dates have varied through the years - the heavier line is the median date and the lighter, dashed lines are the first and third quartile dates. It can be seen that there is a relatively short time during which the first half of the years' nests are started followed by a much longer time when the last half begin, with the median line generally lying nearer the first quartile. The length of the season can be assessed by the distance between the quartiles - this year the length has been just a little shorter than typical. Overall, the picture we have seen in the past continues with tit nesting times continuing to advance, this year's median first egg dates for both species being the earliest ever.





The total number of Marsh Tit nests was equal to our highest ever although the loss of one, to a woodpecker, was a disappointment. Only one Coal Tit nested in the boxes - a far cry from the peak years with 5 to 7 pairs some 15 years ago. One Willow Tit nested but the eggs were deserted. The female was the bird which appeared as a juvenile last autumn and remained in the wood through the winter and spring. Why did the nest fail? We have not retrapped the bird since the breeding season so she may have been taken by a predator, or died in some other way. The nest was unusual in that she did not excavate the cavity herself but used a ready-made cavity in a stump box. Further we did not hear any male Willow Tit singing in the area. We wonder if she had laid infertile eggs having failed to find a mate. Another possibility is that she crossed with a male Marsh Tit, who encouraged her to use a ready-made cavity, but that eggs from this cross-mating were infertile. On the bright side, one pair of Nuthatches nested successfully - only the third time they have attempted to use boxes, this being the second successful attempt. Thanks to all the recorders who have done, as usual, a very thorough job of nest recording and data entry.

The protocols agreed with the dormouse team are working well. Dormouse boxes remain plugged until the majority of tits have selected their nest sites. This is still early enough for the late-emerging dormice. This year, only one tit has used a dormouse box - an excellent record low. Wrens, of course, with their multiple broods, use the boxes in small numbers throughout the season.

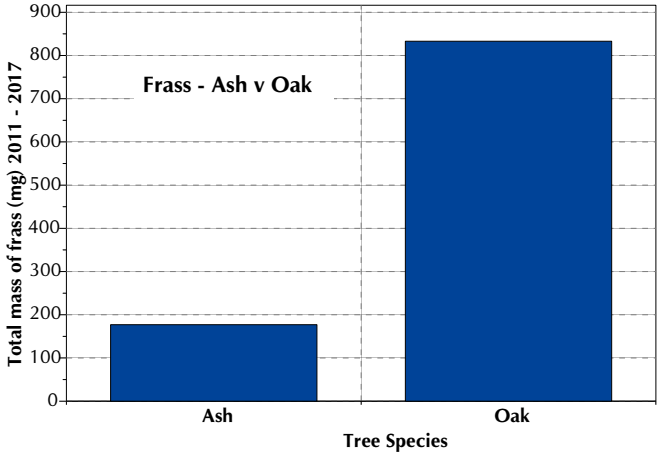
The 10-week standard site captures, give a slightly different picture of breeding success. The overall proportion of juveniles in the total capture numbers gives some idea of relative productivity and this year's numbers show a higher proportion than did last years - up from a dismal 25% to 43%. However, looking at the long-term capture numbers, the overall annual pattern has changed. In early years, the peak of captures came in this third interval with large numbers of newly fledged juveniles. As migrants departed, predators took their toll, food supplies became scarcer and winter came on, numbers decreased. The first interval of the new year brought even fewer captures and then numbers increased as local and long-distance migrants returned to breed. In recent years, the peak has shifted towards the second interval with the third interval barely higher, sometimes even lower. This suggests that productivity within the wood is not generally as high as it was. It is particularly noticeable this year - our third interval captures were only just above average whereas the second interval yielded the highest total number ever. There is much scope here for a deep analysis - any offers?

Normally we catch many juvenile Great Tits at the feeding station in the first months after they have fledged, often catching large proportions of the birds ringed as nestlings - in 2016 it was 52% by the end of August. This year numbers have been very much lower - just 20% of a smaller number of nestling-ringed birds. A number of those we have retrapped (and some non-nestbox Great Tits) have been badly infected with avian pox. We know from past retrapping that even badly affected birds can recover. It seem likely that the pox itself is not fatal but can

severely reduce survival chances. For example, a bird carrying a large lump on its head which obscures vision in one eye, changes the 'flight trim' and increases overall weight, is much easier prey for Sparrowhawks or cats. We wonder whether this infestation, which is more severe than the outbreak in 2014, has resulted in much higher mortality and consequently a lower recapture rate. Ringers do not, as a rule, ring birds they catch which are sick. We have been ringing Great Tits infested with pox (with agreement from the BTO) because our very high recapture rate allows us to follow the progress of infected birds. Infection can be rapid - one bird without signs of pox was retrapped with very obvious pox two weeks later. Of the 31 infested Great Tits we have caught since the beginning of the outbreak in 2014, five have been retrapped apparently recovered. This recovery can also be remarkably rapid - a bird in 2014 was retrapped one week later without apparent symptoms, others have reappeared pox-free after some months. On the peak day, 23rd July 2017, eight Great Tits were trapped with the pox. On some birds the pustules were beginning to burst, on others they were dried and shrivelling. We wondered whether recovery consists of the shrivelled remains dropping off (whether the bird remains a carrier of the pox is another matter.) This might leave a small scar which would be difficult to detect below the plumage of the bird, particularly at this time of the year when birds are in moult and growing new feathers.

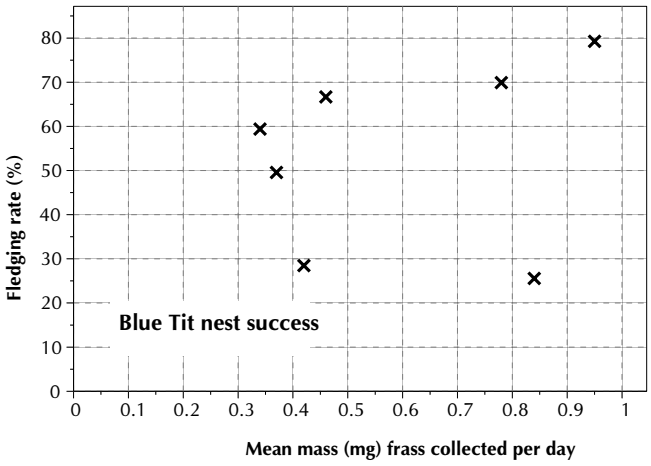
The timing of the outbreaks has varied between years. In 2014 we recorded one case in July, the rest were from September to the end of the year with one case very early in 2015 - presumably the last of the 2014 outbreak. In 2016 there were three cases only - April, May and November. The 2017 cases have been in February (1), April (2) and the other 13 in July and August. The pox seems to favour no particular season, neither does it seem to take any regard of the age of a bird with juveniles and adults both being infected. This form of pox is particularly prevalent on Great Tits; we have only recorded it on one Coal Tit and one Marsh Tit.

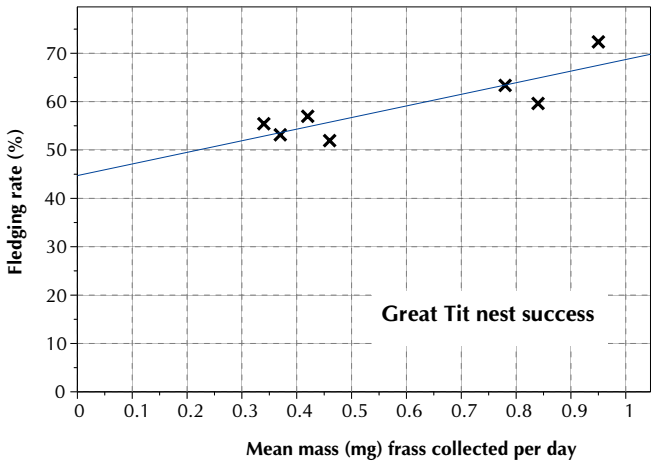
Frass



Our thanks to Ken Smith who has promptly examined the frass samples we collected in the wood this year. Nationally the season seems to have had two peaks of frass production (and therefore caterpillar abundance) and our data have contributed to this. Of particular interest to us is the continuing small mass of frass collected from under ash compared to that from under oak. We now have seven years of frass data and the difference between the two tree species is striking. The chart shows the total amount of frass (mg) collected in the traps below the trees throughout the tit breeding season throughout the seven years. It is likely that the real difference between the species is even greater than the graphs show because it is more likely for frass to drift in the wind from the trees with more frass to those with less frass than vice versa.

The point of collecting frass is understand phenological connections between nestling tit food demand and caterpillar food supply. This is what Ken Smith is working at nationally. With our Treswell Wood data only, we can examine connections between frass supply and nesting success. There are several ways of measuring nesting success - for example total number of birds fledged, average number fledged per brood, percentage of nestlings which fledge. The graphs illustrate this last measure in relation to frass supply during the nestling period (mg in traps/per day). Great Tits show a strong response to frass supply whereas Blue Tits do not. This does not seem to be a statistical artefact because Great Tits show similar strong responses to various other measures of success whereas Blue Tits do not. This, at first, seems surprising. However, there are many factors which determine whether a hatchling fledges - not just food supply. It may be that some other factors (weather, for example) play a relatively





larger part in Blue Tit nest success than they do for Great Tits. Again we have an opportunity here for a thorough analysis. Another student project?

Data Analyses and Publications

In the last Twitter we noted a completed student project about Great Tit phenology by Russell Barnett at Exeter University. Further analyses are being carried out by Russell and his supervisor with the hope of submitting a paper for publication in the near future.

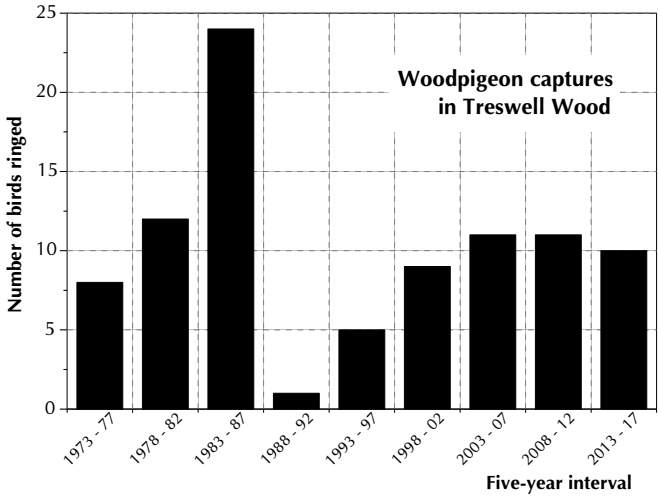
More work has been done at Lincoln University by Charles Deeming and Lucia Biddle resulting in the publication of 'Interspecific and intraspecific spatial separation by birds breeding in nest boxes' in Avian Conservation & Ecology (https://doi.org/10.5751/ACE-01026-120201). This has examined data from our boxes and those at Riseholme Park in Lincoln. The discussion warns against siting nestboxes too close to each other and notes that Blue Tit nests in particular become less productive as they become nearer to another conspecific nest.

Noteworthy Encounters

Species **Age/sex** **Ring** **Date** **Grid**

Woodpigeon **6** **FH74621** **6/8/2017** **R-2**

Nationally, Woodpigeon populations have increased strongly and consistently from the early 1970s, now being nearly three times as large as they were then. The captures in Treswell Wood do not reflect this at all with very low captures in the early 1990s following record numbers in the decade previously. The captures over the last 20 years are still only half the peak of that time and seem to be fairly stable. We have ringed 103 individuals in total (including 12 nestlings). Of these only four have been recovered, all shot. Two have been shot in the wood as part of pest control, one in South Leverton and the fourth in Faldingworth, Lincolnshire some 30km to the east. Apart from one shot in 2012, the others were all taken in the 1970s or early 1980s before the population had expanded. For a large, obvious bird which is a pest species, this recovery rate seems very low indeed.



Tawny Owl **8** **GR24214** **18/6/2017** **D03**

We have now trapped this bird four times. It was ringed as an adult in September 2014 in the centre of the wood. Its next capture was late in the following summer in the south of the wood. In 2015 we found it nesting in the south of the wood and this capture has again been in the south. Tawny Owls do tend to be faithful to their territory - this makes sense because their hunting technique demands thorough familiarity with the hunting ground. It is not surprising, therefore, that so many successive captures have been in the south of the wood. What is more unusual is that three of its four captures have been in mist nets in daylight hours - times when this species should be immobile and roosting.

Great Spotted Woodpecker 4M **CT84206** **11/6/2017**

This is the retrap for which we have been waiting. We last retrapped this bird in July 2016 and noted in the next issue of Twitter that if we caught it again it would break the national longevity record for the species. It has done this by a margin of 40 weeks, at 11y 328d since ringing on 21/7/2005. It is not a European longevity record holder yet - but it will be if we catch it again. To counter our pleasure at having a record holder in the wood, we suspect this is also the bird which has been responsible for predation of a large number of tit nests in the north-west of the wood over the last few years. These nests included a quarter of this year's Marsh Tit nests. It is also likely to be a bird which played a major part in the destruction of the Willow Tit population early in its life.

Wren **6** **EYD002** **6/8/2017** **R-1**

Wrens are notoriously short-lived, suffering high mortality in winter and compensate for this with two or three broods during the breeding season. Individuals which live a long time are not necessarily the fittest birds, just those that have, by chance, escaped death by predation, accident, starvation or weather. It is exceptionally rare for any Wren to die of old age. The national age record for a Wren is just over 7 years; our internal record is of 5 years 3 months (by a bird which was, for a few years, the national age record holder). This bird is our second-longest lived Wren, having been ringed just over 4 years ago. Unusually for a sedentary species, it had not been captured between its ringing as a juvenile in 2013 and April this year as a breeding adult.

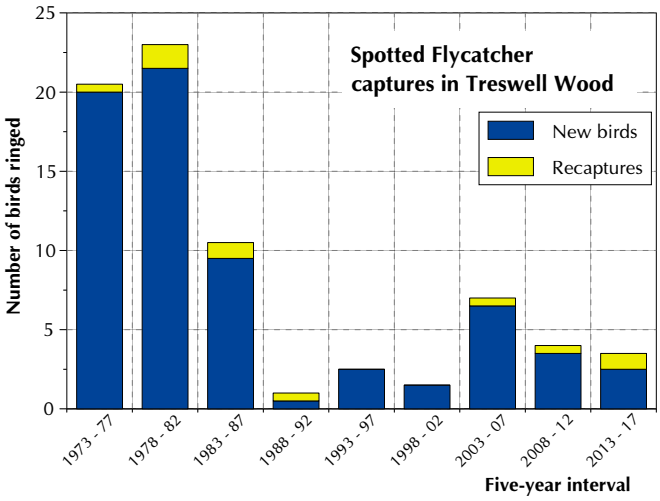
Blackbird 5M LE35359 4/6/2017 M00
Most passerine juveniles do not moult their primary feathers during their summer moult into adult body plumage. Increasing numbers of birds, Great Tits in particular, now moult tail feathers during that first moult. In recent years some local Goldfinches and Greenfinches have been found moulting some of their primary feathers. Under 10% of our moulting juvenile Blackbirds have been recorded moulting any tail feathers. This bird came as a surprise. It was a bird of 2016 which had, as part of its first moult, moulted all but the outer two primary feathers and the alula. Apart from these few juvenile feathers, it appeared just as an adult.

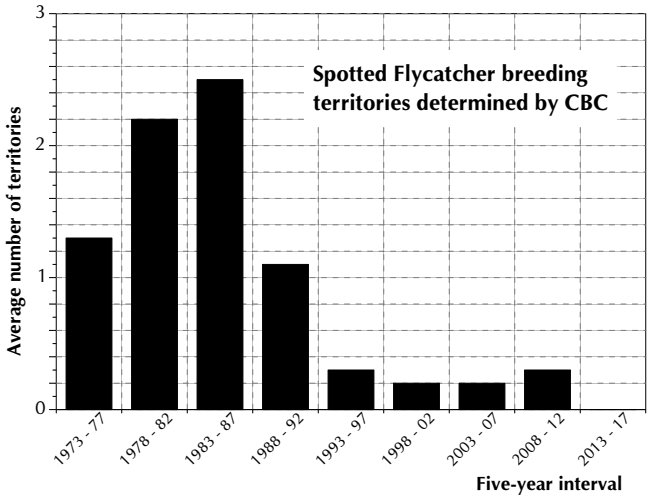
Blackcap 4F D309808 11/6/2017 O06
Blackcaps are usually very faithful to their breeding sites, returning to within perhaps 50m of their previous nesting location, sometimes for three or four years. This one has not behaved typically. It was ringed as a breeding female in 2015 some 350 metres from today's capture position and was not caught by us in 2016. Perhaps it just has itchy feet. Curiously, a second individual exhibited a similar history - ringed in 2014 in the north of the wood, not seen in 2015 or 2016, then retrapped in the south on 13/8/2017.

Willow Warbler 4M JTE216 25/6/2017 N-1
Most of our very few captures of Willow Warblers in recent years have been of juveniles or adults late in the season when they were, probably, in the early stages of their southward journey towards the wintering grounds. This bird was caught in the breeding season and in breeding condition. A welcome change.

Goldcrest 3J JTE235 2/7/2017 D10
Most Goldcrests captured in the wood are winter immigrants, possibly from further north in the UK, possibly from overseas. This bird is clearly not a winter migrant but far more likely to have been reared in the wood. Its capture position was near the yew tree - a species favoured by these birds for nesting and in which a nest was found in the 1970s in this same tree.

Spotted Flycatcher 4M D309880 9/7/2017 O-1
A welcome capture of a formerly regular summer visitor. This is our first capture of the species for the year. Its capture was followed by two more (unringed birds) an adult and a juvenile on August 6th then yet another juvenile on August 13th. In the years when the species was often caught, retraps were very rare indeed - as can be seen in the first chart. This bird was a retrap, having been ringed in 2015.





The drop in Spotted Flycatcher numbers was very sudden indeed after 1987 - although the CBC still recorded them as present for another few years before they virtually vanished as a breeding species. It is tempting to look at the chart and think we are on the verge of a recovery but, in reality, the numbers we are catching are so small that we could well be seeing just chance events rather than an underlying trend.

Blue Tit 3J S078797 28/7/2017 Cottam Power Station
The first report of one of this year's nestling-ringed birds away from the wood. This is an early movement for a juvenile - we have only recorded two Blue Tit movements well away from the wood any earlier than this.

Blue Tit 3J S078833 4/6/2017 L00
For the first few days after fledging, we expect that Blue Tits will remain in a family party being tended by their parents. This bird was caught in a group of three no more than ten days after fledging. Obviously a family party? The adult was, indeed, the female parent of this bird and the point of recapture was under 50 metres from the

nestbox. The other juvenile, though, was from a different brood, reared over 400 metres away and still no more than a week after it had fledged.

Nuthatch 3J TT49315 11/6/2017 O06

A juvenile Nuthatch caught so early in the season is a good indication of successful breeding within the wood. However, in addition to this we recorded a Nuthatch nesting in a box and ringed the whole brood. That makes at least two pairs breeding successfully within the wood this year. Another two unringed juveniles were trapped together in the south of the wood on 13/8/2017. Could this suggest a third successful nest in the wood?

10-Week Summary: 2017 Interval 3, Captures in Standard Sites

	New Birds			Recaptures			Total
	Adult	**5**	**3**	**Adult**	**5**	**3**	
Tawny Owl	.	.	.	1	.	.	1
Wren	3	8	11	2	1	.	25
Dunnock	1	1	3	1	1	.	7
Robin	1	4	16	2	6	.	29
Blackbird	6	4	6	4	1	.	21
Song Thrush	.	3	.	1	.	.	4
Blackcap	8	4	1	4	.	.	17
Chiffchaff	1	.	4	2	.	.	7
Willow Warbler	1	.	1	.	.	.	2
Marsh Tit	.	.	2	.	.	2	4
Blue Tit	.	.	4	.	.	4	8
Great Tit	.	.	2	1	.	4	7
Nuthatch	.	.	3	.	.	.	3
Treecreeper	1	.	5	1	.	.	7
Chaffinch	.	1	1	3	.	.	5
Bullfinch	1	7	1	3	4	.	16
Totals	**23**	**32**	**60**	**25**	**13**	**10**	**163**

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

Recent Totals

Year	**1**	**2**	**3**	**4**	**5**	**Total**
2007	107	110	138	73	92	520
2008	125	130	151	86	100	592
2009	57	130	156	85	80	508
2010	94	100	144	119	143	600
2011	96	112	120	105	101	534
2012	69	125	132	66	72	464
2013	76	90	89	100	157	512
2014	83	132	181	123	120	639
2015	105	123	136	137	158	659
2016	102	185	193	109	109	698
2017	106	198	**163**			

Summary Data since standard site netting began in 1978:

Interval	**1**	**2**	**3**	**4**	**5**	**Total**
Maximum	128	185	288	253	177	864
Minimum	57	33	89	66	59	364
Mean	90	113	159	130	124	609

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

1978 - 1987	90	113	182	140	130	655
1988 - 1997	86	107	170	149	127	637
1998 - 2007	95	100	134	120	125	574
(2008 - 2016)	91	126	149	104	115	561