

TWITTER

Treswell Wood - Information To Tell Every Recorder

December 2000 Treswell Wood IPM Group
(Integrated Population Monitoring)

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Project leaders:

CBC Margaret Price

Nest Records Chris du Feu

Ringling John McMeeking



2000/5 Number 30

Another year gone - the much-hyped Millennium Year - and we never saw the dreaded 'Millennium Bug' - even in Treswell Wood. We have added another year's records for CBC, Nest Records Scheme and Constant Effort Sites to the archive, and want to thank everyone involved for their efforts. The archive is becoming more and more sophisticated as Chris, Steve and their helpers find ways to computerise all our old information (see page 3). It really does seem to be highly regarded by the BTO and other researchers, and the whole dataset can now be supplied on a single CD-ROM. What is more, the mysteries of statistics mean that the longer the series of data, the more it tells us, and the more reliable are the findings. So we are determined to maintain our CBC, and to have it analysed, even though the national CBC index is being phased out. Thank-you all again, and carry on the good work.

John McMeeking

After the poor breeding season and very wet autumn, we could have been forgiven for expecting very low catches in the last months of the year 2000. These fears have not come to pass, with the capture total being the third highest ever for the last ten weeks of the year. The constant-effort total for the whole year has crept up to just below average and higher than any year since 1995. Very wet weather may not seem to be good for the birds - it is certainly bad news in the nesting season. The wet has been accompanied by very mild weather. It is cold that kills the small birds. In mild, wet weather, provided birds can remain fairly dry - by foraging under cover, for example - they should have higher survival than in a normal cold autumn. This has seemed to be the case. Goldcrests have been present in very high numbers and comprised 25% of our total catch. In second place were Long-tailed Tits which we have captured in small parties throughout the period. Treecreepers have been caught in reasonable numbers in spite of the wet. (In our 1995 Ibis paper we described how it is a combination of cold and wet that causes high Treecreeper mortality. This autumn has provided only one of these factors.) Bullfinch numbers are higher than in most recent years. Although Chaffinches have been caught in fairly small numbers on the standard sites, numbers at feeding stations have been higher than usual.

It is commonly thought that birds lose weight in cold weather because they cannot find enough food to keep warm. The truth is not this simple. In hard weather, weights of birds tend to become more diverse than in mild weather. More dominant birds can monopolise food sources and use them to increase body fat in order to provide more insulation and more fuel to burn overnight. They respond to cold weather by **increasing** weight. Birds of lower quality cannot find adequate food. They lose insulating fat and this leads to even more demands on them to remain warm. They respond to cold by **decreasing** weight. The end of the year brought a few days of hard weather. It was probably not long enough to cause high mortality in the small bird population, but by December 31st the increasing spread of weights was becoming noticeable. Some birds were rather light whereas others (including a Chaffinch which was heavy enough to be queried by the computer on data entry) were rather heavy. We did find one dead bird - an unringed Wren - during the cold spell. However, it was relatively heavy and had lost its tail. It seemed more likely to be the victim of a predator than of the cold.

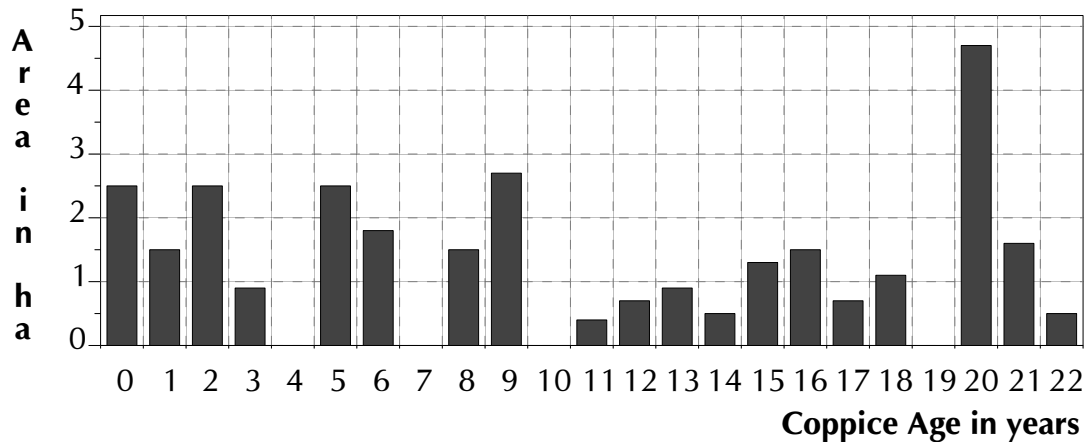
The overall picture for the year is mixed. Two Kestrel captures are unprecedented, but probably not of any great significance. Stock Doves have nested successfully in boxes for the second year running. Warbler totals were very low, even Blackcap with 70 captures is lower than usual. Nestling numbers were very low indeed.

The year ended with mist-netting visit 1487. Visit 1500, which will happen around the end of March, is of absolutely no biological significance whatsoever. Even the special value we humans attach to numbers ending in double zero is an artefact of the accident of counting in tens, probably resulting from us having ten fingers. Nevertheless it is a milestone of sorts. Why not join us for the day, whenever it happens, and be there to welcome the first warblers, perhaps?

Bird Communities and Coppice Structure

Andrew Joys of the University of East Anglia is undertaking a PhD study examining how bird communities are affected by woodland management. Treswell Wood is one of his study sites. He has produced a preliminary (but very comprehensive) report. For interest, his breakdown of the coppice structure of the wood is reproduced below - it does show a good spread of coppice ages and a consequential wide variety of woodland sub-habitats.

Coppice age structure in Treswell Wood - 2000



Andrew has carried out a series of very thorough territory mapping visits in the style of CBC and combined this with detailed habitat measurements. He has recorded such things as foliage density, height of coppice growth and coppice stool density. In his discussion he has noted that some species respond differently to different ages of coppice growth, whereas other species are more generalist and are not restricted to particular areas. He has also begun to examine how these patterns are modified by proximity to the edge of the wood. On the fringe of the wood there are increased densities in the shrub and field layer. This may allow species which are characteristic of young coppice to persist in older coppice near an edge of the wood. We look forward to Andrew's full account.

Treswell Wood Constant Effort Site - 2000 - from Dawn Balmer, BTO

Our data have been submitted to the BTO and included in their system. Their preliminary response is below.

Thank you very much for the computerised CES returns for Treswell Wood. These data transferred without any problems to our computer system. The number of adults caught was virtually the same as last year, although it was a good year for Robins and Blackcaps but adult Bullfinches were way down following last year's excellent catch of 12. The number of juveniles caught was low, suggesting a poor breeding season. Returns from other CE sites show that Robins and Long-tailed Tits had a reasonable breeding season but Willow Warblers had a poor season. We are just about to run the CES programs for 1999-2000 and I should have a clearer idea of the overall picture next week. CES returns have been coming in earlier this year, I now have over 100 datasets in, and over 90% of them are on disk.

Again, many thanks for all your hard work this year. Your efforts are very much appreciated. Please pass on my thanks to the other members of the Treswell Wood IPM Group who helped with CES.

Dawn Balmer

David Thompson - progress reports from the Netherlands

Hi - I've just been contacted by a chap at Antwerp University who is involved in a European project, led from Norway, on the demography of hole-nesting birds. The idea is to build models to gain insight into population viability and extinction risks for tits in different parts of Europe. If you folks are again keen for Treswell Wood to figure in such an international study, I can make it happen. Let me know. Hope life is treating you all well. I guess the birds must be beginning to pile into the feeding station.

These are brief notes on the other projects.

For the purpose of the EU project "Metabird" we aim to analyse patterns of synchrony among hole-nester populations in Europe. The results will be integrated in order to build demographic models predicting times to extinction of bird populations. The project is co-ordinated by Bernt-Erik Saether (Trondheim, NTNU) and includes participants from Belgium (E. Matthysen), Denmark (T. Bregnballe) and France (A.P. Moller; M. Lambrechts). I suspect a very large number of field studies will be included from across Europe.

As for the laying dates project, things are looking good. There is evidence of advancing laying dates from several parts of Europe, though it is not yet clear why it is happening in some places and not in others. The idea is to try and make sense of the differences before publishing anything. I'll keep you posted.

Best wishes, David

Bullfinch survival

Fiona Proffitt is a PhD student at Oxford University. She is examining Bullfinch survival in order to see if the patterns described by Ian Newton in the 1960s still apply. Because Bullfinch populations have declined so much nationally, she is likely to find things have changed. We hope she is able to determine what these changes are and why they have occurred. She asked us if she could use our data - nearly 30 years of round-the-year ringing, much of it constant effort, supported by CBC data for the same period of time. She will be able to have access to the BTO's national ringing recovery database records, but records from one site can give insights and details which are unavailable on a national scale. We have agreed to send her our data and look forward to her findings.

Help wanted and opportunities for fieldwork

Nest recording

Phil May, who has been with us for some years and has recorded the bird nests in the dormouse boxes, left the area during the autumn. He has joined the Tay Ringing Group in Scotland and we will no doubt hear from him from time to time. Thanks to Phil for all his work over the years, and all the best for the future in both work and ornithology. (He is in good hands as Kyle's father is a prominent member of TRG.) This leaves us without an inspector for the dormouse boxes. It is something which need not be done by a ringer, although the ringers will need to be called in to ring the nestlings. If you are interested in this, contact John or Chris. We can give you instruction, training, equipment and help if needed.

Colour-ringed Robins

We have continued to colour-ring Robins in the hope of re-sighting them in the wood. So far, re-sightings have been very few (and most clear views of Robins have been of non-colour ringed birds). Now is the best time to look for these birds, before the leaves are on the trees. If you visit the wood, even for half an hour or so, have a look for Robins and note where they are and what colour rings they are wearing. The ringers have recording forms with full instructions if you want them. All observations will be welcome. David Harper of Sussex University is studying Robins, in particular trying to find where the females go in winter. We have agreed to send him our data - any additional winter sightings would add more value to our existing records.

Computerisation of field notes

Over the past year, Darren Clarke and Dave Barritt have made good progress in computerising the various hand-written notes on our field sheets - our thanks to them for this. The aim is to have all these observations held on computer file eventually. Once this is done it will be very easy to find, for example, all references to hornets for submission to BWARS (see below), or to find the earliest day each year when we noted brimstone butterflies or primroses in bloom. The work can be interesting but does take up to about 40 hours for each year's dataset. Again, it is not necessary to be a ringer to do this work. If anyone else is interested in continuing this effort, please let us know.

Steve has continued with his digitisation of the CBC maps and all the copies of the Treswell Wood Nestbox Reports (1979 - 1994) have been computerised and copied to the Treswell Wood CD-ROM. If you would like a copy of this mine of information, let Chris know.

Electronic Twitter

The advent of the electronic version of Twitter has made distribution much easier and quicker. At present it is distributed as an MSWord document. This creates a number of problems. Word is only a wordprocessor and its graphics handling capability is limited. It is also memory hungry. Perhaps worst, using it further extends the monopolistic position of Microsoft. I am contemplating producing it in the future as a PDF file. This is a cross-platform format. It is also readable by anyone because the file reading software - Adobe Acrobat - is freely available. Electronic versions of Twitter would carry the same masthead as the printed version rather than being text-only. Email chris@beckingham0.demon.co.uk with your comments, objections or other ideas.

This issue of Twitter contains some notes from afar. If you have anything you would like included, please send it to Chris. Email is obviously most convenient but hand-written material will be equally welcome.

Hornets - the full story

The last issue of Twitter noted that we had found a hornet's nest in one of the nestboxes. Below is a fuller account of some events at the nest, late in the autumn. This account was sent to Tom Ings of BWARS (Bee, Wasp Ant Recording Society). His interpretation follows our notes to him.

We have looked after about 120 nestboxes in Treswell Wood for the past 20 years. In that time we have seen hornets using boxes for roosting (is that what they do?) or sunning themselves only three or four times. We have seen a nest in a hole, high in a tree, some years ago and have seen the odd hornet flying about on perhaps half a dozen other occasions. All the sightings, apart from this year, have taken place in only two or three separate years. This means that the hornet is not likely to have been a regular breeder in the wood.

This year I found one individual, early in the morning when I do my nestbox rounds and still torpid (the hornet, that is) in a nestbox and again a week later. Thereafter none was seen again until after the bird breeding season was nearly over. One box had held a part-built Wren nest which was abandoned during June and which I subsequently emptied. On 9th July I noted a hornet active at the box, but as it was late in the morning, I did not go too close. That was the last time I visited the boxes in that part of the wood until October. On 15th, at about 11:00, I went to observe the box to see if the hornet had been a casual passer by or living there. I was pretty sure there was a nest in the wood because we had caught individuals in our mist nets in the past two weeks. (And thereby hangs another tale, which is mentioned later.) Sure enough, the box held a hornets' nest. I was able to observe it from a range of about three metres for about 15 minutes, the three metres being the minimum focus distance of my binoculars.

As I arrived, there were about 10 individuals in the air. One, apparently large, beast fell vertically in front of me and I saw that it was, in fact, two hornets. They grappled for a few seconds before separating and flying off separately. As I watched the nest, it seemed there were two types of hornet. At the nest entrance, and in the air, were slimmer hornets. Some crawled to the nest mouth, waited a while, then returned to the inside or flew off. Others remained at the entrance. The second sort, which I only saw in the air, were more heavily built and seemed to have brighter-yellow abdomens. They seemed to aim for the entrance, but took a very indirect path, weaving around in the air. A few made a close final approach, but when they did the animals at the entrance seemed to repel them by waving antennae and front legs. I saw none of the large yellow animals manage to land at the nest. Some of the smaller beasts buzzed the larger ones in flight and I think the first two I saw grappling were one of each type. Have you any idea what they were up to?

I then moved off, wondering whether they were engaged in some sort of dispersal operation. There is a coppiced area (Windy Ride) beyond that box and it held several hornets flying in the cool autumn sunshine but none of the other nestboxes in the coppiced area held any other nest. The following week the ringers, who happened to be operating in that sector of the wood, caught four individuals in the nets.

The other tale may interest you, although it needs no explanation. One hornet was caught in a mist net about a month ago. As with the occasional bee which is trapped, the fine-mesh of the net was wrapped around the narrow waist between thorax and abdomen. (The nets are of three-ply polyester thread which is about as thick as a hornet's leg.) We stretched the net gently to see if would be possible to untangle the insect and, as it was not badly tangled, we saw that if we cut the four threads in which was tangled, it could fly free. Scissors out and close-range glasses on! Imagine the hornet held in the net with four threads coming out from around its body in a cross shape. The intention was to cut these four threads. No need! By this time the hornet had cut through one itself and was half way through the next. We could see its mandibles chewing through the polyester. I cut the other two as it finished its second and off it went.

Tom's reply

Thanks for you interesting message, I am always happy to receive them. It seems that you were observing a combination of gynes (unmated new queens), males and a few workers at the nest. The two that were connected were probably a gyne and male copulating with the gyne being the larger, more robust of the pair and those at the nest being a combination of males leaving on their nuptial flights and probably workers which would be defending the nest. I hope this answers your question, but I will try and give you more detail later if you wish. I'm glad you found them interesting and took the time to make good observations. When you have finalised your database any hornet or other wasp/bee records will be most appreciated.

Thanks to Tom for taking the time to explain what was happening. The BWARS web site address is www.bwars.freeserve.co.uk A German web site, www.muenster.org/hornissenschutz.printengl.html contains a treasury of information about these creatures.

10 Week Summary - Captures in Standard Sites - October to December 2000

	New Birds			Recaptures			Total
	Adult	5	3	Adult	5	3	
Wren	1	.	6	.	.	3	10
Dunnock	1	.	3	2	.	2	8
Robin	.	.	2	4	.	6	12
Blackbird	2	.	3	2	.	.	7
Blackcap	.	.	1	.	.	.	1
Goldcrest	3	.	32	2	.	7	44
Long-tailed Tit	7	.	.	20	.	.	27
Marsh Tit	.	.	.	4	.	1	5
Willow Tit	.	.	.	2	.	2	4
Coal Tit	.	.	3	6	.	5	14
Blue Tit	1	.	2	3	.	6	12
Great Tit	.	.	.	7	.	.	7
Treecreeper	.	.	1	4	.	3	8
Chaffinch	2	.	1	1	.	.	4
Bullfinch	1	.	5	.	.	1	7
Totals	18	.	59	57	.	36	170

Treswell Wood Standard Site Totals in 10-week Periods

Year	1	2	3	4	5	Total
1978	101	131	243	223	131	829
1979	97	115	180	91	123	606
1980	86	102	211	147	170	716
1981	102	110	288	188	177	865
1982	66	113	142	89	110	520
1983	82	140	143	185	128	678
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	99	74	127	422
1992	64	64	115	223	159	625
1993	81	70	112	158	126	547
1994	88	109	209	155	157	718
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	177	170	616
Max	124	145	288	253	177	865
Min	59	57	99	68	88	422
Mean	87	108	168	141	131	634

Treswell Wood - Annual Ringing Totals for 2000

	Ctrl	New Birds			Retraps		Sight	Rec	Other	Total
		Adult	Juv	Pulli	Rt	SDR				
Sparrowhawk	.	1	.	.	1	.	.	.	2	
Kestrel	.	2	.	.	.	.	.	.	2
Stock Dove	.	.	.	2	.	.	.	.	2
Tawny Owl	1	.	.	2	3	
Great Spotted Woodpecker	.	3	1	.	4	.	.	.	8	
Swallow	.	.	.	4	.	.	.	.	4
Wren	.	30	47	10	31	6	.	2	126	
Dunnock	.	20	27	.	89	13	.	.	149	
Robin	.	27	50	.	78	18	11	.	184	
Blackbird	.	25	11	3	29	1	.	1	70	
Song Thrush	.	10	4	5	5	2	.	.	26	
Lesser Whitethroat	.	.	1	.	.	.	.	.	1
Garden Warbler	1	3	1	.	.	.	.	.	5
Blackcap	1	30	16	.	13	11	.	.	71	
Chiffchaff	.	11	1	.	2	1	.	.	15	
Willow Warbler	.	1	.	.	.	.	.	.	1
Goldcrest	.	16	80	.	23	13	.	1	133	
Long-tailed Tit	.	27	2	.	55	2	.	.	86	
Marsh Tit	.	.	3	3	34	2	.	1	43	
Willow Tit	.	2	8	.	30	5	.	.	45	
Coal Tit	.	6	11	26	90	7	.	.	140	
Blue Tit	1	38	30	120	243	23	.	1	494	
Great Tit	.	24	29	43	276	46	.	2	421	
Treecreeper	.	10	12	.	27	.	.	.	49	
Jay	3	.	.	.	3	
Chaffinch	1	46	51	.	62	8	.	.	168	
Greenfinch	.	13	.	.	2	.	.	.	15	
Bullfinch	.	6	15	.	18	6	.	.	45	
Yellowhammer	.	26	.	.	1	2	.	.	29	
Totals	4	377	400	216	1117	166	11	8	41	2340

Key: **Ctrl** - Birds ringed elsewhere and caught in Treswell Wood or vice-versa. **Juv** - juveniles. **Pulli** - birds ringed as nestlings. **Rt** - ordinary recaptures. **SDR** - same day recaptures. **Rec** - recoveries, i.e. ringed birds found dead in Treswell Wood or elsewhere. **Other** - all in this table are pulli which were ringed but died before fledging, they are not included in the Pulli column.

Noteworthy captures October - December 2000

Species	Age/sex	Ring	Date	Grid
Wren	3J	5Z1187	15/10/00	Q01

This Wren was first captured in July at the feeders, Q02. Occasionally we trap Wrens at the feeders even though they live almost exclusively on invertebrate food. We suspect that they are merely caught at the feeding site because they are there, not because they are using the food provided. Support for this is that this capture was very near to the feeders so it seems that the bird could have become a resident in that area.

Dunnock	4	K287613	8/10/00	H04
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Our oldest recent capture, ringed as a juvenile in August 1994 at the pond (K03). Since then we have trapped it regularly, always in or near H04.

Dunnock	2	N275415	3/12/00	Q02F
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Several of our Dunnocks have caused problems with ageing recently. This one (problem for CD) had pale eyes, and a not-very-broad tail and was aged as a bird of the year. Not so! It had been ringed in January, also at the feeders. At that time of ringing we had made notes about its age - they were identical to those made today. Pale eyes, intermediate tail shape and greater covert pattern. If in doubt about ageing, use the unknown age codes (2 or 4) and make notes on the field sheet.

Robin 4 N275431 8/10/00 H02

We have been recording presence of mites on Robins for about 18 months now and the body of information is increasing steadily, although none of the data have yet been computerised and we have not attempted any analysis. The presence of mites certainly varies through the year and between individuals. We have several birds with multiple mite counts. This one was heavily infested when ringed in February with several mites on each of its 19 flight feathers (on the right wing). Today there were only one or two mites on one of these feathers.

Long-tailed Tit 2 5Z1260 17/12/00 L03

On 1st October we caught a party of seven Long-tailed Tits in Horse Guards Parade, L05 and we ringed them with rings numbered 5Z1258 - 264. On the 3rd December we retrapped '260 to '264 inclusive, still in a group at Treswell End - O06. Today, these 5, together with '258 were retrapped together, again in Horse Guards Parade - L03. Perhaps '259 is cleverer than the rest of the party, or has already fallen victim to one of the many threats which these little birds encounter every day.

Willow Tit 3 P400172 22/10/00 M00

We have almost never recorded adult Willow Tits crossing the invisible boundary between north and south of the wood. Juveniles, on the other hand, cross it often. This is such a bird, trapped first in August in F03, south of Norman's Ride. Today it was to the north. It is a fairly safe bet that its next capture, as an adult, will be in the northern part of the wood.

Coal Tit 4M K463341 10/12/00 D07

A respectably aged little bird which appears to be a commuter between the feeders in the north and Nightingale Ride. It was ringed in May 1996 at the feeders and recaptured there, or near there, eight times before being caught in Nightingale Ride in November 1999. Its next encounter with us was back at the feeders in January 2000, and today it is back in the deep south.

Blue Tit 4 J639119 31/12/00 Q02 Feeder

We ringed this bird as a nestling in box 81 in May 1995. It has been trapped at the feeders several times since then, although it evaded us for the whole of 1998. We also trapped it roosting nearby in January 1996. It is a male and this makes it unlikely to be caught at its nest. Its one known roosting site is in a part of the wood, Q03, where we almost never set mist nets. Perhaps it has a long-standing breeding territory there?

Blue Tit 4F N275204 17/12/00 O02 Roosting

Our first evening visit of the winter to the nestboxes gave us one Great Tit and six Blue Tit recaptures, with no unringed birds found. Only one bird was a bird of the year, the others had respectable recapture histories. This one was typical having been found roosting in the same box at the very beginning of January 2000 and found nesting in a box nearby (O01) in the spring. Like some of the other birds roosting, this bird had also been trapped earlier in the day at the feeders.

Great Tit 4F K463701 22/10/00 M00

A fairly old bird, colour-ringed by Ulli in March 1997. We have trapped her on the nest in O03 in 1998 and found her roosting in February 1999 in O03. All of her 13 other captures have been at the feeders. However, Ulli did see her during the 1997 breeding season in the Windy Ride area (M01). Quite a mobile bird!

Great Tit 3M VJ35469 8/10/00 H04

One of our nestbox birds, ringed in block A. It has been a regular at the feeders but today's capture is the first elsewhere. Has it found a place to live permanently or is it homing in on the supplies of Pheasant food?

Great Tit 4F VS51103 10/12/00 D08

We mentioned this bird in Twitter 23 because of the series of captures in which we recorded its state of post juvenile moult - from brand new nestling plumage, through to the start of post juvenile moult, then with tail moulting also and finally in its first adult plumage. All its post-fledging captures were at the feeders and we had not seen it since February. Now it appears in the far south of the wood. It will be interesting to note whether it is found using the feeders in the north during this winter.

Chaffinch 4M J522611 29/10/00 Q02 Feeder

Another Chaffinch which was absent for some years before appearing again. We ringed it, at the feeders, in March 1995 and retrapped it there on 29/10/95. Since then, 5 years ago to the day, we had not recaptured it.

Controls and Recoveries

Species **Age/sex** **Ring** **Date** **Grid**
Robin **3** **P400127** **21/12/00** **Rampton Village**

One of our autumn 2000 juveniles which we ringed but never recaptured. It was trapped in Rampton village, by Mike Archer. He also retrapped it on 30/12/00. Unlike the Chaffinches listed below, it is more likely to be a bird which has dispersed from Treswell Wood and is now settled in Rampton rather than a commuter between roost and feeding sites.

Chaffinch **3M** **P253055** **3/12/00** **Q02 Feeder**

One of a trio of exchanged birds. It was ringed at a roost in Rampton Village on 4/11/00. It had rather unusual plumage features - pointed but very broad (much broader than some adult) tail feathers, with some black at the end of the central pair. The tertials on the right wing were broadly edged reddish-brown, as for adults, although those on the left were thin, pale edged. It retained one old, outer greater covert. Just as well to look at all ageing features before deciding on age.

Chaffinch **3M** **P400288** **1/12/00** **Rampton Village**

The second of the exchanged trio. We ringed this one on Main Ride south on 8/10/00. We presumed it was attracted by the grain put down for Pheasants. It was recaptured at the roost in Rampton Village.

Chaffinch **3M** **P400310** **15/12/00** **Rampton Village**

The third of our trio was also a bird travelling from the wood. We ringed it on 12/11/00 at our feeding station by the car park, Q02.

Bullfinch **5F** **N275283** **11/6/00** **Cottam Power Station**

We ringed this bird as a juvenile in September 1999. Dave Fogg caught it as a breeding adult last June. Considering the proximity of Treswell Wood and Cottam, we exchange remarkably few birds.

Treswell Wood Integrated Population Monitoring Group - 2000

Dan Bardsley	Ringling	Stuart Martin	CBC
Dave Barritt	Ringling, DNA analysis	Phil May	Ringling, nestboxes
John Bartley	CBC	Kath Maddison	DNA analysis
Jerzy Behnke	Ringling, Mites	John McMeeking	Ringling
The Bower Family	Equipment storage	Ulli Langemann	Data analysis
Kyle Campbell	Ringling	Stuart Martin	CBC
Dave Carthy	Distant but regular visitor	Phil May	Ringling, nestboxes
Darren Clarke	Ringling	Kath Maddison	DNA analysis
Sally Clough	Ringling	John McMeeking	Ringling
Peter Cobb	Ringling	David Parkin	DNA analysis
Andy Edwards	Nestbox making	Peter Phillips	Ringling
Chris du Feu	Ringling, nestboxes,	Margaret Price	CBC organiser
Richard du Feu	Ringling, data processing	Neil Taylor	Ringling
Koon Wah Fok	DNA analysis	David Thompson	Data analysis
Andy Gosler	Data analysis	Frank Tillotson	CBC
Chris Holliland	Dormouse boxes	Liz Tillotson	CBC
Richard Johnson	CBC	Steve Wain	Ringling, data processing
Andrew Joys	PhD project		
Tony Kennedy	Woodland management	Contact numbers	
Ulli Langemann	Data analysis	John McMeeking	01636 830389
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Footnote.

This issue was originally produced on the Acorn computer using Techwriter which exported copies in MSWord format. For consistency it has been transferred to Impression and exported as a PDF file.