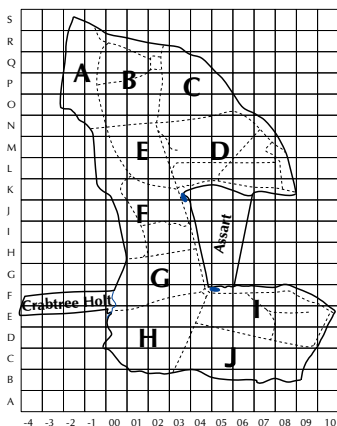


TWITTER



Treswell Wood - Information To Tell Every Recorder

December 2014 Treswell Wood IPM Group
(Integrated Population Monitoring)

Project leaders:

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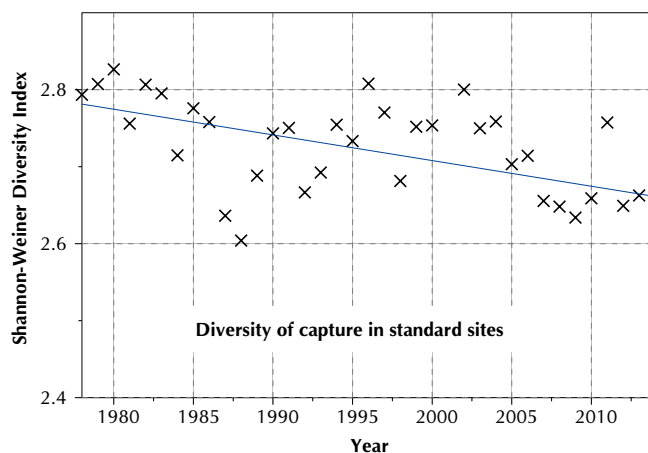
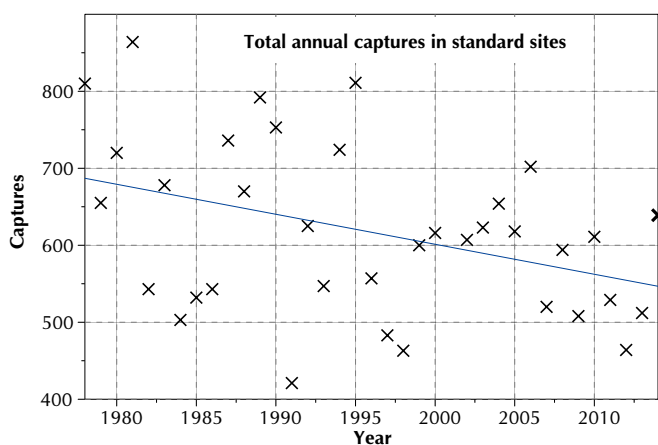
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2014/5 Number 100

The end of 2014 marks completion of 42 complete years of ringing and common bird census in Treswell Wood, 37 years of constant effort captures, and 36 years of nest recording. In that time we have, jointly, amassed records of 17,431 breeding bird territories, 4,288 nest records, 102,424 encounters with 51,730 birds of which 12,920 were ringed as nestlings.

The highlights of the year? Perhaps 41 nestling-ringed Wrens and almost exactly 10% of our total captures being of Wrens, or 17 Marsh Tit nestlings. The first House Sparrow since the 1980s. More Bullfinches than usual - 54 captures in total. The 2014 breeding season has been the first in which the Common Birds Census has been extended to the assart. It appears that very little bred in that new area. It will be very interesting to see how rapidly things may change as the habitat develops in the next few years. We hope the full 2014 CBC results will appear in the next issue of Twitter.

The Ibis paper published earlier in the year on birds' responses to coppice age looked at species in isolation from each other. What we have not really addressed is the overall bird community and how that has changed over the years. Our standard site regime, operating since 1978, can throw some light on this. It can be difficult to compare different years because total capture effort is not consistent between years. However, our standard sites operation does give as consistent capture effort as is possible to achieve. The first graph below shows our total standard site



captures over the years since 1978. (Note that 2001 does not appear on the graph because the foot and mouth outbreak disrupted the operation.) The overall picture is one of a decline in numbers with a good deal of between-year variation. This year, though, seems to be one of the best years since the early 1990s. The trend line is statistically significant and falls at nearly four captures per year. That may not seem many but it does mean a fall in the annual total of approaching 150 birds over the 37 years of the operation. (Note that the graph has a false origin, so at the current rate of decline it will be the 22nd century before we fall to zero.) The second graph gives a measure of diversity of our standard site captures over the same time. (See below for more details of diversity calculations.) The picture here too is one of a slow decline in diversity of our captures. Often lower numbers go hand in hand with lower diversity, but not always. This year's annual diversity is the lowest ever in spite of the relatively high number of captures. The explanation lies in the abundance of Wrens. About one fifth of standard site captures were of Wrens and the total number in standard sites was well over double the typical number. The sheer abundance of this one species has made all other species relatively less abundant and that is what has reduced diversity. On the face of things, it could be concluded that coppicing is bad for birds. However, our fall in

Annual Summary - All ringing records 2014

	Ctrl.	New Birds			Retraps		Sight	Recvs.	Othr.	Total
		Adult	Juvnl	Pulli	Rt	SDR				
Kestrel	.	.	1	.	.	.	.	.	1
Stock Dove	.	.	.	8	1	.	.	.	9	
Woodpigeon	.	2	.	2	.	.	.	.	4
Tawny Owl	.	1	.	.	.	.	.	.	1
Barn Owl	.	.	.	4	.	.	.	.	4
Great Spotted Woodpecker	.	.	4	.	13	1	.	.	18	
Meadow Pipit	.	.	1	.	.	.	.	.	1
Wren	.	37	67	41	62	15	.	3	225	
Dunnock	.	22	23	.	34	8	1	.	88	
Robin	1	20	65	.	45	12	.	.	143	
Blackbird	.	32	43	.	61	10	.	.	146	
Song Thrush	.	9	4	.	4	.	.	.	17	
Redwing	.	2	4	.	.	.	.	.	6
Blackcap	.	40	26	.	9	10	.	.	85	
Chiffchaff	1	26	12	.	3	6	.	.	48	
Willow Warbler	.	.	1	.	.	.	.	.	1
Goldcrest	.	12	63	.	20	4	.	.	99	
Long-tailed Tit	.	13	.	.	31	2	.	.	46	
Marsh Tit	.	1	5	17	41	5	.	.	69	
Coal Tit	.	1	11	16	61	2	.	.	91	
Blue Tit	5	28	54	113	214	6	.	23	443	
Great Tit	5	30	45	127	262	45	1	9	524	
Nuthatch	.	4	4	.	12	.	.	.	20	
Treecreeper	.	5	11	.	35	3	.	.	54	
Jay	.	1	.	.	.	.	.	.	1
House Sparrow	.	1	.	.	.	.	.	.	1
Tree Sparrow	.	1	.	.	.	.	.	.	1
Chaffinch	.	18	8	.	10	.	1	.	37	
Greenfinch	1	.	.	.	1	
Goldfinch	.	5	.	.	1	.	.	.	6	
Bullfinch	.	16	18	.	14	6	.	.	54	
Totals	12	328	470	328	934	135	3	36	2246	

Key:

Ctrl - Birds ringed elsewhere and caught in Treswell Wood including all birds from Hillcrest Farm. **Juvnl** - juveniles. **Pulli** - birds ringed as nestlings. **Rt** - ordinary recaptures. **SDR** - same day recaptures. **Sight** - observations of ringed birds. **Recvs.** - recoveries, i.e. our own ringed birds found dead in Treswell Wood. **Othr.** - all in this table are pulli which were ringed but died before fledging; they are not included in the Pulli column.

catches needs to be put in a national context. The nearest national figure we have is the Woodland Bird Indicator data published by DEFRA. This is an index of breeding abundance for 37 woodland specialist species; our data include birds which are generalist and some farmland species. Our data also include wintering birds for which there does not seem to be a comparable national index. The DEFRA breeding bird index shows a national decline, not quite as steep as our decline. It seems likely, therefore, that our decline in catches is, at least in a major part, driven by external factors. Grazing pressure by deer is noted as a probable factor in the national decline. Until fairly recent years, deer were rarely seen in the wood whereas now they are seen very frequently indeed. Perhaps we are just at the point where their presence is having a noticeable affect.

The beginning of 2015 sees the group in good health. Our equipment is more comprehensive and easier to access than ever before - thanks to the Notts. Trust for use of the secure storage container in the wood, to the HLF for its grant providing new mist nets and much other equipment, and to members who we now ask for an annual contribution to help cover costs of equipment, rings and bird food. (Keith will be collecting subscriptions early in the new year.) We have a well-established team of census workers and a reasonable number of regular ringers at various stages of their ringing careers. And, of course, we have a large number of people who take an active interest in various ways. This year has also seen a major submission of historic species records to the Notts. Trust and is also the first year in which we are able to make an annual submission of current species records. The BTO was only able to accept computerised data in late 1995; our computerised data set stretched back to 1972. Over time we are gradually working through the archival ringing data from before 1995. It might seem a simple task -

just press a button and all old data would be submitted. It is not quite like this. Old records need some additional checking which is now possible with much more computer power available. In addition, some records can have more data added from the field sheets. For example, in the 'old days' our software could not cope with various things such as moult data. The task is slowly drawing to an end and there are now only two more years of old data to be worked through.

Although everything noted so far looks rosy, we still have various things which need to be done. Volunteers will be welcome for any of these.

Our collection of photographs and digital images which is growing weekly still needs a curator. We still have HLF funding for people to go on training courses in bird recording etc. There are still archival species records and nest records to be computerised.

Twitter was originally far ahead of its time, but we are now behind other groups in not having a web site. We would welcome anyone with the the knowledge, time and interest to develop a web site for the group.

The length of our data set will allow a vast number of matters of interest to be addressed. We hope that someone, for student project work or academic research work, will be encouraged to look at some of these things. One example arose recently while preparing material for the forthcoming Nottinghamshire Avifauna. We have known for many years that there is a major influx of Great Tits in the spring. What we have not looked at is the exact timing of this in relation to weather, the timing of the breeding season or anything else. One thing of interest which did emerge was the breakdown of the 'influx' birds by age and history. Of the Great Tits trapped at the feeder during February and March since it was established in 1981, 49% were unringed first winter birds, 39% were first winter birds with a history in the wood (either ringed as nestlings or juveniles), 9% were new adults and a niggardly 3% were adults with a known history. It would be most interesting to compare these proportions with those of Great Tits caught at the same time of year in standard site nets.

Useful equipment

We have come across three useful pieces of equipment this year.

First, and cheapest, is a thin sheet of opaque white plastic, about credit card size. Slip it below the greater coverts of a Goldfinch (or Greenfinch) and this gives a much better idea of contrast in pattern and colour between moulted and unmoulted coverts because it hides the darker feathers below. There is one of these now in the Treswell ringing kit.

Slightly more expensive (under £2) is a small (about 0.6 mm) crochet hook. Apart from use in crocheting mist net mending thread in one's idle hours, it is wonderful for unhooking the thread around the barbs on the tongue of a badly caught bird in a net. It takes a little practice, but by the second time you use it, it will be like an old friend.

The third piece is the drastic solution to severely overlapped rings - ring cutting pliers from A C Hughes (the colour ring company). If the ring is too tight to use fine circlip pliers then this device will cut it off without damage to the bird's leg. Position the hooked jaws over top and bottom edges of the ring. Squeeze steadily but firmly. Magic! However, it needs a firm hand and practice. Before using it on a bird, take some 'dead' rings - size AA or A - and overlap them badly on a matchstick (or split matchstick to simulate very thin legs). Using the pliers on these will show you how firmly you need to squeeze. We have one pair in the ringing kit - at just under £20 they are not cheap but they do solve what can be a very difficult problem.

Avian pox

We continue to ring and record birds with avian pox. So far only Great Tits seem to have been affected. There is an interesting item in the BTO web site with information about this disease. It reads:

The disease, which typically leads to unsightly growths on a bird's head, was first reported in British tits in Sussex in 2006, and has spread north and westwards since. Although birds can recover from the pox virus, the lesions it causes may impair their vision and ability to feed, as well as leaving them susceptible to secondary infections and predation.

Avian pox has been endemic in other British garden birds, including Dunnocks and Blackbirds, since the 1950s. However, the disease in tits is a different strain, causing more serious symptoms. Its transmission also appears to be independent from that in non-Paridae. In all species, avian pox is thought to be spread by biting insects, leading to a peak in incidence in late summer after warm wet weather when insect population densities are high.

Our own observations are in line with this. One bird, TT49075, has recovered and a second, TV35717, has been infected for longer than any others we know of and is still active. Both these birds had lesions on the legs which did not impair vision or feeding and seem likely to have had only a minor affect on powers of flight or movement. Contrast this with L327995 which was trapped on December 13th with only small lesions at the base of the bill. It was retrapped on December 28th and the lesion had become much larger but mostly within the mouth, greatly

increasing the difficulty of feeding. This is one bird which we consider unlikely to survive long even though the pox itself will not be the direct cause of death.

Our current practice is to ring and record all Great Tits with pox. There is no processing done of them other than ring/species/age/sex. Any bird bag in which they are held must be removed for washing immediately. Where possible any infected birds must be extracted from nets after all other birds, and hands must be cleaned after handling any infected birds. On the field sheet record the location and size of lesions. This information will be useful in looking at recovery chances of individuals.

Noteworthy Encounters

Species	Age/sex	Ring	Date	Grid
Kestrel	3F	EL87480	13/12/2014	M03

This is the 18th Kestrel we have mist-netted - overall about one every two years. However, eight of those were in the 28 years before 2000. Since then the average capture rate has increased to one a year. It seems likely that they are responding to the increased area of heavy coppicing which allows them much better hunting ground for small mammals. In contrast, Sparrowhawks have been caught less frequently in very recent years - we caught none at all in 2014.

This bird provided an additional species for one of our trainees. It is sometimes difficult to decide who should be offered a new species to but on this occasion it was easy. We had caught a Redwing at the same time and so the two trainees both added one species to their lists.

Great Spotted Woodpecker	2F	CT95960	8/11/2014	M02
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An old friend, first ringed in May 2010 and captured 15 times since then. As usual, it would be all too easy to age this bird as a young one for its primary coverts were paler than its other wing coverts. As we have seen many times now, it is only contrast **within** the other coverts that will allow a woodpecker to be aged as young.

Great Spotted Woodpecker	3F	LE35135	16/11/2014	F04
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In contrast to old CT95960, this bird had black lesser and median coverts with the outer greater coverts the paler grey of the unmoulted juvenile coverts allowing it to be aged as a young bird. It seems that the proportion of juveniles which moult **all** their greater coverts varies from year to year. This means that in some years it will be impossible to age any birds whereas in others most of the young birds will be ageable as such.

We have been measuring the length of the red cap on juveniles over recent years in order to establish whether the length of the red patch can indicate the sex of the bird. All that is needed now is for us to retrap measured individuals after they have undergone post-juvenile moult and ascertain their sex by the red patch, or lack of it, on the nape. Naturally, as soon as we decided to do this, the woodpeckers suffered a run of poor breeding seasons with few juveniles being captured. Even then, we need to recapture the birds after moult. This bird is one of the first to be retrapped - a female which had sported a juvenile red cap of length 24mm.

Wren	4	EYD078	8/11/2014	N07
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Several Wrens have caused us ageing problems this year. In the summer we ringed a few juveniles, still in their unmistakable juvenile plumage but with too many spots on the fourth primary or with the primary spots not well aligned. This one was the opposite way round with few spots more-or-less in line. It is worth looking at the Wren spots more closely. In addition to the number of spots and the in-lineness of them, look at their coloration and size. Juveniles (age codes 3/5) are likely to have larger, buffish spots whereas adults have smaller, paler and better defined spots than juveniles.

Wren	3	EYD920	13/12/2014	N01
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Of the 41 nestling-ringed Wrens, we have now retrapped just five. This one was ringed about 200 metres to the east of its recapture point. It may not seem a great distance but for a Wren that distance may represent a movement across three or four territories and be a greater shift than it sees again after settling in a breeding territory (assuming it survives to breed).

Redwing	4	RW58279	13/12/2014	M03
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A new recording of a Latvian Redwing is now available to British ringers and this seems to be very attractive to the species in Britain. Of course, Redwings need to be in the area in order for them to be attracted by the call, but it does seem to work well. This was the first of six Redwings we attracted with the recording - four juveniles and two adults.

Chiffchaff 4M DRH931 19/4/2014 N01

The BTO has spent a good deal of time reorganising its ringing database and this has meant that some control details have taken longer than usual to filter through the system. This bird was ringed by Dave Fogg at Cottam a year less a day earlier and had not been seen again by him there. Dave notes that 'this is the fifth Chiffchaff we have sent to Treswell but none has ever come from there. Maybe they like it there?' We cannot dispute that Treswell Wood is a wonderful place to be and that the ringers in the wood are a fine lot of people. However, in spite of that we have not seen the bird again either. It looks as if it could have been just passing through and regarded us as no more favourable than Dave Fogg's operation.

Blue Tit 4 D309245 8/11/2014 M03

One of several birds which has moved between the wood and Hillcrest Farm in the village. This one was ringed almost exactly a year earlier in the wood, then retrapped at the farm in March 2014. No further captures occurred either in the wood or at the farm until this one.

Blue Tit 4 V475744 21/12/2014 Q04

Our oldest recent capture - ringed 6 years and 5 months previously with an odd history. It was retrapped several times between its first captures as a juvenile in July 2008 and early 2012. Its first captures, as a juvenile, were all at the car park feeders. From January 2009 it was caught in the central part of the wood but never again at the feeders. After January 2012 there were no further captures until this one when it was at the north edge of the wood, opposite Wood House in a place where we have netted several times over the last two years. Where has it been lurking?

Great Tit 4F TJ49843 22/12/2014 M04 Roosting

One of the small number of birds found roosting in boxes this winter. It was ringed as a nestling in a box only about 50 m from this roosting site and was also found nesting in the same box in 2013. This is the fourth time she has been found roosting in a nestbox, always in the same part of the wood. We have not done any detailed analysis, but our impression is that birds found roosting have rather different mist-net capture histories from the birds not found roosting. It is almost as if they form a different sub-population within the wood. Plenty of scope here for a student project.

Long-tailed Tit 2 CXN010 30/11/2014 C03

This bird was ringed 5 years and 8 months previously and is our fifth oldest recorded Long-tailed Tit. It still has 17 months to go to break our internal record of 7 years and 1 month and even longer to attempt the national record of 8 years and 8 months.

Jay 4 DK58431 30/11/2014 D03

Our only Jay of the year. We catch, on average about two Jays per year but this average number is misleading. Occasionally we catch several in a year - 1983 was the record with 15 captures of 11 birds. Such numbers result from irruptions, probably from the continent, where a successful breeding season coupled with poor food supply drives many birds to move westwards.

House Sparrow 2F TT49500 21/12/2014 Q04

What a change from the 'old days' when ringing House Sparrows was only allowed with special permission from the BTO Ringing Office. They were common and recoveries were regarded as costing more time than they were worth in the pre-computer era. Ringing had shown that House Sparrows were very sedentary and very often killed by next door's cat or by a car on the road nearby. We used to catch this species frequently in Treswell Wood, even having a few pairs nesting in open-fronted boxes in the wood. Their numbers dwindled and the last one we caught in the wood was in 1983. This bird was caught on the north edge of the wood, opposite Wood House at the same time as we also caught the Tree Sparrow (below).

Tree Sparrow 2 D309602 21/12/2014 Q04

Tree Sparrows bred in the wood in good numbers until the early 1980s. From 1983 until early 2006 we caught none at all. From then onwards we have caught a few each year - always either on the north edge of the wood or at the nearby feeders. For the 2014 season we placed some suitable nestboxes in a cluster in this part of the wood, alas to no avail. Perhaps they may return as a breeding species before long?

10-Week Summary: 2014 Interval 5, Captures in Standard Sites

	New Birds			Recaptures			Total
	Adult	5	3	Adult	5	3	
Wren	.	.	8	6	.	8	22
Dunnock	.	.	.	2	.	.	2
Robin	.	.	6	4	.	2	12
Blackbird	1	.	3	4	.	3	11
Goldcrest	1	.	17	1	.	8	27
Long-tailed Tit	2	.	.	6	.	.	8
Marsh Tit	.	.	.	1	.	3	4
Coal Tit	.	.	1	2	.	.	3
Blue Tit	.	.	5	6	.	1	12
Great Tit	.	.	2	2	.	1	5
Nuthatch	.	.	.	1	.	.	1
Treecreeper	2	.	.	2	.	.	4
Jay	1	.	.	.	.	.	1
Bullfinch	1	.	4	2	.	1	8
Totals	8	.	46	39	.	27	120

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

Year	1	2	3	4	5	Total
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

Summary Data since standard site netting began in 1978:

Maximum	128	145	288	253	177	864
Minimum	57	33	89	66	59	364
Mean	90	108	160	131	123	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 - 2013)	86	115	132	94	109	536

Diversity and numbers on standard sites

Biodiversity is a term heard very often in the media. It is easy to say, moderately easy to grasp its meaning but not so easy to quantify absolutely. Diversity will also have different shades of meaning depending on whether it refers to particular habitats or to particular taxa and the level at which the information is gathered - genetic, species, genus ... Fortunately there are simple solutions which can be used to compare diversity of two or more comparable 'communities'.

One measure of diversity, which seems to be the most statistically reliable, is the Shannon-Weiner index. This has the wonderful properties that a 'community' consisting of individuals of one species only has a diversity of zero and that there is no theoretical upper limit to it. This is perfectly sensible - a community with one species only has no species diversity. On the other hand, we can never have a maximally diverse community for by adding one individual of one more species we would always increase the diversity. The S-W index, D , is given by:

$$D = - \sum \frac{a_i}{N} \cdot \ln \left(\frac{a_i}{N} \right)$$

where N is the total number of individuals and a_i are the numbers of individuals of each species. \ln is the natural logarithm and Σ is the mathematical summation sign.

Diversity is much more than either just the number of species or the number of individuals. It also covers the balance of numbers between the species. A community of 100 individuals with, say, 10 species will be much more diverse if there are 10 individuals of each species than if there are 91 of one species and one each of the other 9 species. Reducing numbers of individuals tends to reduce diversity as does reducing the number of species but this is not always the case. Diversity can be reduced if a community is dominated by just one or two species.