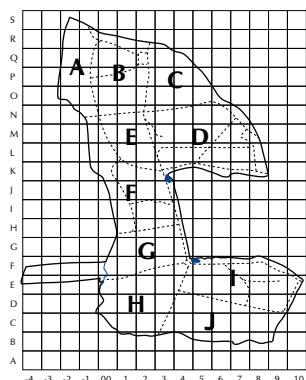


TWITTER

2007/3
Number 63



Treswell Wood - Information To Tell Every Recorder

August 2007 Treswell Wood IPM Group

(Integrated Population Monitoring)

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Project leaders:

CBC Pat Quinn-Catling

Nest Records Chris du Feu

Ringing John McMeeking



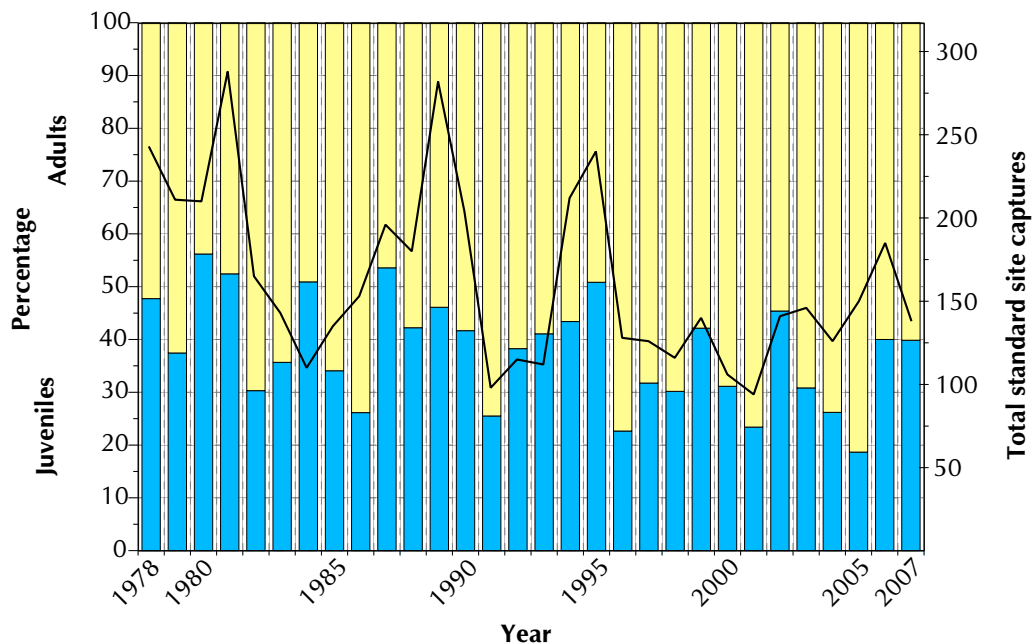
May to August standard-site captures

Our standard-site captures for the first two periods of the year were somewhat above average. We might have expected this to continue, all other things being equal. Other things, though, are rarely equal. The exceptionally wet weather seemed to have a major effect with our standard site totals dropping well below average. Our impression has been of low captures, particularly of juveniles and warblers. Luckily, data from the past are there to temper our impressions which turn out to be, surprisingly, ill founded. Although the total number of captures is low, it is rather better than in most of the last decade. As for productivity, the 40% of our captures being of juveniles is exactly the same as the overall total of juveniles in this interval since our standard site operations began in 1978. So we do seem to have fewer birds than in earlier decades but, overall, their productivity has been typical.

Closer examination of the species breakdown shows some differences between species. Wrens, Blackbirds and Robins have contributed well over half the total number of juvenile captures. Robins and Blackbirds can breed early - before the wetness began in earnest. Blackbirds have also been able to take advantage of the soft earth for foraging for worms and other invertebrates. The later breeders have not fared so well.

Reports from around the country have, generally, indicated low breeding success because of the weather. However, as within our small patch of woodland, there has been considerable variation between species and between localities. Perhaps the moral is that, as a rule, we should not make generalisations - particularly those based on unchecked impressions.

Standard site captures - May to August



The 2007 nestbox season

Since the introduction of a very large number of nestboxes in 2003, to try to assess the dormouse population, we have been plagued by very low bird breeding success rates. Most of the failures have been through predation. In addition it seemed that some birds were attempting to build two nests in adjacent boxes, one nest often being abandoned before building was completed. After a review of the situation during the winter, and in the light of only a single dormouse nest ever being found since the additional boxes were installed, we have removed all boxes (dormouse and conventional tit boxes) from compartments G and J. In compartment I the number of boxes has been halved and elsewhere in the wood the numbers reduced to levels lower than we have had since the first dormouse boxes were installed in 1995. The hope was that wasted nest building would no longer be a problem (for either birds or nest recorders) and that more-widely spaced boxes would make it less likely that predators would

attack boxes systematically as they seem to have done in recent years. In addition, we have replaced dormouse boxes in the north of the wood with conventional tit boxes with front entrances, and have also used a variety of mammal repellent substances on some of these boxes. Has it worked? We need to do a full analysis comparing predation rates in boxes with different treatments and hope to do this in the autumn. However, at first glance, the season does seem to have suffered far less predation than in recent years. Nesting success was higher only in 2004 but, even here, all is not as simple as it might seem.

In the years of high predation (2003, 2005 and 2006) the percentage of nests which succeeded (i.e. at least one young fledged) was very low. The percentage of eggs which produced fledged young, however, was higher. That is in line with nests either failing completely, sometimes before the full clutch is laid, or else being successful with all, or nearly all, the eggs producing fledged young. Note that under these circumstances clutches which are destroyed will tend to be smaller than others as many will have been depredated before the full clutch is laid. Examination of this year's figures shows a higher nest success rate coupled with a relatively lower egg success rate. The reason? Most likely it is the record-breaking weather. In many cases eggs hatched but, as the cold, rainy weather continued, some of the nestlings died. Unlike with nest predation which usually results in complete failure of the nest, in many nests just a few nestlings survived to fledging. In 2003 we did not suffer such high levels of predation or such unusual weather as in the other three years.

Some species seem to have nested in smaller numbers this year - Coal Tit and Marsh Tit in particular. The total number of other tit nests is rather lower than in 2006. This is probably more to do with fewer duplicated nest building attempts rather than lower breeding populations (the ratio of eggs:nests is higher this year indicating more nests with full clutches and fewer abandoned after laying only one or two eggs).

One species which has fared very badly is the Wren. No nests in boxes succeeded. They seemed to suffer predation at all stages whereas the tits in boxes nearby suffered less. The only successful nest which we found was in an almost-natural site - in a bundle of birch twigs stored in the roof structure of one of the management team's huts.

Events in Nestboxes - Treswell Wood, 2007

Species	Nests		Eggs laid	Birds			% Success rate	
	Recorded	Successful		Adults caught on nests	Nestlings fledged	Nestlings recaptured (to Sept. 1)	Nests	Eggs
Stock Dove	7	3	12	1	4	.	43	33
Tawny Owl	2	2	8	2	6	.	100	75
Wren	9	1	46	.	4	.	11	9
Robin	2	1	9	.	5	.	50	100
<i>Blackbird</i>	3	2	9	.	6	.	67	67
<i>Song Thrush</i>	2	0	8	.	.	.	0	0
Marsh Tit	1	1	9	1	6	1	100	67
Coal Tit	2	2	20	1	18	.	100	90
Blue Tit	40	18	358	31	91	3	45	25
Great Tit	61	34	443	16	173	31	56	39
Totals (2007)	129	64	922	52	313	35	50	34
Totals (2006)	175	37	885	31	225	33	21	25
Totals (2005)	153	49	852	47	245	22	32	29
Totals (2004)	141	94	917	41	538	41	67	59
Totals (2003)	133	41	769	29	213	17	31	28

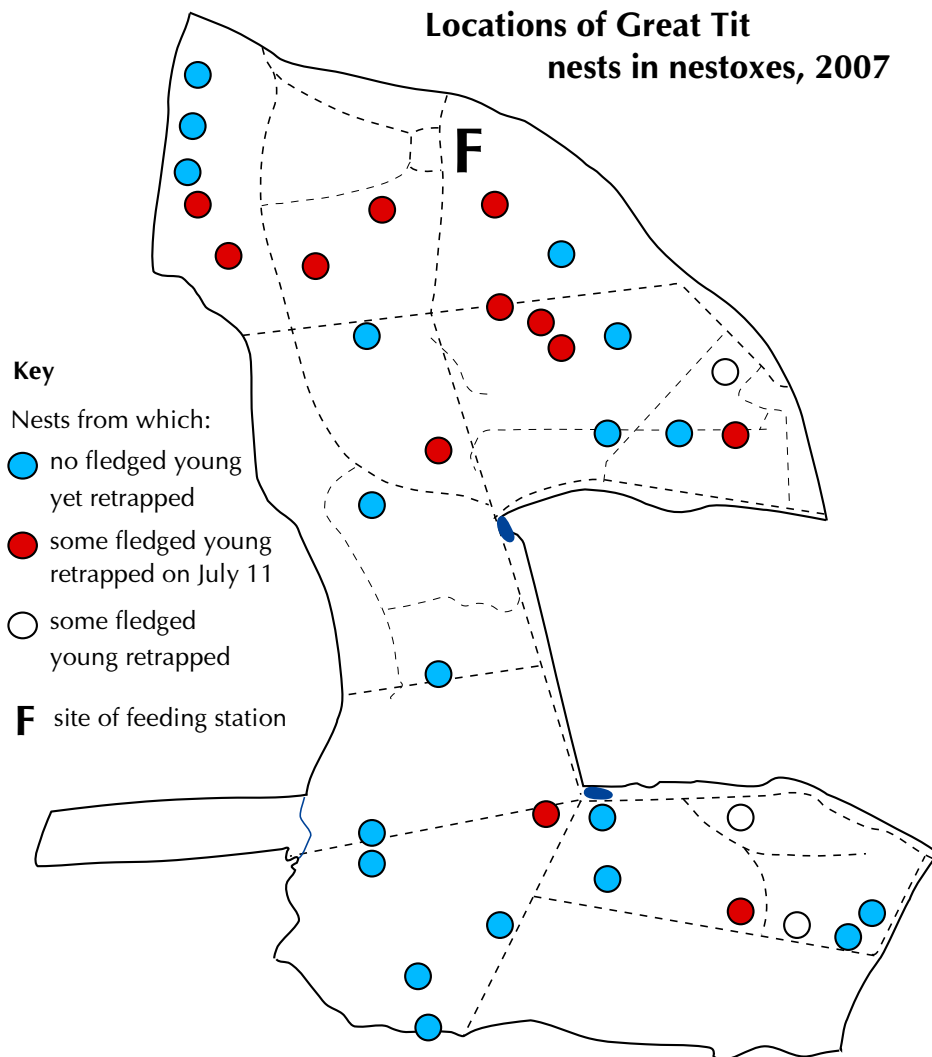
Notes: Nests of species in italics were open nests found incidentally during the nestbox rounds. There may be a few later records of Stock Doves. The numbers of nests recorded, for all species, exclude nests which were abandoned before any eggs were laid.

Great Tit populations and post-fledging survival

We had noticed food at the feeders being consumed very rapidly during early July but, because of weather and the sequence of constant effort netting visits, we had not been able to make any catches there for some time. An extra mid-week visit on July 11th remedied this very effectively. A seemingly endless stream of Great Tits poured into the nets. By the end of the session we had a good number of same-day recapture events. Many of these were birds we had ringed as nestlings. This gave an opportunity to see how they are spreading from their natal sites.

Because of the number of same-day recapture events, we can also make some fairly reliable estimates of the catchment population using the feeder (which is probably less than the population of the whole wood). The catch included a number of juvenile Great Tits we had first ringed as fledged birds. Again, because of the numbers

Locations of Great Tit nests in nestoxes, 2007



trapped from both 'new' and 'nestbox' cohorts, we can make population estimates for them separately.

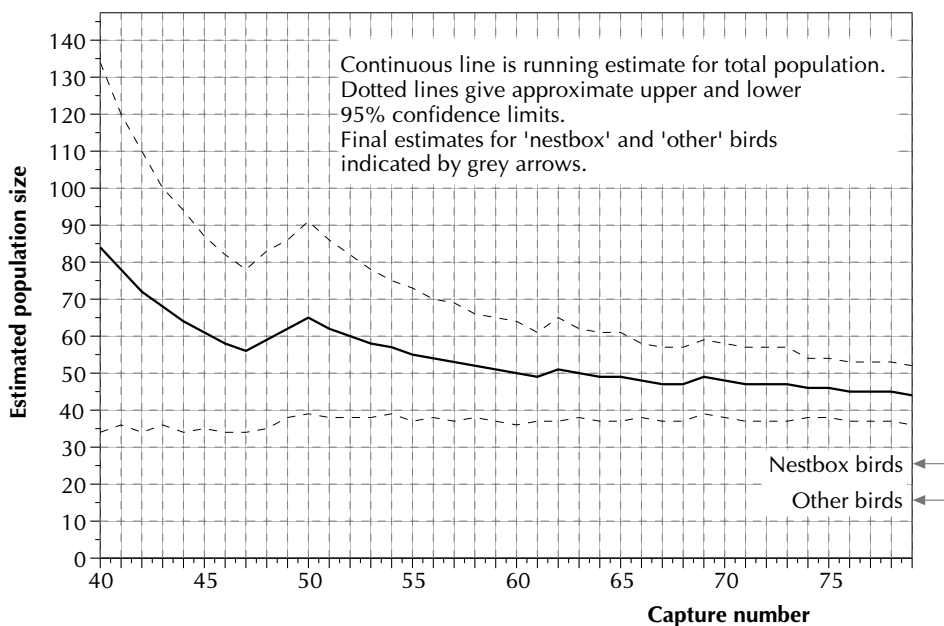
First, consider where these birds came from. The map shows locations of all nests from which Great Tit young fledged. Those in red are ones from which at least one fledged young was trapped at the feeder on July 11th. The three white circles show additional boxes from which we have retrapped young at other times or other places. The remaining, light blue circles show nests from which we have not yet retrapped any young. It seems clear that, on the whole, birds trapped at the feeder tended to come from the nearer, northerly boxes. This means that the population from which we are sampling 'nestbox' birds is likely to be smaller than the whole wood population.

Now, the population estimates. The final population estimate of 42 birds is composed of 26 'nestbox' birds and 16 'others'. That this estimate is reliable can be seen

from the very narrow confidence bands and from the shape of the running estimate. The estimate gradually reduces to a value a little over 40. This fairly steady decrease in the estimate is consistent with a closed population in which there is some delay between a bird's capture and its next recapture (as there has to be unless bird capture and processing time is reduced to zero). Consider just the estimated population of 26 'nestbox' birds. We know these come from a total of 79 which fledged from those boxes which were represented in this catch.

This gives a minimum survival rate of 33% during the first month after fledging. The actual survival rate is likely to be higher than this as some of these birds could have dispersed elsewhere within, or outside the wood. We know from the literature that juvenile Great Tits become independent from their parents within the first two weeks after fledging. We also know that survival in the first days of independence, when the young birds have to learn quickly or die, is low. The literature, however, does not seem to give any specific value to this post-fledging mortality. Perhaps, if we have subsequent large, single-day captures at the feeders we may be able to look further into this subject.

Great Tit juveniles - 11 July 2007



Noteworthy Captures

Species	Age/sex	Ring	Date	Grid
Great Spotted Woodpecker		CT84206	29/7/2007	Q02 Feeder

After many months with very few captures of this species, we are back in business. We have captured five individuals during this 10-week interval including this male which we ringed in 2005, a new female and a new juvenile. We have diligently photographed their primary feathers at every capture and recorded state of moult. With a little more work we hope that we will be able to throw some light on the problem of ageing these birds once they have moulted out of their juvenile plumage. Watch this space.

Marsh Tit	4	R353617	21/8/2007	Q02 Feeder
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One of a total of seven Marsh Tits caught at the feeder during one afternoon. She was ringed as a juvenile in September 2004 and colour-ringed on a subsequent capture in the spring of 2005. She then was seen by the RSPB team, in the north of compartment F but we failed to find whether she was nesting there. We failed to trap or see her in the 2006 breeding season but she was resighted at a nest in May 2007 in compartment A. We have, so far, retrapped one of her fledged offspring from this year's nest.

Willow Tit	4	R123840	22/7/2007	Q02 Feeder
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After not capturing this long-standing resident since January 2007, it was good to see it still alive. This season, we have had no RSPB workers in the wood following the colour-ringed birds so do not know if this bird had a breeding territory. It probably did – it certainly knows the wood having been ringed in 2002 and either seen or captured at least 4 times each year since then. Last year it was one of our breeding birds. Other evidence is that some Willow Tits have managed to breed successfully this year as we have captured some birds still in full juvenile plumage.

Great Tit	3J	TC61467	22/7/2007	Q02 Feeder
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We now have very many Great Tit juvenile captures, over several years, where we have recorded the state of post juvenile moult. This one has a particularly good record. It was ringed, as a nestling, on 16th May 2007 and fledged during the last week of May. We first recaptured it on 10th June when it was still in complete juvenile plumage, as worn when it left the nest. It was next caught, a month later, on 11th July and, by this time, had begun its post-juvenile moult. By 22nd July it had also begun moulting its tail feathers. By examining the first dates in which our ex-nestlings are found in post juvenile moult, we should be able to determine whether there is any temporal trend to earlier moulting (we already know that there has been a trend to more of them moulting their tails as part of the partial post-juvenile moult).

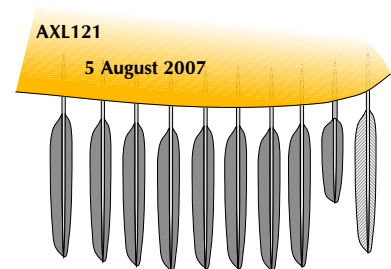
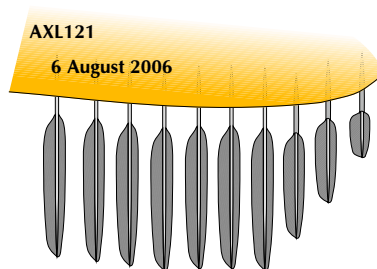
Contrast this with Great Tit TC61397 which fledged, from a later brood, during the third week in June. By 29th July it had still not begun its post-juvenile moult. In spite of its late fledging date it has done nothing to catch up with earlier-fledging birds.

Nuthatch	4M	BE34065	29/7/2007	Q01
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After another season studiously avoiding the nestboxes that John Clark has furnished especially for these birds, they still have the effrontery to be caught in the nets fairly frequently. They seem to have managed to breed successfully this year in natural holes – we have now ringed three juveniles of the species. In addition we have caught just this one adult. He was ringed at the beginning of this breeding season.

Treecreeper	4M	AXL121	28/8/2007	L03
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We have managed to collect rather more moult records in recent years than we had managed for some time. This is giving us a good number of within-year and between-year records of the progress of moult of individual birds. This particular bird was trapped a year less a day ago and its moult recorded. Comparison of the the state of moult can be used to compare the timings of different seasons. The diagram shows that this bird is in almost exactly the same state as at



the same time last year. Before we jump to too many conclusions about the timing of the season based on this single bird, we should note that similar, between-year recaptures of other birds have shown both earlier and later moulting. We now have enough data to begin to look at changes in timing of full moult over the years, as we have for post-juvenile moult.

Chaffinch **4M** **P400021** **10/6/2007** **R-1**

July brought a spate of old Chaffinches into our nets. This is the oldest of them – ringed in April 2000. This is only its third capture – its previous one being in March 2003. Maybe next capture will be in another three years' time?

Controls and recoveries

Species	Age/sex	Ring	Date	Place
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Great Spotted Woodpecker	4	CT84257	23/5/2007	P02 Found dead
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Ringed as an adult in May 2006, we did not recapture this bird again. We found only its long-dead remains.

Blackbird	CT84319	N01	22/07/2007	
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Bodies of dead birds can deteriorate very quickly indeed. This bird was ringed some six weeks earlier as an adult female. Today, all that was left was a leg with ring and a few feathers lying around. Cause of death difficult to ascertain with so few remains, but predation is a strong possibility.

Great Tit	5M	TC61229	5/3/2006	I03 Killed by predator
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No data set of any size is completely free of errors or omissions. This bird was found dead over a year ago but, somehow, this record of its passing has slipped through the net. Ringed as a nestling in 2005 in J01, this bird was trapped three times as a juvenile at the feeders. It was killed at a feeding station by a predator. Male Great Tits tend to disperse less widely from their natal sites than do females. This one was clearly not a long-distance disperser, being killed only 150 metres from its natal box.

Chaffinch	4	R353318	24/7/2007	Q02 Found dead
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Ringed in Windy Ride (L00) as a breeding female in April 2004 and retrapped at the feeder a month later, this bird was not seen again until July this year - appearing at the feeder. It was, soon after, found dead.

Bullfinch	4	R353165	8/7/2007	Cottam Power Station
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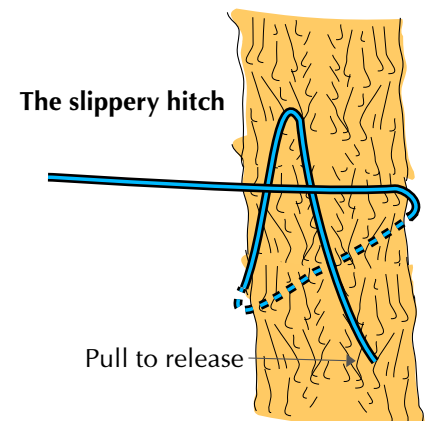
Ringed as a juvenile in September 2005, we had not retrapped this bird in the wood. Dave Fogg retrapped it at Cottam Power Station.

Bullfinch	4M	T663260	22/4/2007	K09 Road
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Ringed in April 2006 as young male and retrapped in June 2006. Its remains were found on the road to the north of the wood, a traffic victim.

Oh, No! Knot again!

Dan, very tactfully, reprimanded the editor for not including the slippery hitch as one of the very useful knots for ringers. It is a safe way of attaching a line which is under constant tension. When the tension is released, the knot collapses. It is ideal for fixing side guys to trees, particularly when you are working on your own. On dismantling the nets, the tension will be released, the knot fall apart and the guy can be pulled in from the comfort and safety of the mist net ride. You need not venture again into the thorny, nettle-ridden undergrowth to retrieve the guy. It is not safe to use this knot on the end of a run of nets in order to tension them - side guys are not critical (although I do not recall a well-tied slippery hitch coming undone at the wrong time).



SCAMS - a warning

Britain has a fine tradition of amateur naturalists gathering data and in recent years this has become much more systematic. For many groups of organisms we can now plot distribution maps, demonstrate changes in abundance and distribution, show annual cycles of activity or changes over many years. The BTO, for example, gathers data on breeding bird abundance and productivity through the Constant Efforts Sites scheme, about changes in timing of nesting activity through the Nest Records Scheme and about distributions through its atlas projects. The on-line survey, Migration Watch, allows a vast, up-to-date data set to be amassed which will show change in abundance, distribution and timing. Not all species are this well observed. For example, when Selina Tape analysed the Robin mite data, she showed, for the first time, that the abundance in mites on the primary feathers had a distinct annual cycle. (Twitter 47).

A few years ago, a slug expert was asked by the Daily Mail whether that particular year had seen very high slug populations - many readers had said it seemed to be a good (although they called it bad) year for slugs. She was

unable to answer other than to say she had seen a good many about in her garden. She was unable to quantify this statement, nor give any details about abundance elsewhere in Britain. Clearly the slug counting world lags far behind the bird world. What is needed is SCAMS - a Slug Counting And Monitoring System. To this end I attempted to devise a system which would be easy to use and give worthwhile results. With a mere two years of field study in the garden I had cracked this most important of problems. The system is simple - place a slug counting mat in a suitable damp and shaded place. Every week, say, look under the mat and record the numbers of each species present. Results in the garden were promising. There was an annual pattern of abundance with the best months for slug watchers being from September until late winter. The absolute abundance also varied between the two years. Time to extend the operation so that Treswell Wood could be a pioneer in this novel field.

Slug counting mats are not difficult to find. Any piece of board, above 30 cm square will do. Once it has become damp it should provide a suitable roosting place for slugs. You can easily see how effective such artefacts are by lifting any piece of scrap board lying around in a garden or on waste ground - slugs are really attracted to them. I placed three of these mats strategically on the nest box walk and dutifully examined them every week or two.

It has been a complete disaster. Although small mammals have frequently used these chipboard squares as shelter, as have woodlice, centipedes and snails; slugs have been conspicuous by their avoidance of these counting stations. Over two seasons, only six species have been seen. This compares with 15 species recorded in the wood in the last few years (Twitter 57). Our abundant resident, the Tree Slug *Lehmannia marginata*, has not been recorded at all under these mats. The average was half a species of slug recorded under any mat on any occasion. This compares rather unfavourably with the garden where it would be very uncommon to find fewer than 5 species under a mat and as many as a dozen can be present on occasions. With the exception of the Tree Slug, slugs are more abundant locally in gardens than in woodland but, even so, the performance of these standard-effort monitoring stations does not represent the woodland population fairly. For instance, one casually chosen log, rolled over during early March, had four species of slug lurking below. Of a total of 84 observations under the mats in the wood, only one had a species count as high as three species.

I gave up systematic examination of the mats at the end of the 2006 nesting season. Since then we have recorded another new species for the wood - *Arion flagellus*. This is the only slug species known only from the British Isles. As with so many species, it is under-recorded, although now seemingly becoming more abundant nationally. However, its appearance here is likely to be through spreading rather than previous under-recording. In addition, the Worm Slug, *Boettgerilla pallens* (Twitter 57) which first appeared in the wood in 2006 has now become more firmly established with several new records in the area around the main cross roads.

Towards the end of this season, I was explaining to someone what a great failure it had been and turned over one of the decaying chipboard squares to show its impoverished slug collection. What a surprise. More species under this one mat than I had seen under all mats in total and including a good collection of Tree Slugs. SCAMS? It seems a particularly apt acronym.

10 Week Summary 2007 Interval 2, Captures in Standard Sites

Visits 1842, 1839, 1837, 1838, 1840, 1836, 1843

	New Birds			Recaptures			Total
	Adult	5	3	Adult	5	3	
Wren	3	8	8	2	1	.	22
Dunnock	1	.	1
Robin	2	4	13	2	1	2	24
Blackbird	.	5	9	6	1	.	21
Song Thrush	1	3	1	1	2	.	8
Blackcap	6	4	6	2	1	.	19
Chiffchaff	3	2	1	2	.	.	8
Long-tailed Tit	.	.	3	.	.	.	3
Marsh Tit	.	.	2	.	.	1	3
Blue Tit	.	.	1	2	3	2	8
Great Tit	.	.	.	2	.	1	3
Nuthatch	.	.	2	.	.	.	2
Treecreeper	1	.	.	.	1	.	2
Chaffinch	1	1	2	2	.	.	6
Bullfinch	2	1	1	3	1	.	8
Totals	19	28	49	24	12	6	138

Thanks are due to Jennifer Bell of Marine and Wildlife Studio, Steep Hill, Lincoln for the Treecreeper on the front page.