

Treswell Wood

Nestbox Report - 1983

Introduction

Once again, we have had a disappointing year for a variety of reasons. However, on reflection, I think that the exceptional year of 1980 has somewhat coloured my opinion of all succeeding years. Apart from Tree Sparrows, which are atypical, this year shows little change from 1979.

Table 1 Summary of events in 1983

	Nesting attempts		Nestlings ringed in 1983	Total recaptures of birds ringed as nestlings in			
	Success	Failure		1979	1980	1981	1982
Stock Dove	1	0	1	0	0	0	0
Tawny Owl	0	2	0	0	0	0	0
Wren	1	1	4	0	1	0	0
Robin	0	1	0	2	2	1	0
Spotted Flycatcher	0	2	0	0	2	0	0
Coal Tit	1	0	10	0	0	0	2
Blue Tit	14	20	11	61	92	81	48
Great Tit	7	17	48	34	10	10	10
Tree Sparrow	2	2	4	13	15	2	1
Totals	26	45	184	110	122	94	61

n.b. Recaptures includes birds found dead. Nestlings ringed includes nest box species only.

Early on, the season promised to be a good one for the Great Tits. I was very pleased as something always seems to go wrong for these birds - competition with Tree Sparrows, Grey Squirrel *Sciurus carolinensis* attack or weather. Hopes were not well founded for the trouble soon appeared, this time as unwelcome and persistent vandalism. In spite of police efforts and the watching of the boxes at various times we have not discovered the vandals nor been able to prevent their activities. As can be seen in table 2, vandals caused over half of the nestbox failures this year.

Table 2 Nest failure 1983

Species	Cause of failure			
	Wood mouse	Other predator	Vandals	Other
Tawny Owl	0	0	2	0
Wren	0	1	0	0
Robin	0	1	0	0
Spotted Flycatcher	0	0	1	1
Blue Tit	2	3	11	4
Great Tit	0	1	9	7
Tree Sparrow	0	1	0	1
Totals	2	7	23	13

In addition to vandalism, another new problem has been depredation by wood mice *Apodemus sylvaticus*. Their population seems to be very high this year and this has led them to nest in at least three boxes. In two cases they destroyed Blue Tit nests. They are probably responsible for some of the other depredation, including eating some of the nestlings. It is possible that the high population of wood mice may be in part caused by the vandals who stole the eggs from the two Tawny Owl nests. Parent Tawny Owls would have taken a good number of wood mice to feed their young, had they been allowed to hatch.

Finally the weather has not been on our side. There was a large number of desertions of half-built nests and unfinished clutches. I believe these were caused by the very wet conditions.

On the positive side, the problems of the year have provided opportunity to observe the strength of the breeding drive in woodland birds. Some birds continued to use boxes after they had been vandalised, laying more eggs to replace those stolen. Others moved away and built entirely new nests. One Blue Tit - a young and inexperienced bird - continued to sit on an empty nest after the eggs had been stolen. I suspect she began to 'bring-up' her non-existent brood after the time when the eggs would have normally hatched. Certainly she behaved as if she were guarding young.

Species Notes

Note that this section refers only to birds which have attempted to nest in nestboxes

Stock Dove

This year has seen the first successful brood since 1979. The nest was made on the remains of the plundered Tawny Owl nests. This is in contrast to some years when Tawny Owls have depredated Stock Dove nests, then nested in their place. Two boxes designed especially for Stock Doves - large, with very large entrance holes and situated on the edge of the wood - are in position. Of course our birds ignored these and used a box with a fairly small hole situated in the centre of the wood.

Tawny Owl

The two nesting attempts were made in the traditional two nestboxes. One nest held three eggs which is more than the previous years. Regrettably both these nests were robbed by vandals.

Wren

Two attempts this year. The first was made on the top of a recently depredated Robin nest and suffered the same fate. The second was made on the top of an abandoned Blue Tit nest, very late in the season which added four more young to the year's total.

Robin

Only one attempt this year. This nest was plundered by an unknown but natural predator.

Spotted Flycatcher

There have been only two attempts this year - both in the boxes designed for these birds. One nest fell victim to the vandals, and the other to an unknown predator.

Coal Tit

One successful attempt provided ten young. This bird ignored the four special Coal Tit boxes and used an ordinary box instead. Two of the four Coal Tit boxes have been used by wood mice or Blue Tits.

Blue Tit

Twenty-four females have been captured at the nest, including all those which nested successfully. In contrast to previous years, the proportion of young (i.e. first breeding season) birds has been very high, 16 young, eight older birds. Of the young birds, eight were 1982 'nestbox products', two were ringed as juveniles last autumn, and the rest were recent arrivals in the wood. Two of these recent arrivals had been captured and ringed at Rampton Hospital during the winter. Old friends including A213987, a 1980 nestling, which has used the nestboxes every year of her life, A436293 and A319659 both nesting for the third year running, the former having originally been ringed in Retford in 1981, and A761073 a 1981 nestling which also nested in 1982. Two of last year's nestlings are of particular interest in the light of current investigation into juvenile dispersal patterns. A761602 and A761663 were both in Retford during March 1983, then were found again breeding in Treswell Wood. Such return movements are very uncommon.

Great Tit

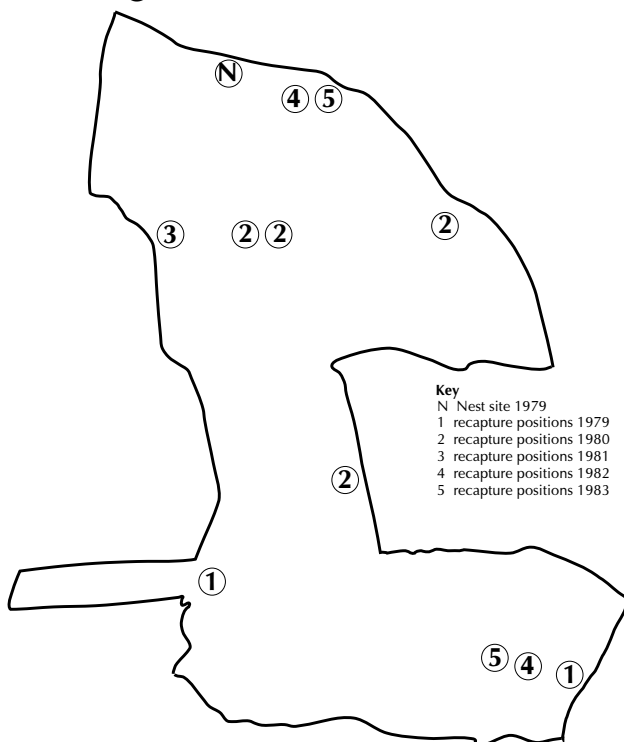
Early in the season my impression was that it would be, at least, a good year for Great Tits. Several people had mentioned that there seemed to be plenty about, and there have certainly been more individuals attempting to use the nestboxes than ever before. The limiting factor on Great Tits breeding in the wood may be nesting sites, for in at least two cases nestboxes have been taken over by other birds after the first pairs had abandoned the sites. The identities of 14 female Great Tits which attempted to breed are known. These include all except one of those which were successful. The breakdown of the female breeding population is quite unlike that of Blue Tits.

Half of the birds were young. Ten of the birds, including eight young, were only recently ringed in the wood. Only two had nested in boxes previously. None of the birds had been raised in nestboxes. This last feature may be a result of female Great Tits dispersing more widely than do males, and since it is generally the female which is found on the nest we know almost nothing about the breeding males. The fact that we captured 22 males ringed as nestlings 1979-1982 in subsequent years, but only ten females illustrates the wider dispersal of female Great Tits. (It is not so easy to assess the corresponding pattern for Blue Tits because males and females cannot always be told apart.) There would also be a systematic bias in our data since the females have a greater chance of being identified as they are the ones caught at the nest.)

Tree Sparrow

This year's efforts have reached an all-time low, with only two pairs breeding in boxes. Hopefully the population of these birds will expand over the next year or two as dramatically and inexplicably as it has decreased over the last two.

Nestlings of Previous Years



A few birds are worth a passing mention. Some Blue Tits of 1979 vintage have been trapped in 1983. The most recent is KR03511 on 8/5/83. This bird has been captured eleven times since fledging, at least once in every calendar year, and Fig. 1 shows its capture locations in the wood. Also of interest is KR03596, retrapped in Treswell Wood only once in 1979. Nothing else was seen of her until February and March of this year when she was recaptured in Gamston Wood. Our most distant emigrant is Blue Tit A761097, a 1981 bird, captured near Nottingham University early in 1982. Lastly a Chaffinch A761160, ringed in the nest in 1981, flew into a farmhouse adjacent to the wood recently and had her ring number noted before being released.

Analysis of some of the Treswell Wood bird ringing data has been greatly assisted by some of my pupils at Queen Elizabeth's Grammar School in Gainsborough. These fortunate students take a course called 'Statistics' which is, in fact, thinly disguised ornithological data analysis. Some results are interesting. It is well known, that up to a point, the size of Great Tit nest cavity influences the number of young fledged. Treswell data confirm this. Investigations into Tree Sparrow nests did not. However

Figure 1 Capture Positions of Blue Tit KR03511

we have found that with Tree Sparrows the size of the nest cavity is related to the number of broods which may be raised in that box during the season. We are not sure if Tree Sparrows which nest in small boxes will not have second or third broods, or if they move to a different box for later broods. Perhaps when Tree Sparrows become common again we might be able to investigate this.

Table 3 Comparison of fledged birds 1979 - 1983

Species	1979	1980	1981	1982	1983
Stock Dove	2	0	0	0	2
Tawny Owl	0	2	2	2	0
Wren	0	10	0	0	4
Robin	6	5	11	3	0
Spotted Flycatcher	12	5	0	8	0
Coal Tit	0	0	0	10	10
Blue Tit	101	240	231	171	117
Great Tit	65	53	56	50	48
Tree Sparrow	116	188	113	28	4
Totals	302	503	413	272	185

Note: This table includes nestbox species only.

Blue Tits have been given some attention. It seems that although the size of box does not affect the number fledged, it does influence both the percentage of eggs hatching and the percentage of hatched young which fledge. It may be that none of the boxes is small enough to restrict the number of eggs that Blue Tits lay. Blue Tits seem to prefer boxes facing east to those facing west, although fledging success (as a percentage of the number hatched) is higher in west facing boxes. As is to be expected, our older Blue Tits lay larger clutches than first-time breeders.

A number of factors which may influence the choice of nest site have been looked at for Blue Tits, Great Tits and Tree Sparrows. All of these have been inconclusive except the one quoted above. Type of tree, height of box and direction in which box faces are of no importance. (This will not be true in a garden where a cat might be able to reach a low box or where south facing boxes might not be shaded by trees and overheat in a hot year.) Coal Tits have ignored conventional wisdom and avoided low boxes with elliptical entrance holes sited on isolated conifers in a largely deciduous wood. They have taken, so far, medium to high boxes with round entrance holes on broadleaved trees.

Table 4 Blue and Great Tit Recaptures and Recoveries

(correct to September 17th 1983)

		Natal Year				
		1979	1980	1981	1982	1983
Blue Tit	Trapped in wood	59	83	72	49	18
	Found dead	0	5	2	0	0
	Trapped elsewhere	5	8	13	4	0
	Total number retrapped	61	92	81	48	10
Great Tit	Trapped in wood	31	9	8	9	4
	Found dead	0	1	1	1	0
	Trapped elsewhere	4	0	2	1	0
	Total number retrapped	34	10	10	10	3

A number of Blue Tits are yielding information about juvenile dispersal and selection of breeding territory. One conventional view is that some Blue Tits may make a long distance dispersal (say 5 - 30 km) then only make short movements thereafter. This might mean, for example, distances of up to 3 km from a night-time roost to a day time feeding site. Some of our birds have demonstrated this latter movement. For example, A213910, a 1980 bird, was captured whilst feeding on peanuts in Rampton in January 1982 and shortly afterwards found roosting in Treswell Wood about 3 km distant. On the other hand some birds have been making much longer return movements to Treswell Wood travelling greater distances than is normally expected. Three 1982 birds have been found in Retford (7 km) during the last winter and found again in the spring back in Treswell Wood. A bird from 1981 (A761211) spent some of his first winter in Retford but was found this winter in Treswell Wood. The milder winter may have been a factor, or perhaps increasing age. We hope that our nestling Blue Tits will be able to throw light on this whole problem - this chapter to be continued next year.

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Chris du Feu,
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