

Treswell Wood

Nestbox Report - 1985

Introduction

Summer 1985 will be as memorable as that of 1976, but for opposite reasons. We probably complained of the weather during the summer holidays, but for the birds the whole season has been difficult. The start of the season was delayed by cold weather. This delay leads to smaller clutches and young birds which have a shorter time in which to gain experience before becoming independent. The cold wet weather has a more serious effect on open-nesting birds because parents have to spend more time on the nest sheltering the young rather than finding food. Birds in boxes can fare better but, ever so, continued rain will reduce the rate at which parents can find food which will, in turn, reduce the young birds' chances of survival.

There also seems to have been a general lack of food available, not only for birds but also for many other creatures. This has led to much higher rates of nest depredation than usual with young taken by grey squirrels *Sciurus carolinensis*, wood mice *Apodemus sylvaticus*, weasels *Mustela nivalis* and Great Spotted Woodpeckers. The rate of nest depredation and failure in Treswell Wood has been about twice the normal figure. 40% of Great Tit and 30% of Blue Tit nests which were started failed for one reason or another. Even those birds that survived to fledging did not have an easy time. Their normal food of caterpillars seems to have been in short supply and so other less productive food sources were exploited. A flock of Blue Tits was seen in Treswell Wood clinging to the trunk of a tree searching for food. The food in this case turned out to be, not caterpillars, but minute spiders

Nest boxes in Gamston Wood have been inspected as usual, but it has not been possible to ring all the young in them this year. Table 1 lists the events in Gamston and Treswell Wood nestboxes this year. Nestboxes remain in Clarborough but we have not yet found a volunteer to inspect them. Offers welcome.

Table 1a Gamston Wood nestboxes 1985

Species	Broods	Eggs Laid	Young Ringed
Coal Tit	2	20	10
Blue Tit	7	74	11
Great Tit	5	29	7

Table 1b Treswell Wood nestboxes 1985

Species	Broods	Eggs Laid	Young Ringed	Recaptured (to 10 th Sept.)
Wren	4	1	6	0
Spotted Flycatcher	1	0	0	0
Coal Tit	0	1	10	0
Blue Tit	10	25	189	26
Great Tit	9	15	104	9

See Tables 2 and 5 for comparisons with other years.

Species Notes

Wren

After last year's events in Treswell Wood, this year's efforts were disappointing. The problem was probably more of depredation than of not using boxes. Two nests were built then taken over by tits, one of these boxes was used later by Wrens but the nest was depredated. As usual, it is not clear if the tits evicted the Wrens or if they merely commandeered a nest built by the male Wren but not selected for use by the female. Another nest was depredated and three others built but apparently not used.

Two nests were built in conventional hole-entrance boxes. All the others were in the slit-entrance box - an open box but with the front coming up to 30 mm below the roof. This type of box seems to be most preferred by them.

Coal Tit

Gamston Wood wins again with two clutches of these birds. Treswell Wood has enjoyed its traditional single brood of ten Coal Tits. As usual the female was a different bird from the female of previous years.

Blue Tit

This has been a good year in Treswell Wood with the third highest number of young fledged since 1979. The number of boxes used was very high, probably because of the wider spreading of boxes in the centre section of the wood. However the number fledged per successful clutch was lower than ever before. This was caused by the weather - small clutches because of the cold late spring and lower survival because of rain and lack of food. Table 2 gives fledging success for Blue and Great Tits in Treswell Wood since 1979. It would be interesting to compare these average numbers with the numbers raised in garden tit boxes. Normally we expect slightly fewer to be raised in gardens than in broad-leaved woodland where food is much more plentiful.

An unusual capture was made of a female Blue Tit still with eight of the nine young in her brood. These captures were made about two weeks after the brood had fledged. It is possible that the ninth bird of the brood was one seen to escape from the net.

Table 2 Average numbers of young fledged per brood, Treswell Wood 1979 - 1985

Species	1979	1980	1981	1982	1983	1984	1985
Blue Tit	8.4	10.0	8.3	9.0	8.4	8.2	7.6
Great Tit	9.3	7.6	8.0	10.0	6.6	7.6	6.9

Great Tit

At last in Treswell Wood, the year of the Great Tit (see Table 3) . This is in line with the national trend and in spite of the heavy depredation, the number of young fledged is nearly double the typical number in Treswell Wood. Part of the success must be through a wider spreading of nest boxes in the wood although two nests were made within 10 metres of each other. As for Blue Tits, the number fledged per brood was low. (Table 2)

Spotted Flycatcher

Only one attempt was made this year in the approved pattern of box with a protective metal portcullis over the front. The nest was abandoned after being half built. All the other boxes had a protective balloon of chicken wire over the front and were not used.

Other Inhabitants

Nestboxes may contain an interesting collection of other animal life. Indeed, a study of this life would be just as interesting as that of the bird life. This year's collection included a wood mouse nest. The boxes intended for Willow Tits and stuffed with polystyrene were used by solitary bees. No nest was made, the bees crept in between the polystyrene blocks.

In one box two young Great Tits died (probably through lack of food) just before the rest fledged. These two were discovered by two sexton beetles (*Necrophorus* species, black beetles with orange chevrons across the back). These beetles find carrion by their sense of smell. Normally they bury the animal carcass in soil ready for the larvae to eat. In this case the soil was the springy moss floor of the box which did not yield to normal digging technique. The whole Great Tit carcass was heaving up and down as the sexton beetle below tried, unsuccessfully, to dig into the mossy floor.

The wet season brought with it a good crop of slugs in the boxes. Normally one or two slugs come into boxes but this year many boxes have been inhabited. The slugs were the Tree Slug *Lehmannia marginata*. These slugs are inhabitants of wet woodland and only have a patchy distribution in the normally dry arable east midland counties. Presumably our healthy population is a relict from the time when woodland covered a much wider area than it does now and there was plenty of cool damp habitat under trees. These slugs climb trees and hide in nooks and crannies. Nestboxes provide a cool and (this year) damp atmosphere which the slugs need. For those people wishing to make special slug boxes (why not?) I suggest entrance holes too small for birds to use.

Fleas

Almost daily observations of one nestbox have shown a long pattern of flea activity. Adult fleas were present on the box on almost every day of the year from a few days before the young fledged in 1984 until well into the

1985 nesting season. Only occasionally were there flealess days. Adults emerge from larvae in the nest and come to the box entrance. There they wait for a bird on which they can be transported. Those that fail to be picked up either crawl away to find a suitable site or hide in a crack in the box until the next day. The peak flea emergence time is from late March to early May when tits are inspecting boxes most frequently. This ensures that fleas have the greatest chance of being picked up and of finding a hole where birds will nest. There is least activity in January and this may be because of cold weather (although some fleas are present on frosty days, and one flea was seen inside a box covered in a layer of white frost). Presumably fleas that emerge in the autumn will meet a young bird as it investigates its environment. Fleas can cause major problems to young birds but of course they do have their own problems. Where fleas are present so, often, are predatory beetle larvae (*Staphylinidae*). These beetles look rather like small earwigs but are more closely related to beneficial predatory beetles like the Devil's coach horse *Ocypus olens*. Figure 1 shows the pattern of flea emergence together with the annual cycle of bird activity.

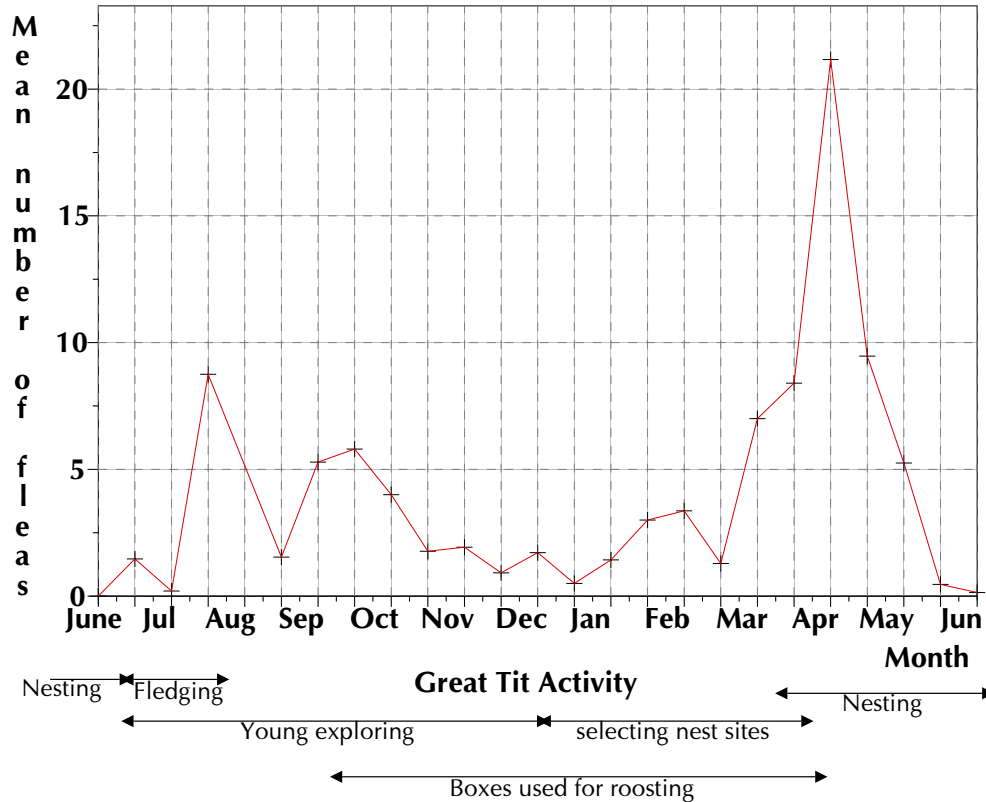


Figure 1 Fleas emerging from a Great Tit nest, 1984 - 1985

Box Designs

Table 3 gives a breakdown of box types in Treswell Wood together with their usage of them. Blue and Great Tits, as usual, are the most reliable customers. Wrens are now becoming used to nestboxes and beginning to use them consistently. Other potential box users have yet to learn, but I hope once they start, they will continue.

Table 3 Types of nestbox used in Treswell Wood 1985

Type	Number available	Number Used by target species	Failed use by target species	Used by other species	Not used
Hole-entrance, small	56	31	16	0	9
Great Tit	15	7	4	0	4
Spotted Flycatcher	6	0	1	0	5
Willow Tit	5	0	0	0	5
Woodpecker	6	0	0	1	5
Treecreeper	2	0	0	1	1
Open, small	3	0	2	0	1
Hole-entrance, large	3	0	0	0	3
Wren	4	0	2	1	2

Note: Target species for hole entrance boxes include tits and sparrows; for open small boxes include Robin and Wren; for hole large include Tawny Owl and Stock Dove.

Nest Construction

The materials used by birds for nest building, like many other aspects of animal life, vary more than the field guides would have us believe. The general trend in Treswell Wood is for the lining of tit nests in the north of the wood to contain red fluff, presumably taken from some abandoned, rather denuded piece of furniture near the wood. Nests in the south tend to be of natural materials only. The materials on the nest depend on very local opportunities. For instance, three adjacent Blue Tit nests used Starling feathers for lining. Probably a dead and now bald Starling lay nearby. It seems that several pairs of birds may share the same nest material source although their breeding territories are exclusive. Elsewhere several Blue and Great Tits used the shredded materials from under the bark of the same dead oak.

Great Tits have demonstrated the widest range of nesting design. Typically the nest has a base of twigs or roots, covered deeply in moss and finished with a lining of wool or hair. One nest, in a deep box, had a moss layer 30 cm deep whereas another in a similar box had a twig and moss layer barely covering the base. Another nest lining contained part of an unused Brillo pad - probably unwittingly supplied by the Manpower Services Commission work party.

A Blue Tit had the most interesting nest. She selected a box put up for a Lesser Spotted Woodpecker. The box, stuffed with polystyrene for excavation, was selected within two days of being put up and after a week the nest cavity had been excavated. The excavated nest cavity was about the size of a litre orange juice bottle. The only disappointment was when the identity of the 'woodpecker' was discovered. The bird was seen excavating the nest cavity. It was a Blue Tit and the nest was successful. A Blue Tit excavating her own nest is a very rare event, possibly not unique, but certainly worth noting.

Population trends

It is notoriously difficult to estimate bird population trends reliably in almost any type of ornithological monitoring operation. Only where two or more independent estimates agree can we begin to have confidence in them. Figure 2 compares the information from nestboxes and from other ringing operations in Treswell Wood. The two graphs for each species show the number of nests in boxes in each of the years since 1979 and the number of adult birds caught during January to June of each year from 1978 onwards. During constant effort mist-netting operations. (With constant effort ringing, the time, amount of netting and sites remain constant from year to year. Thus it is hoped the catch represents the population rather than the change in amount of ringing activity.)

The Great Tit graphs are very much in agreement. The curves both generally increase to the present. Only 1983 is anomalous, but this is the year when many Great Tit nests were destroyed by vandals. The Blue Tit graphs are less close, but still do show a fair measure of agreement. Again the 1983 nestbox figure is unrepresentative.

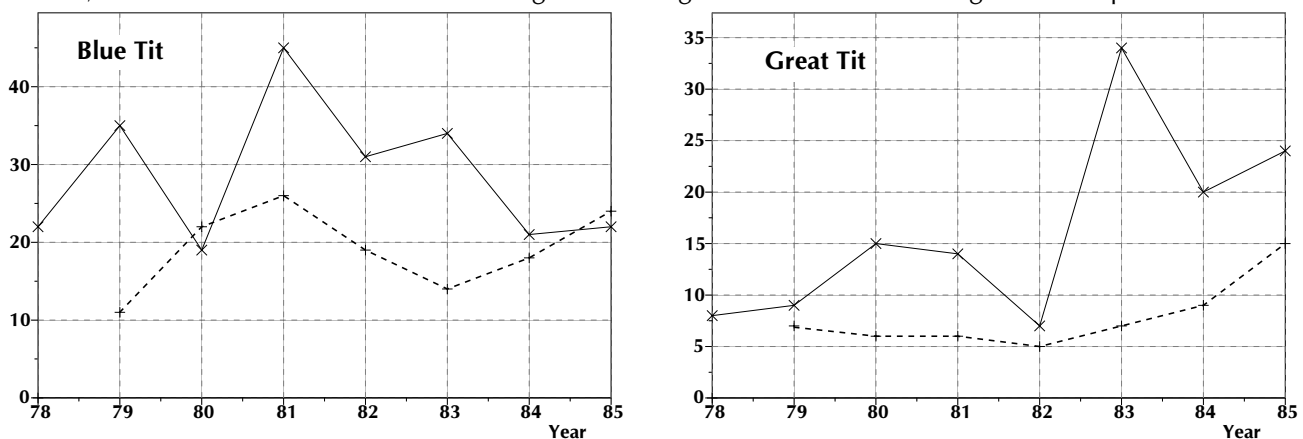


Figure 2 Population trends - Blue and Great Tits 1978 - 1985

Notes: dotted lines - number of successful nests; continuous lines - adults caught in constant effort nets.
Vertical scales give both numbers of nests found and of adults caught January - June.

Birds from Previous Years

As ever, our ringed young birds provide both interest and information. Many of them are captured elsewhere and some then return to Treswell Wood. Three Great Tits were found in Babworth, one of them had been killed by a predator. The other two returned to Treswell Wood in the spring. A dozen of the 1984 Blue Tits were captured over the winter in Rampton Village, of these two were found again in Treswell Wood.

Table 4 Recaptures of 1984 nestlings outside Treswell Wood

Species	Found at Rampton Village		Found at Babworth	
		& returned		& returned
Blue Tit	12	2	0	0
Great Tit	1	0	3	2

Note: The '& returned' columns give the numbers of birds in the 'Found at' columns retrapped subsequently in Treswell Wood.

Three female Great Tits which were ringed as nestlings, nested in Treswell Wood nestboxes this year. One of these, NN18038, was ringed in Treswell Wood in 1983. She raised a brood successfully. The other two NH52340 and NN33327, both failed to raise a brood. NN33327 abandoned her eggs before they hatched and NH52340 lost her whole brood to a weasel a few days before they would have fledged. These two birds were particularly interesting. Both were caught in a mist net very near to box 75 where NH52340 nested. However it was NN33327 that held the nesting material in her bill at this time. We presume that there was a territorial dispute which NN33327 lost for she laid her eggs in a nearby box. Both birds were ringed in 1984, NH52340 in Treswell Wood and NN33327 in a nest box in Shropshire.

Table 5 gives the numbers of some species ringed in Treswell Wood nestboxes. Two features of this are noteworthy. First is that, as time goes on, a decreasing number of birds are recaptured for the first time. This is to be expected, indeed it is most probable that we shall see no different individuals from 1979 or 1980 ever again. The few not recaptured but still alive are probably living elsewhere. Our last record of a 1979 nestling was KR03514, a Blue Tit from box 39, recaptured on 24th February 1985. The second feature of the table is the large proportion of 1979 birds which were retrapped compared with the much lower proportions since then. The 1979 tits fledged into a wood which had previously been lacking in nesting sites, now it had many more in the form of new nest boxes. The young birds naturally tended to stay in the wood where both food and potential nesting sites were plentiful. From 1980 the population had increased. Fledging birds were less attracted to remain because competition for resources was greater. The higher proportion leaving led to a lower recapture rate. Great Tits disperse more widely than do Blue Tits and the lower recapture rates for Great Tits reflect this.

Table 5 Numbers of birds ringed in boxes then recaptured, Treswell Wood 1979 - 1985

Species		1979	1980	1981	1982	1983	1984	1985
Wren	N	0	10	0	0	4	33	6
	P		1			1	5	0
	R		10%			25%	15%	0%
	E		0			0	2	
Blue Tit	N	101	240	231	171	117	155	189
	P	63	91	81	56	28	43	26
	R	63%	40%	35%	33%	24%	28%	14%
	E	0	1	1	3	3	35	
Great Tit	N	65	53	56	50	48	61	104
	P	34	10	10	10	13	18	9
	R	52%	19%	18%	28%	27%	30%	9%
	E	0	0	0	0	1	9	

Note: N nestlings ringed and fledged
 R recaptured and/or recovered
 P recaptured and/or recovered as % of total
 B first captured since fledging in the last year

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Notes on this revision

This report was originally published for the Nottinghamshire Trust for Nature Conservation in October 1985 under the name North Notts Nestbox Report and distributed to nestbox sponsors, various trust officers, CBC observers and ringers in Treswell Wood. The front cover was a line drawing depicting various non-bird occupants of nestboxes. The Original report was created using Wordwise on the BBC microcomputer. This edition has been produced using TechWriter on the Acorn RISC PC.

Chris du Feu,
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