

Treswell Wood

Nestbox Report - 1988

Introduction

Following the very high tit populations of summer 1987 and the mild winter, we expected large numbers of tits to nest this season. This happened, with Treswell Wood Blue and Great Tits attempting as many nests as ever before. After a good start to the season, events took an unexpected turn for the worst with severe depredation by wood mice *Apodemus sylvaticus*. The winter, which had allowed many birds to survive, also allowed many of these mice (and other mammals including weasels *Mustela nivalis*) to survive. The two earliest nests, belonging to a Wren and a Coal Tit were depredated. Mice were seen at the Wren nest. In the Coal Tit nest, as in so many later on, only broken eggs were found. This pattern continued as the season progressed although no more mice were seen in action. Once birds began to incubate eggs, the depredation continued. Several Blue Tits were killed whilst on the nest. Only one Great Tit was killed at the nest; possibly they are quicker to leave the nest when danger is near. No weasels were seen at boxes but they might have been responsible for some of the later depredation. Table 1a lists the events in Treswell Wood boxes together with details of other nests recorded.

Table 1a Nests recorded, Treswell Wood 1988

Species	Failed Nests	Successful Nests	Young Fledged	Recaptured
Woodpigeon*	1	0	0	.
Turtle Dove*	1	0	0	.
Tawny Owl	0	1	1	0
Wren	3	2	7	0
Robin*	0	1	5	0
Blackbird*	4	1	5	0
Song Thrush*	6	2	6	0
Spotted Flycatcher*	3	0	0	.
Coal Tit	1	0	0	.
Blue Tit	28	13	103	11
Great Tit	14	11	77	7

Note: * includes nests not in nestboxes, recaptures correct to 22.10.88

Table 1b Nests recorded, Gamston Wood 1988

Species	Failed Nests	Successful Nests	Young Ringed
Coal Tit	0	1	9
Blue Tit	2	5	42
Great Tit	0	3	7

Early in the year the rabbit *Oryctolagus cuniculus* population around Treswell Wood was controlled. This will have forced weasels to hunt for other food sources - and could have led to the depredation of tit (and other) nests. It has been suggested that one rogue weasel learnt that nestboxes meant food and attacked them systematically. I do not think this is so because the depredated boxes were spread all over the wood rather than in one small part of the wood. The normal weasel depredation takes place only at the end of the season when nests of tits are very noisy with nearly fledged young. This year, no nests in boxes were taken at this stage.

Depredation of non-nestbox nests was also very high. This again points to a high predator population rather than a single individual developing a taste for birds' eggs and nestlings. Table 2 gives some details of rates of depredation for five species both in and out of nestboxes. Both 1979 and 1985 were normal years. 1983 was the year when human vandals struck at nestboxes.

In contrast to these sad events, Gamston Wood suffered almost no depredation. Events in Gamston Wood are given in Table 1b. The BTO nest records officer reported in BTO News that the season had been generally very successful throughout the country. Gamston Wood reflected this, Treswell Wood did not.

Table 2 Nest failure rates, Treswell Wood

Species	1979	1983	1985	1988	Nests in boxes?
Wren	–	50%	80%	60%	some
Blackbird	55%	-	-	80%	none
Song Thrush	50%	-	-	75%	none
Blue Tit	20%	59%	29%	68%	all
Great Tit	30%	71%	38%	56%	all

Species Notes

Tawny Owl

There was, as usual, one nest in Treswell Wood this year. With high populations of wood mice one might have expected a large brood of young owls. As it happened only one young fledged. Tawny Owls can locate prey by sound. If the undergrowth is damp - as it was this spring - rodents can move almost silently making it difficult for Tawny Owls to find them. Thus the owls were unable to benefit from the high rodent populations.

Spotted Flycatcher

As expected in a year of high predation, these birds suffered heavily. They nest in sites which overlook open areas and as a result their nests are usually not well hidden. Two nests were made in Treswell Wood boxes, both were depredated. A third Treswell Wood nest found in a natural site was also depredated. Another nest in a box locally fared better. A grey squirrel *Sciurus carolinensis* was seen to attack the box but the young were just big enough to fly to safety. Both adults from the box spent the next few days feeding and guarding the young in a hedgerow, from time to time dive bombing the squirrel when it came uncomfortably close. At least three of the four young birds survived the first few critical days after fledging.

Wren

Fewer nests than usual were found in Treswell Wood. The early nest in a box designed for Spotted Flycatchers was depredated, but two of the three late nests were successful. They came well after the tit nesting season by which time the former nest predators were hunting other quarry.

Coal Tit

One pair nested in Gamston Wood nestboxes. They selected a wedge shaped box (originally intended for Treecreepers). This is the first time the wedge boxes have been used in Gamston Wood. Treecreepers here prefer to nest between the boards of the Manpower Services Commission cabin than in the wedge boxes. Experience of many people throughout the country has shown that these boxes are of little use for Treecreepers (in spite of the many books which recommend the design).

Blue Tit

BTO News preliminary account of the season nationally, reported a 'compact' season for Blue Tits. Nests were started relatively early, the season was short with few late or replacement clutches. Treswell and Gamston Woods followed this pattern. Table 3 gives the first egg dates of nests in Treswell Wood over the past years. The first egg date is the date on which the first egg is laid in a nest. The table shows the start of the earliest nest and the date of the middle nest of the season. Compare the difference between these two dates to judge the relative lengths of the seasons.

Treswell Wood held one nest with 19 eggs. It seems that they were all laid by one female for they appeared at

one per day. Had there been two females laying in the same nest, eggs would have appeared faster. The Collins Field guide to Eggs, Nests and Nestlings gives 16 as the normal maximum clutch size for Blue Tits. Sadly this nest was depredated, the outcome might have been very interesting.

One Blue Tit excavated a nest hole in a box stuffed with polystyrene intended for Willow Tits. Willow Tits have yet to discover these boxes.

There were a very large number of nests in Treswell Wood. Part of the cause must be replacement clutches for nests which were depredated very early in the season where the adults were not killed by predators. Some may have been made by new adults which moved in to claim a territory left vacant after the previous residents were killed by predators. There were no late replacement clutches in either wood. Perhaps the wet weather deterred further attempts. Gamston Wood boxes enjoyed a higher fledging rate from successful nests than did Treswell Wood - Gamston 10.5 per nest, Treswell only 8.0 The difference could be because predation in Treswell Wood was on early nests which tend to hold larger clutches.

Table 3 First egg dates, Treswell Wood, 1979 - 1988

Year	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Blue Tit										
Earliest	17 Apr	15 Apr	14 Apr	20 Apr	25 Apr	27 Apr	22 Apr	4 May	20 Apr	20 Apr
Median	29 Apr	23 Apr	20 Apr	24 Apr	6 May	2 May	30 Apr	8 May	24 Apr	25 Apr
Great Tit										
Earliest	2 May	20 Apr	21 Apr	24 Apr	28 Apr	30 Apr	25 Apr	6 May	22 Apr	20 Apr
Median	7 May	3 May	4 May	27 Apr	5 May	5 May	4 May	12 May	26 Apr	30 Apr

Great Tit

Table 4 shows the continued high Treswell Wood Great Tit population. In spite of high depredation the number of young fledged was higher than in any year before the expansion of 1985. Table 4 also shows the numbers of young fledged per successful brood. This year's low figure is a result of higher depredation on early nests. Successful nests had an average starting date two weeks later than unsuccessful ones. As the season progresses, clutches laid become smaller (because there is less time to rear a brood). Thus in Treswell Wood depredation tended to be on larger clutches. Only one Great Tit was killed at the nest compared with seven Blue Tits. This bird presumably tried to escape when the predator attacked. Unfortunately its foot became entangled in a thread used for nest lining. The bird was trapped at the nest, and killed by the predator.

Two boxes intended for woodpeckers were used by Great Tits. In these, the birds excavated their own nesting cavity inside the polystyrene stuffing of the boxes. This is the first time that Treswell Wood Great Tits have excavated their own nests in these boxes.

Table 4 Great Tit nests and nestlings, Treswell Wood 1979 - 1988

Year	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Nesting attempts	10	8	16	6	24	14	24	18	20	25
Young Fledged	65	53	56	50	48	61	104	126	133	77
Mean number per successful nest	9.3	7.6	8.0	10.0	6.9	7.6	6.9	8.9	8.9	7.0

Birds from Previous Years

Tables 5 and 6 give some details of birds which have been ringed in past years. Table 5 shows a more or less steady state of the Blue Tit recapture rates - about 20% to 30% of the nestlings ever being recaptured. The high figures of the early years were a result of low tit populations allowing more young to stay within the wood to breed. The Great Tit figures are quite erratic, both in absolute numbers and percentage of the number ringed being recovered. Table 6 gives numbers of Treswell Wood Blue Tits ringed in the nest in 1987 which have been recaptured, together with the places and circumstances of recapture.

Table 5 Numbers of nestlings ringed in boxes then recaptured, Treswell Wood 1979 - 1988

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Blue Tit										(to22Oct)
N	101	240	231	171	117	155	189	233	272	103
R	63	91	81	56	29	45	50	51	63	8
P	62%	38%	35%	33%	25%	29%	26%	22%	23%	8%
E	0	0	0	0	0	0	0	1	28	.
Great Tit										
N	65	53	56	50	48	61	104	126	133	77
R	34	10	10	10	13	19	18	9	43	6
P	52%	19%	18%	20%	27%	31%	17%	7%	32%	8%
E	0	0	0	0	0	0	0	1	11	.

Note: N nestlings ringed and fledged
 R recaptured and/or recovered
 P recaptured and/or recovered as % of total
 E first recaptured during the last year.

Table 6 Recaptures of 1987 Treswell Wood Blue Tits

Place of recapture	Number	distance (km)
Treswell Wood	56	0
Treswell Wood (nesting 1988)	4	0
East Drayton	1	5
Retford	1	6
Doncaster	1	30
Total winter-survivors (i.e. recaptured since March 1988)	9	

Other Species

Gamston Wood was quiet this year - no mice, weasels or grey squirrels.

All Treswell Wood tit nests have been sent to Nottingham University for use in an undergraduate investigation. We hope that some more species will be identified. Fleas from the nests will go, as usual, to Malcolm Greenwood. (The report of this investigation by Karen Renton is now on the Treswell Wood CD-ROM.)

One new species has nested - the pygmy shrew *Sorex minutus*. An individual was seen once during 1987 in a box. This year two have nested. One used a wedge box (14) (intended for Treecreepers, see Coal Tit notes). The other nested in a box intended for Lesser Spotted Woodpeckers, slung under a branch, entrance pointing downwards and stuffed with expanded polystyrene. This box had been excavated early in the season, probably by a bird for there were a few feathers in it. It was unused until mid-August when the shrew moved in. The difference between the two boxes selected by shrews underlines the danger of making generalisations about nest site preferences from experience of only a few individuals.

Bumble bees identified were *Bombus leucorum*. They have used boxes both as nest sites (evicting the Blue Tits) and as temporary roosts. A moth was identified as the double square spot, *Xestia triangulum* and a spider as *Nuctenea umbratica*.

Treswell Wood Bird Populations

Events in nest boxes gave the impression that there were high bird populations, but that nesting success was low. The lack of successful nests in natural sites supported this idea. A more reliable confirmation comes from the bird ringing constant-effort captures. Throughout the year we catch birds in mist nets. Nets are put up in seven sites around the wood, once every ten weeks at each site. At each visit we use the same amount of net for the same time. Since the amount of effort is constant from one year to the next, the capture totals should reflect the population size. The graphs in Fig.1 show the numbers of birds caught in the fourth ten-week interval (August to October) of each year from 1978 when the constant-effort netting started. Three features are apparent. First, the adult captures for 1988 are well above average, indicating high adult breeding populations. Second the juvenile captures are below average (although not as low as in years such as 1979 after the very hard winter). The third and most important feature is the ratio of juvenile to adult captures. This gives an idea of the relative success of the breeding season. The 1988 figure is the lowest we have recorded and demonstrates the lack of success in the bird populations as a whole this year in Treswell Wood.

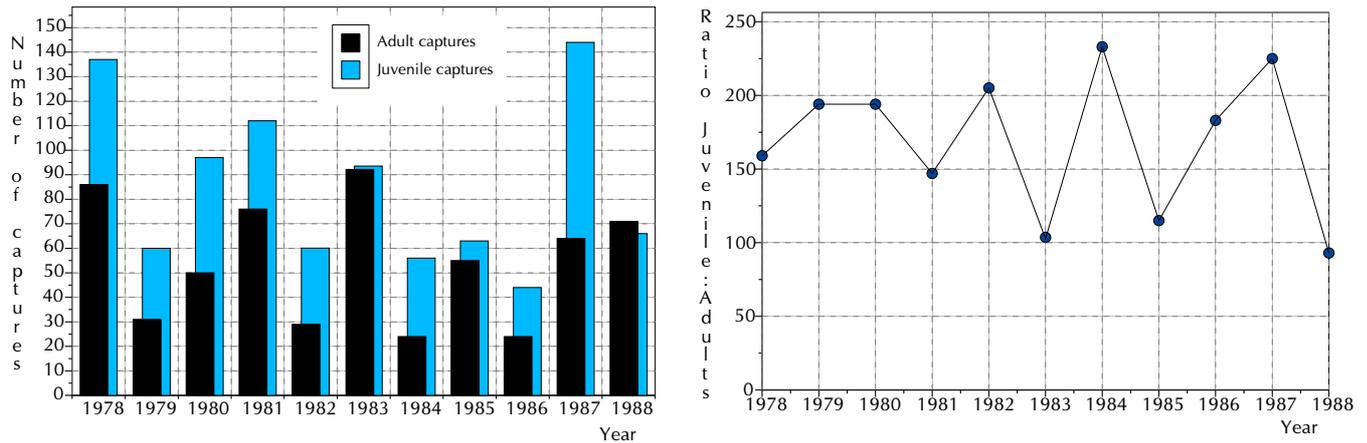


Figure 1 Constant Effort Captures - Treswell Wood - August to October, 1978 -1988

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This was originally published in October 1988 for the Nottingham Trust for Nature Conservation as the **North Notts Nestbox Report 1988**. It was produced on the BBC microcomputer using Inter-Word. The front cover was designed by Adèle du Feu and contained a photograph of the 19-egg nest and a nestbox being stuffed with polystyrene. It also has copies of a page of the nestbox note book, a nest record card and three BTO recovery slips for Great Tit VA30384 and Blue Tits E343188 and E343242.

This edition has been produced from the original Inter-Word computer files using Techwriter on the Acorn RISC PC. Figure 1, originally produced using Inter-Chart on the BBC microcomputer has been redrawn using Chartwell and Draw+ on the RISC PC.

Chris du Feu, December 2000