

Wharnccliffe Heath Nature Reserve Common Bird Census 2016Survey Methodology

Breeding season bird surveys on Wharnccliffe Heath Nature Reserve in 2016 were based on the Common Bird Census (CBC) methodology used by the British Trust for Ornithology (BTO) (Gilbert et al., 1998). The surveys were undertaken from 14th April – 09th July 2016, and comprised of 10 visits. During each survey, the observer covered the full area of the nature reserve, recording territorial birds, and their activity codes. Bird registrations were recorded on field maps using BTO one or two letter species codes. Additional visits were also made to record birds using the nest boxes on the reserve in May and June. Separate visits after sunset were made in late May and June to establish the status of nocturnal species on the reserve. The breeding bird surveys were conducted by Andrew Hill, and the nocturnal bird surveys were undertaken by Dave Buttle.

Survey Results

Species	1999	2000	2002	2009	2010	2011	2012	2013	2014	2015	2016
Mallard	0	0	0	0	0	0	0	0	0	0	1
Tree Pipit	6	6	5	3	4	6	4	5	5	5	5
Willow Warbler	21	14	14	22	19	23	20	18	24	24	34
Chiffchaff	1	0	0	0	0	1	1	0	2	2	3
Blackcap	1	1	0	0	0	1	2	1	4	3	3
Garden Warbler	1	0	0	0	0	1	0	1	2	2	1
Common Redstart	0	0	0	0	0	1	0	1	1	1	0
Pied Flycatcher	0	0	0	0	0	0	0	0	1	3	6
Spotted Flycatcher	0	0	0	0	0	0	0	0	1	1	1
Blue Tit	1	0	0	0	0	1	6	15	21	12	19
Great Tit	1	0	0	0	0	2	3	3	8	6	8
Coal Tit	2	0	0	0	0	1	0	1	1	0	1
Wren	22	22	20	22	9	11	10	5	22	23	27
Robin	18	13	6	15	10	7	6	13	14	17	19
Nuthatch	0	0	0	0	0	1	1	1	1	0	0
Dunnock	2	2	1	7	4	1	2	2	2	2	3
Great Spotted Woodpecker	0	0	0	0	0	0	0	0	1	1	1
Goldcrest	2	0	0	0	0	0	0	0	0	1	1
Treecreeper	0	0	0	0	0	0	0	0	0	0	1
Song Thrush	0	0	0	0	0	0	1	2	0	0	1
Mistle Thrush	0	0	0	0	1	0	1	0	0	0	1
Chaffinch	11	3	0	4	2	5	4	10	10	11	11
Linnet	1	1	4	1	2	3	3	2	2	4	3
Nightjar	1	0	0	1	1	1	1	1	1	1	1

Table 1: Territory numbers of birds recorded on Wharnccliffe Heath from 1999-2016. Birds of conservation concern are highlighted in red for red list, and in orange for amber list species (taken from Eaton et al, 2015). The 1999 survey was undertaken by Paul Medforth, 2000 and 2002 By Dave Buttle, and 2009 onwards by Andrew Hill.



Plate 1: Juvenile pied flycatcher, one of the five birds that were ringed by Sorby Breck Ringing Group in June 2016.

Other Species Recorded

Green Woodpecker, Common Buzzard, Grey Heron, Sparrowhawk, Kestrel, Pheasant, Woodcock, Nuthatch, Siskin, Bullfinch, Long tailed Tit, Carrion Crow, Swallow, Swift, Tawny Owl, Blackbird, Cuckoo, Goldfinch, Meadow Pipit, Raven, Jay

Results and Discussion

The numbers of territories recorded from 1999 - 2016 can be found in table 1. Eleven species of conservation concern were found to have established territories on Wharnccliffe Heath in 2016, six from the red list and five from the amber list (Eaton, 2015).

An additional 20 nest boxes were placed on Wharnccliffe Heath over the winter of 2016. Nine of the boxes were placed below Wharnccliffe Craggs in the mature sessile oak woodland in the western enclosure, four in the northern enclosure, and the remaining seven in the southern enclosure. Five of these boxes were made with larger, oval shaped holes, with the intention of attracting redstart. Two of these were placed on the edge of the large woodland glade in the western enclosure, and the remaining three were placed in the wood pasture of the southern enclosure. This increased the total number of boxes on the reserve to 63, although three boxes have now been significantly damaged by grey squirrels (damaged to the point that they may never be used again).

The number of pied flycatcher territories on the reserve doubled from the previous year, from three in 2015 to six confirmed territories in 2016. An expansion of pied flycatcher territory locations took place in 2016. As in 2015, the majority of territories were located in the southern enclosure, but additional territories were established in the northern and western enclosures, likely as a result of increased nest box availability in these areas. Of these territories, four resulted in nesting attempts, all located in the southern enclosure, of which all were apparently successful. The territorial males in the northern and western enclosure moved on after a few weeks. The nest boxes in the northern and western enclosure were all occupied by resident tit species, so the departure of the pied flycatchers is likely a result of failing to secure a nesting site.

Sorby Breck Ringing Group visited the reserve in June to ring the juvenile pied flycatchers. At the time, one box could not be opened, and two of the other used nest boxes were empty, the juveniles having apparently successfully fledged. Five *pulli* were rung from the remaining box, all seeming healthy at the time (Plate 1).

An increase in both blue and great tits occurred from the previous year. A total of 19 pairs of blue tit nested in 2016, seven higher than 2015, although still lower than the high of 21 in 2014. Most of these nests were in the reserves nest boxes, and another in a cavity in a sessile oak close to the grazing pond in the southern enclosure. Great tits increased to eight nests, equalling the highest number recorded on the reserve, six of which in nest boxes, and two were found in natural cavities. It was noted that the new nest boxes placed in the northern and western enclosures were fully occupied by these two species, suggesting a lack of nest sites in these areas.

The openable nest boxes on the reserve were inspected and cleared out in September 2016. The pied flycatcher attempts all appear to have been fully successful, as no dead juveniles or discarded eggs were found within. A single great tit egg was found from within a box below Wharnccliffe Craggs, but the other nests were fully empty. It was noted that pied flycatchers had made another two nests (identified by the leaf litter used to fill the box) in nest boxes in the southern enclosure that were not used. Another two nest boxes were lined by tit species, but were also not used. The weather in early to mid-spring was unseasonably cold, although not to the extent of the previous year. This may have had an effect on the number of nesting attempts in the reserves nest boxes.

Tree pipits had another good year in 2016, with five territories found on the reserve. Two of these were found in the northern enclosure, two in the southern enclosure, and one in the large glade area in the western enclosure. Alarming and food carrying by tree pipits was also observed in the southern enclosure, close to the wood pasture on several dates in June, proving breeding.

A record 34 willow warbler territories were recorded in 2016, ten higher than in 2015. Most of the territories were in the scrub areas of the reserve, in silver birches around Wharnccliffe Craggs, and one was found in a more unusual location next to the Woodhead Road track to the east of the woodland near the dam pond. As the habitat on the reserve has remained largely unchanged from the previous year, the upsurge in territories appears to reflect a higher numbers of this species locally, as records from other local sites, such as Wharnccliffe Wood, were also higher than in previous years. Breeding was proved in June when several juvenile birds were observed in bracken in the north of the southern enclosure.

A pair of mallard bred on the reserve for the first time in 2016, with 13 juveniles seen at the dam pond in May (although the original nest was not located). The mortality rate of these juveniles was high however, as by mid-June, only two of the mallard ducklings remained. Other adult birds were seen close to the grazing pond on several survey visits, but no evidence of breeding was recorded.

A treecreeper territory was established to the south of the dam pond in 2016, the first time this has been recorded on reserve. A nest containing at least four eggs was discovered in a scots pine in the reserves wood pasture in late April, but this nest was abandoned in early May for reasons unknown. It should be noted that it is extremely unlikely that 2016 was the first year treecreeper attempted to breed on the reserve, and it is likely due to methodological issues (such as not recording singing birds/finding nests) that they have not been previously recorded.

Linnets had an above average year, with three territories. One of the territories was in the northern enclosure and two were in the southern enclosure. Singing birds were observed on the scattered pines and sessile oaks in the enclosures.

Blackcap territories remained at the numbers from the previous year, with three territories, all found in the woodland parts of the reserve.

Three chiffchaff territories were recorded in 2016, one higher than in 2015, with territories in the woodland, one close to the dam pond, the other in the west of the reserve. Alarming by adults was noted close to the dam pond in May, suggesting a nearby nest.

One garden warbler territory was found on the reserve in 2016, in an area of thick silver birch scrub and bracken in the northern enclosure.

A single song thrush territory, the first since 2013, was established on the edge of the wood pasture in the southern enclosure. Two mistle thrushes held territories in the northern and southern enclosures.

Dunnocks increased by one from the previous year, with three territories on the heath, two in the northern and one in the southern enclosures.

Wren territories reached the highest numbers recorded on the reserve since the start of the CBC, with 27 scattered around the reserve, with preference for the fringe habitats of the heathland and below Wharnccliffe crags.

Robins also had a good year, with 21 territories recorded, the highest number recorded on the reserve, mainly around the heath fringes.

Chaffinches also had a good year in 2016, with 11 territories, equalling the highest recorded on the reserve, located in the woodland fringes and below Wharnccliffe crags

A spotted flycatcher territory was found between the dam pond and Plank Gate. Another bird was recorded close to the grazing pond, but was not subsequently seen again.

A single goldcrest territory was located in the woodland to the east of the reserve in conifers close to the Woodhead Road track, as was a single coal tit territory.

A great spotted woodpecker nest was found in a silver birch stump, the third consecutive year breeding has been proven for this species on the reserve. A pair copulating was observed below Wharnccliffe crags during April, but a nest site as not found in this area.

No nuthatch territories were found on the reserve in 2016, but individual birds were seen and heard during the surveys.

Despite the addition of suitable nest boxes, no redstart territories were recorded on the reserve in 2016. A male redstart sang in the open glade area near Wharnccliffe Chase in May on one survey visit, but was not subsequently recorded. The boxes designed by redstart were not used by this species, although 3 were utilised by great tits.

A single male nightjar was observed and heard churring during the nocturnal visits, as was two female birds. The last record of the year was a male seen and heard on a WHT event on the 15th July. At least two woodcocks were also seen roding during the nocturnal visits.

References

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