

## **Willow Tit Surveys in Shropshire – Summary of 2016**

This is a short summary of the work carried out to survey Willow Tit in 2016. A more detailed report is currently in progress that will expand on many of these points further and reference published study material.

### **Introduction**

The Willow Tit *Poecile montanus* has been identified as the fastest declining widespread resident species of bird in the UK. The reasons for this decline are currently unclear, but evidence suggests habitat loss/change and also possibly climate change.

It is an oft-overlooked species probably due to its elusive tendencies. It also bears a strong visual similarity to the closely-related Marsh Tit *Poecile palustris* which can lead to difficulties in identification. The most reliable method of identification is using vocalisations which are different between the two.

Surveys using a playback method have been increasing in use through the UK in recent years and the RSPB have reported back on a number of surveys through the Species Recovery Group for Willow Tit. These surveys have all tended to find more Willow Tit than previously thought in sites as close as Powys and Staffordshire.

Current data from the Breeding Bird Atlas projects shows an 80% decline in distribution between 1985-1990 and 2008-2013 in Shropshire. There is a lack of site-specific data however as the atlas work was done on at quite a broad scale (tetrads - 2x2km grid squares), and there is always the possibility of under-recording with such a difficult species. Given the lack of understanding of its decline and precarious position in the UK, it is essential that specific focus be given to this species so that any conservation may be better targeted.

The survey method is relatively simple and at this stage only presence/absence and breeding evidence has been gathered from it. Using this method can also get an estimate of breeding pairs but caution must be used, as more visits would generally be required to be more certain of this.

### **Results**

28 sites were surveyed with playback in 2016 and 12 of these generated positive results. It must be noted that out the 16 negative sites, 10 were determined to have not had enough surveys to rule them out. There were also 4 sites where casual records of breeding evidence were submitted.

This equated to 21 tetrads with positive results. Encouragingly 13 of these were 're-finds' from their 1990 Atlas distributions or completely new tetrad records.

Looking through records from the County Recorder for the years 2013 onwards also produced a few additional records that could be verified (i.e. notes taken on call/song/habitat). This produced a total of 42 sites total over 47 tetrads, 29 of which were 're-finds' from the first Atlas period or completely new tetrad records.

It is possible to estimate a minimum population estimate from these surveys for each site, but this must be treated with caution as it was often impossible to cover the entire site. Nevertheless it may form some kind of basis for monitoring at these sites in the future.

Habitat notes were also taken and available data examined from the Forestry Commission at appropriate sites.

I also managed to find an active nest in a standing birch stump at the Haughmond Hill site. This was monitored under the BTO Nest Record Scheme (the first record for Shropshire for at least 9 years) and I am very happy to report that the pair looked to have fledged a full brood of 9. The Shropshire Birder, Jim Almond, was able to obtain some wonderful photos of the adults feeding young, for which I am very grateful.



## Discussion

This initial year of survey effort has certainly been a success. We have managed to 're-find' this species in some tetrads from the 1990 Atlas and also at some new tetrads that were not recorded in either Atlas. The Atlas projects are 'broad-brush' surveys designed to highlight areas for further research, and species like Willow Tit, which are localised, elusive and/or difficult to ID are likely to be under-recorded (other species such as Lesser Spotted Woodpecker and Grasshopper Warbler probably also fall into this category). It is also possible that the overall decline in the species would lead to a lower detection rate in many tetrads. The Atlas therefore provides a solid baseline of data, but this more detailed and specific survey provides a valuable addition to the Atlas result and will be essential for keeping an eye on the Willow Tit in Shropshire.

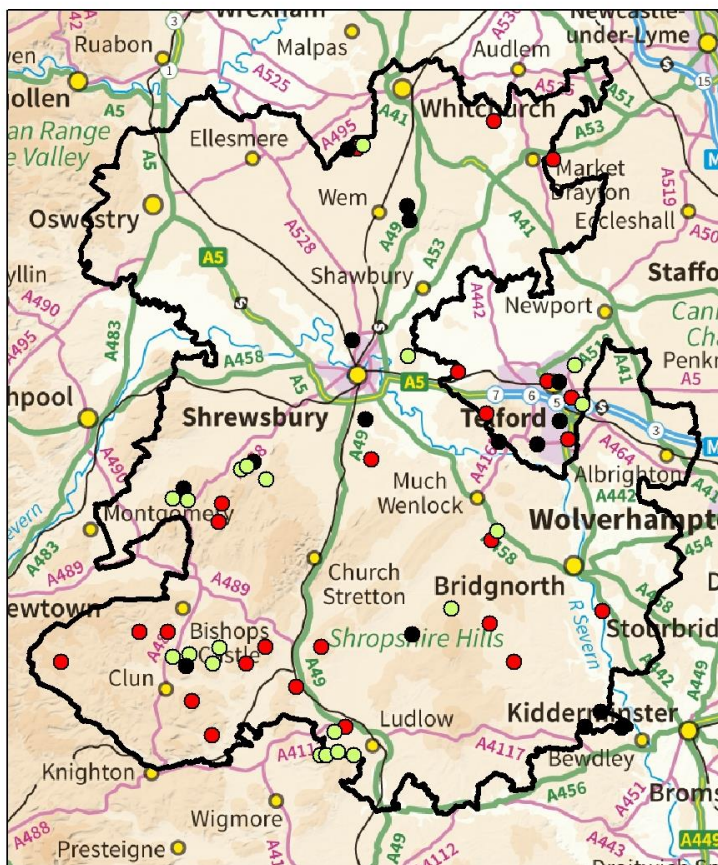
We have gathered some very loose estimates of populations from some sites, normally no more than 3-4 territories at most, but we don't have anything to compare this to, so we can't make any estimates of local population changes. This information will be important going forward as we can potentially re-visit these sites and check them again in future years.

Feedback from myself and volunteers and analysis of the data also provided the following discussion points:

- Habitats where they were found were almost exclusively conifer plantation sites and also some wet woodland (normally fringing waterbodies or waterways).
- They showed a distinct preference for areas of Larch or Douglas Fir within conifer plantation sites. Whether this is due to the conifers themselves or the structure of the woodland provided by these species is as yet undetermined.

- The highest number of successful responses to playback in a single survey was 7 at Walcot Wood near Bury Ditches. Other surveys produced only 3 at the same site which is still a good amount.
- The earliest singing record in 2016 was 20th March and the latest was 25th April.
- They only respond when good and ready. Although they are known to sing during February or even January, many surveys during this time drew a blank, only to have them 'appear' and respond to playback in March or April. Anecdotally, I have heard that they seemed to be late in singing in 2016. Accordingly, many sites that were only surveyed once or during February may have missed them.
- They also seemed to be very elusive in general. During several weeks of nest-monitoring for Willow Tit, I never saw the adults off the nest in the general vicinity (until they began to feed young). Marsh Tit at the site, on the other hand, were easy to see regularly with little effort, and much more confiding in general. I was not the only one to note this seeming difference in detectability.

Sites found holding Willow Tit in 2016 (see Map below) are fairly widespread from Whixall Moss on the north border, down to the conifer plantation in the South Shropshire hills. Telford is notable for having several sites within its area that are known to hold them or have unverified records. Priorslee Lake, of course, being the most well known site in Shropshire for the species, although discussion with a very regular birdwatcher of the site would indicate that the population is down to a lone singing male.



Willow Tit Sites 2013-2016

Red = Positive record submitted to County Recorder

Green = Positive playback survey in 2016

Black = Negative playback survey in 2016 (doesn't mean they aren't there!)

All records from 2016 have been submitted to the County Recorder.

My overall feeling is that of optimism, that this species may still be quite widespread in Shropshire. But of course the only way to confirm this is to continue searching sites and building up a bigger

picture. By doing this we also set a base-line where we can re-check known sites in the future in order to keep an eye on them.

### **THREATS TO THE WILLOW TIT**

Current evidence is actually starting to point towards a combination of climate change and habitat loss as being responsible for the decline in Willow Tit (and other 'cold-climate' species such as Willow Warbler) in the UK and Europe (<https://www.theguardian.com/environment/2017/jan/11/birds-vanish-england-climate-change-habitat-loss>). Certainly, the southerly disappearance seen in the UK Bird Atlas would tie in with this (<http://app.bto.org/mapstore/StoreServlet?id=433>). This is an interesting and quite worrying development as this is something that we humans struggle to perceive and is difficult to do anything about on a purely local level.

On a more local level, the most obvious threat would be habitat loss. We don't know what effect forestry operations may have on them in the large conifer plantations. The population around Telford are also clearly vulnerable to development either hemming in known sites, or destroying marginal ones that may seem low value in ecological terms, but could still be suitable habitat. Restoration of valuable wetland habitat in the Meres and Mosses often involves scrub and tree clearance. This may actually benefit Willow Tit especially if stumps are left to standing to decay, or it may be detrimental, but if we don't know they are there then we can't find this out.

### **PLAN FOR 2017 AND BEYOND**

At this stage I think the most important thing is to continue to generate a site-based inventory. Presence or absence is the most important thing to establish, as getting population estimates requires much more survey effort.

It will of course be impossible to re-survey every possible tetrad or search along every stretch of tree-lined waterway or pool, but if surveys can continue to establish where the species is located in larger defined sites such as woodland blocks, then that will be a great base to work from.

I have therefore created a Google map (<https://drive.google.com/open?id=19Co8j7ikbrFHAqfic1h-s0vqEcU&usp=sharing>)

with some ideas for sites to survey in order to try and cover the whole county broadly. I would be also be perfectly happy for any volunteers to suggest suitable looking sites that are not on this map if more convenient for them.

I would like to set a target of 20 sites to be surveyed in 2017 with adequate effort to be reasonably sure of presence/absence. Casual records that can be verified (ideally be recording singing males) can also contribute to this total.

For future years I would like to continue surveying sites, but also to engage with local ringers and talk about doing some population studies ideally involving colour ringing. I would also like to engage with landowners such as the Forestry Commission and raise the profile of this species.