

An Analysis of Staffordshire Bird Records 2005 – 2014

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Warblers

1. Introduction

In 2003 we started the computerisation of bird records for Staffordshire and since that time have placed all records going back to 2000 into the county database.

The major change to record keeping occurred in 2006 when the British Trust for Ornithology (BTO) introduced their national online bird recording system, BTO Birdtrack. This system allows anyone to record their bird sightings via the web and has resulted in a massive increase in the number of records we are able to obtain now. We have the ability to automatically extract Staffordshire data from Birdtrack, although some filtering and validation is required to ensure erroneous records are filtered out. This saves us the onerous task of manually keying in data.

Since there is now a considerable archive of bird records for the county, I have started analysing the data with the help of a free graphical software tool called QlikView. This document looks at Warbler species, but I hope in time to be able to examine other groups too. The period covered is a ten year period from 2005 to 2014; whilst the volume of data for 2005 is not quite as comprehensive as later years, there is sufficient data to enable us to look at meaningful trends. Data for the years 2000 – 2004 is less comprehensive so has been omitted.

The numerical counts in the graphs are obtained as follows: Each sighting in the database either has a quantity or the bird is recorded as being “present”. If present, it is assigned a quantity of 1. The quantities are added together to produce a total. This does mean the total can include repeat sightings of the same bird on different dates and also some duplicate counts from different recorders will be present. It would take much work to filter these duplicates out, but I doubt it would make much difference to the trends, just the overall numbers. Because of this, the total counts should not be seen as representing an actual total number of different birds – this would be a lower number. What remains meaningful however is the comparison of month against month and year against year.

There are three types of graph used as follows:

- a) Sighting Counts by Month. These are accumulated counts as described above broken down by month. These are used to show the relative frequencies of sightings during each month.
- b) Sightings by Year. These show the total counts broken down by the ten individual years examined. This is used to show population changes over the ten year period.
- c) Monthly Sightings. For an individual month, counts are accumulated by each day in the month. This is used for the arrival month(s) to show when birds arrive back in the county from their wintering grounds.

2. Discussion of Warbler Records

Most of our warbler species, specifically the migratory ones, have their highest monthly counts when they are singing on territory in the spring and are therefore much easier to spot. In the summer and autumn months, these counts decrease, but this is primarily because the birds cease singing and get on with breeding and are therefore much less audible and visible. It does not represent a reduction in numbers until we get to the later months when they start departing for their wintering grounds.

In a few cases, there is an increase in sightings in the autumn: for Chiffchaff and Willow Warbler, this is likely because they have large broods and more juveniles are present and active than in the breeding months. Interestingly, this is also the case for Lesser Whitethroat, unlike the rest of the *sylvia* warblers, but is also likely to be accounted for by post breeding birds being more active and visible. In addition, birds on passage from further afield passing through the county may also account for these autumn increases, but I'm unaware of any hard evidence to support either theory.

For Cetti's Warbler, these birds start singing again in October and as a result are easier to spot, hence the increase in sightings in this month.

3. Acknowledgements

My thanks go to all recorders who have provided bird records for Staffordshire over the years, without you none of this analysis would be possible.

Thanks to all site report compilers and those who have assisted with data entry, particularly Mary Holley, Holly Sissons and Matthew Sissons.

Thanks to Craig Slawson at Staffordshire Ecological Records (Staffordshire Wildlife Trust) for funding our use of MapMate software for the county bird database and assisting with data validation.

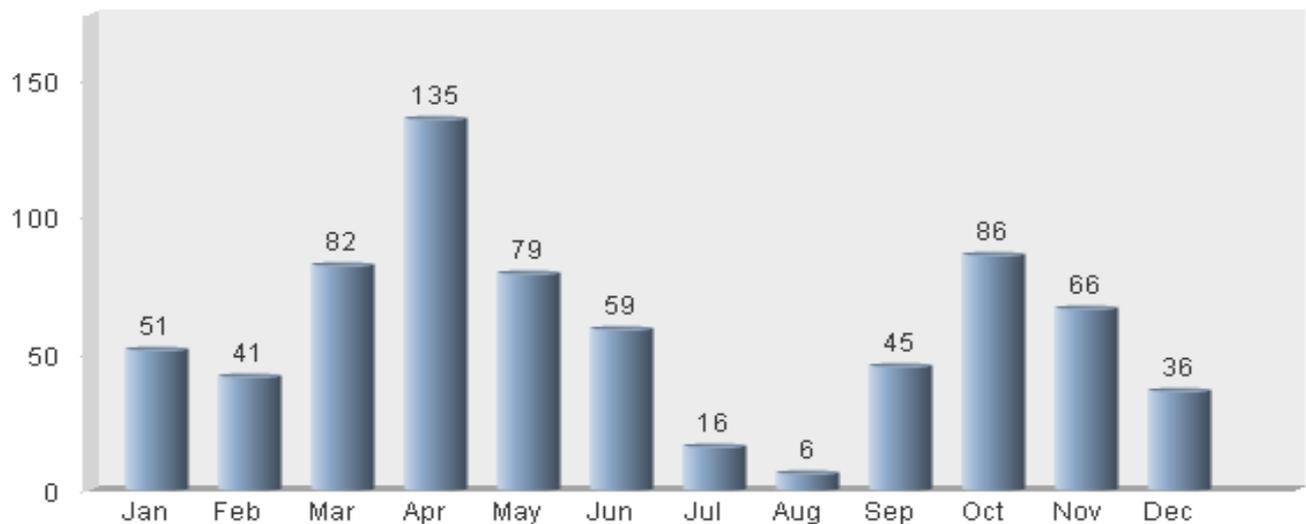
All graphs were made using QlikView freeware.

4. Detailed Species Accounts

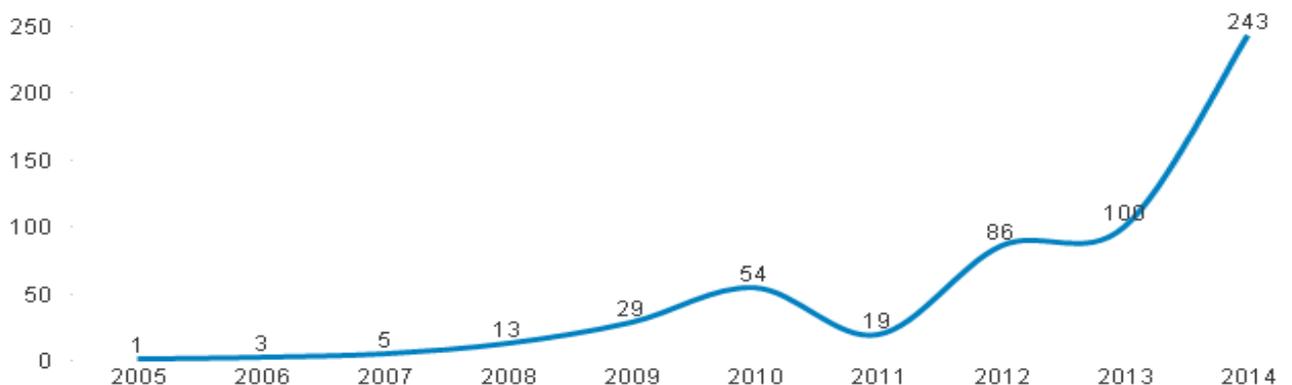
Cetti's Warbler

The most obvious trend over the ten year period is the transition from a county vagrant to a permanent resident and Cetti's Warbler is now part of our breeding fauna. The expansion from initial breeding sites on the south coast of England northward has been well documented over previous decades. Territories in Staffordshire have been noted at Middleton Lakes and Branston Gravel Pits, along with regular sightings at Aqualate, Belvide and Doxey Marshes, so it looks set to colonise the whole of the lower lying areas of the county over the next few years. The monthly breakdown shows the greatest number of records in April when it is most vocal prior to breeding and in the late autumn when they start vocalising again.

Sighting Counts by Month, 2005 - 2014



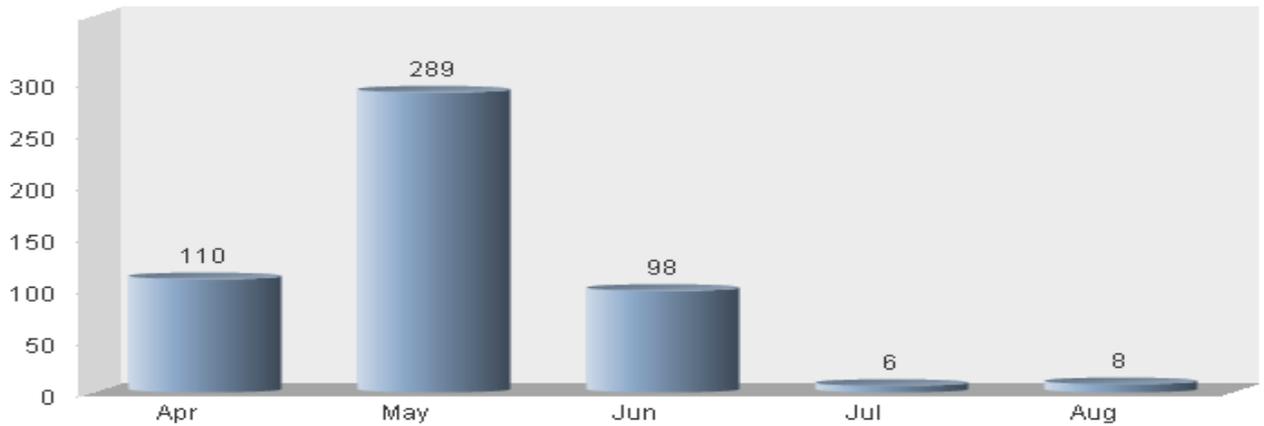
Sightings by Year



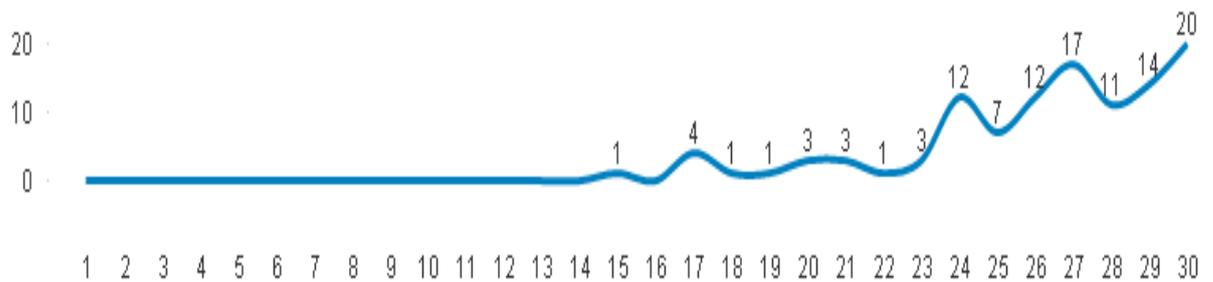
Wood Warbler

The number of annual sightings suggests a stable, if low, population of birds in the county. This is nevertheless encouraging given the national decline in numbers. Arrival dates show that birds are on territory by late April, most arriving in the final week of the month. A small number of passage birds have been recorded in August.

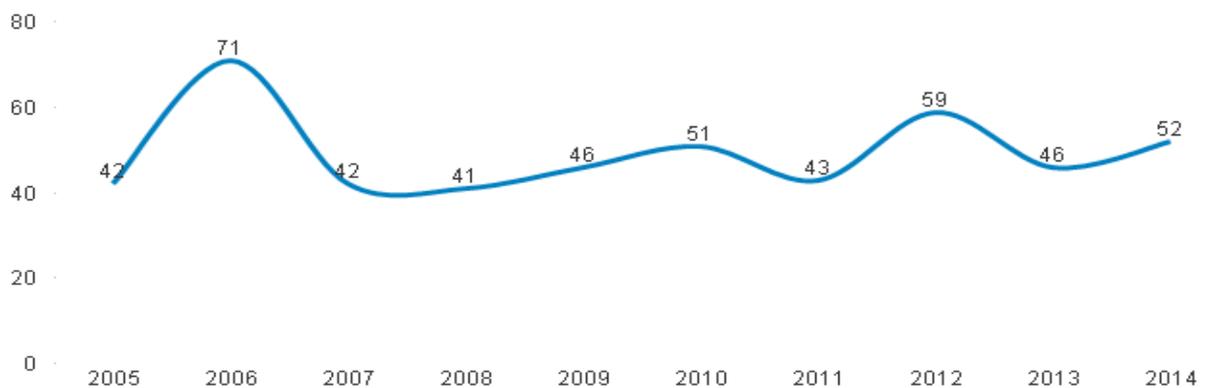
Sighting Counts by Month, 2005 - 2014



April Sightings 2005 - 2014



Sightings by Year



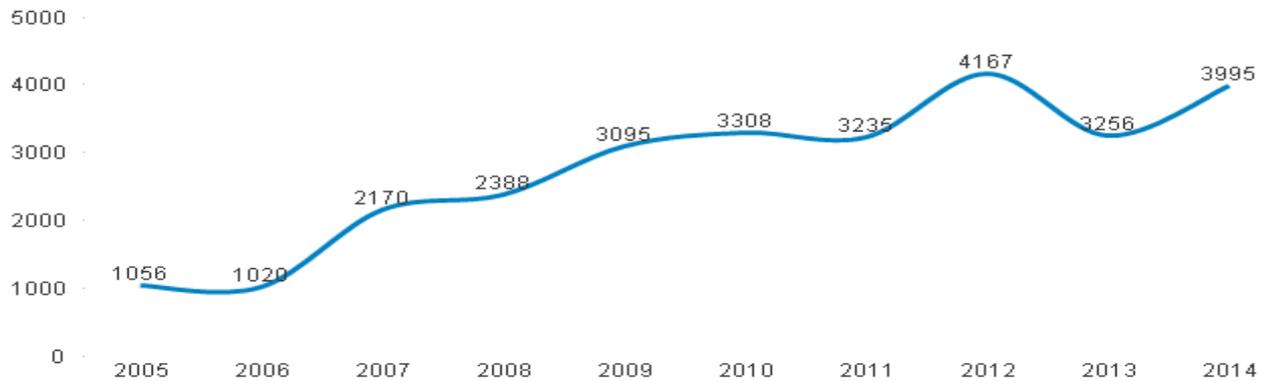
Chiffchaff

The sightings by year show an encouraging trend of increasing numbers, in contrast to the decreasing counts of Willow Warbler. Peak counts in April coincide with singing birds establishing territories. Of interest too is the all year round presence of this bird, with wintering birds now a regular occurrence. The chart of wintering bird counts shows that more have done so in 2014 than ever before, but this is probably the result of a mild winter and weather factors may be the primary influence for future numbers.

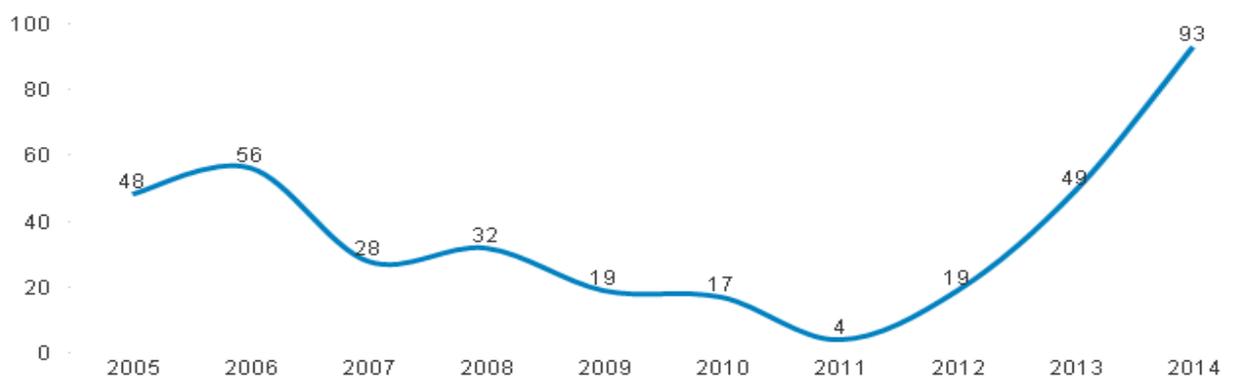
Sighting Counts by Month, 2005 - 2014



Sightings by Year



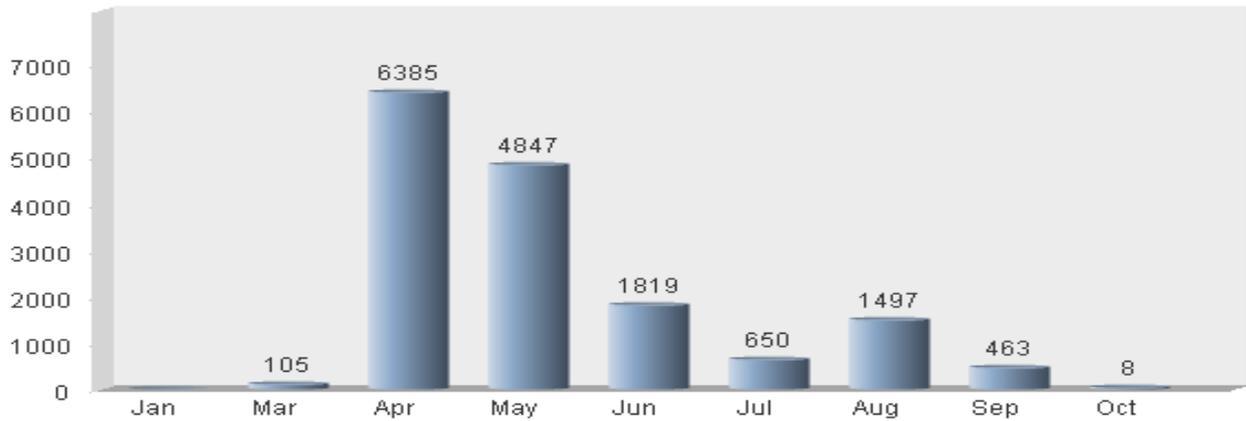
January and December Records by Year



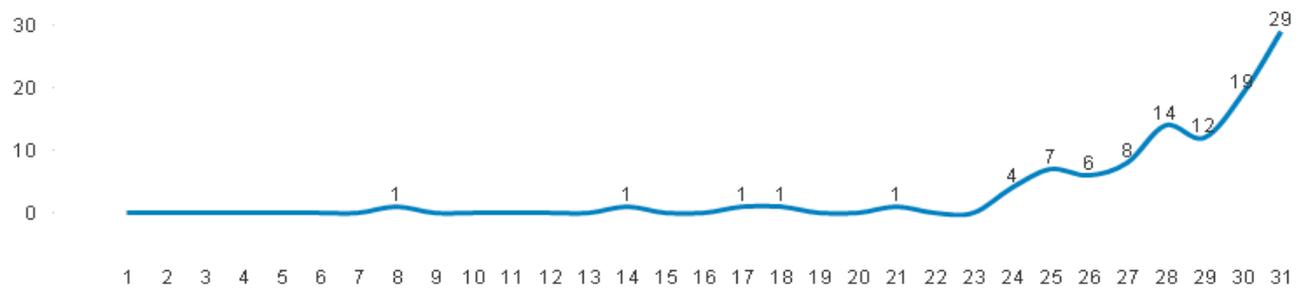
Willow Warbler

In contrast to Chiffchaff, there has been a downward trend in numbers since a peak in 2008-09. The initial influx occurs in the last week of March – there have been no overwintering birds - and the monthly chart shows a typical peak in April and May from singing birds.

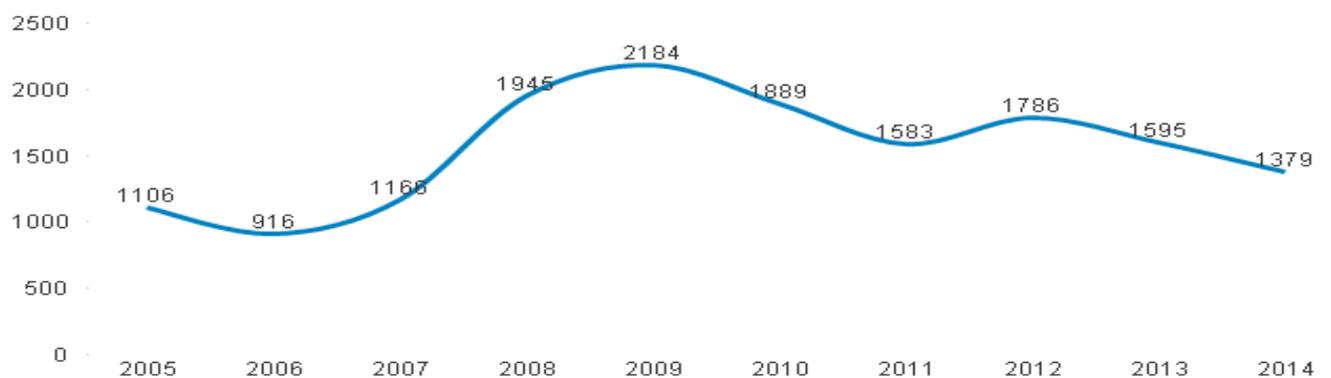
Sighting Counts by Month, 2005 - 2014



March Sightings 2005 - 2014



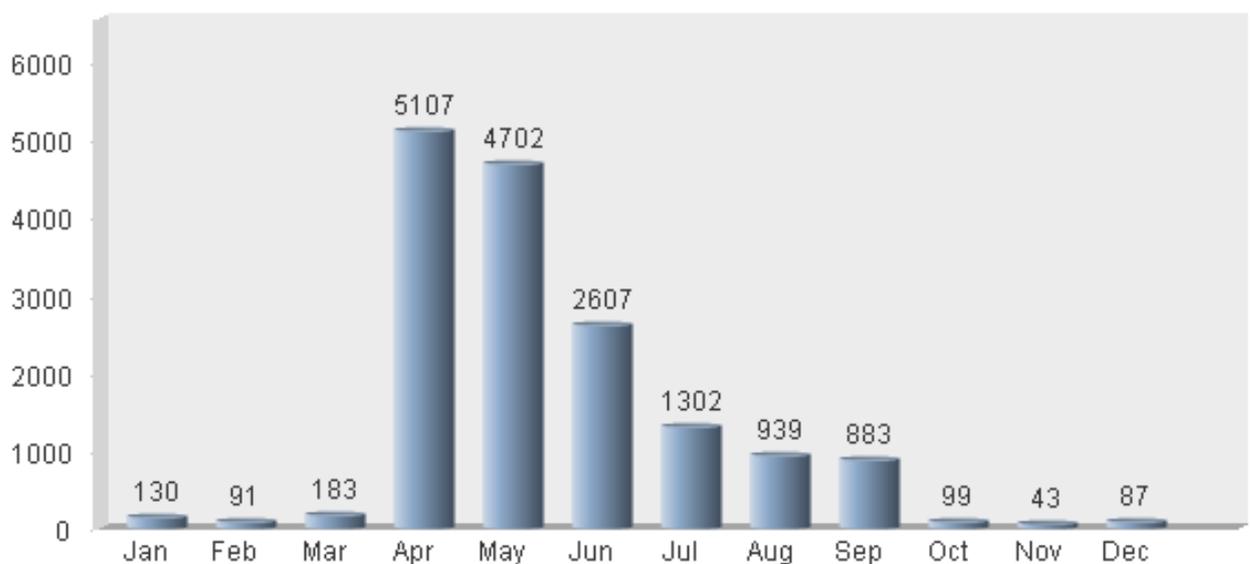
Sightings by Year



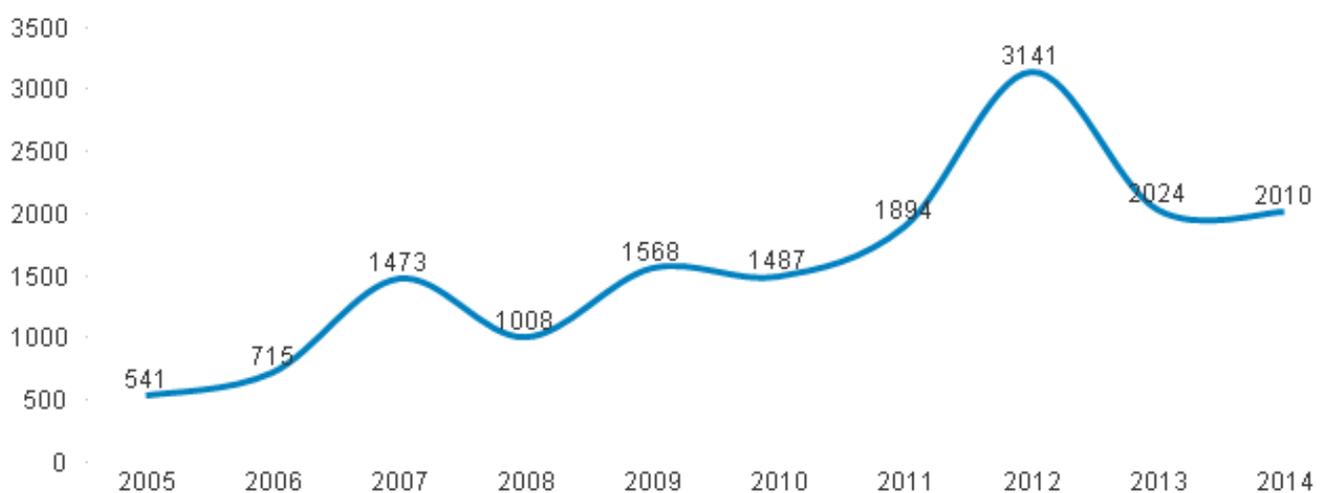
Blackcap

Blackcaps are with us the whole year round. Work by the BTO has shown that whilst wintering birds initially comprised of European birds, there are now also British birds staying on too. The winter counts for Staffordshire however, shown in the “January and December Records by Year” chart, show a generally decreasing number of wintering birds aside from a peak in 2010 which is different from the national increases. Spring numbers show that the vast majority of birds arrive from outside the county and set up territories in April and May. The two charts for March and April show an increasing number of birds from the last week in March until they reach steady numbers by mid-April. The annual sightings suggest that the breeding population is increasing, which is encouraging news for this popular bird.

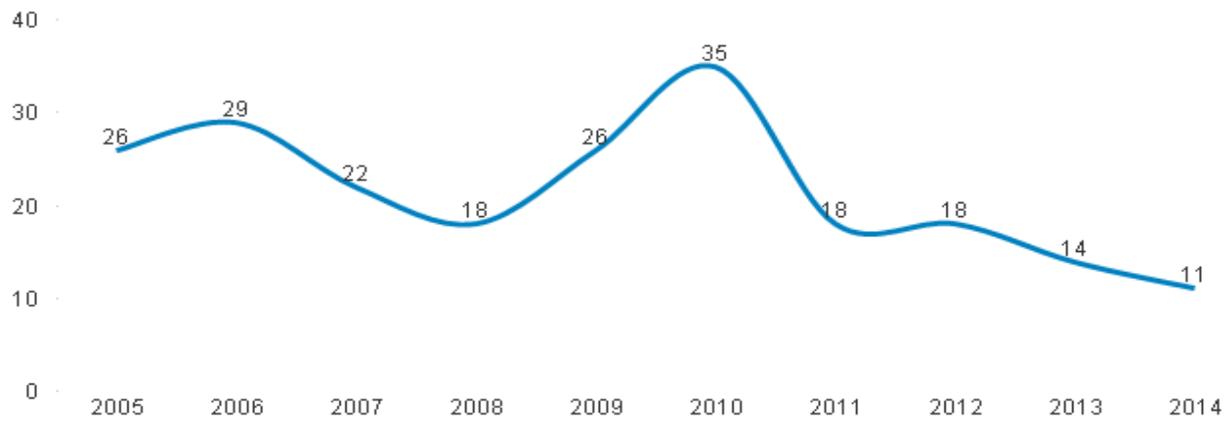
Sighting Counts by Month, 2005 - 2014



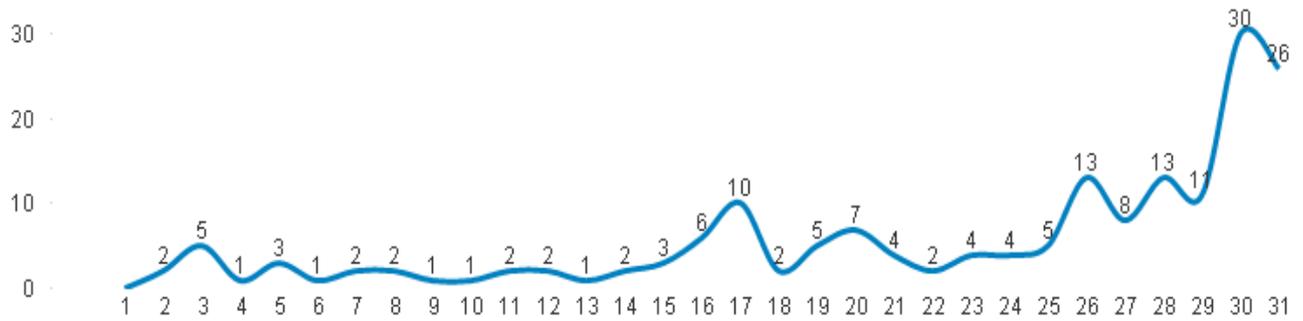
Sightings by Year



January and December Records by Year



March Sightings 2005 - 2014



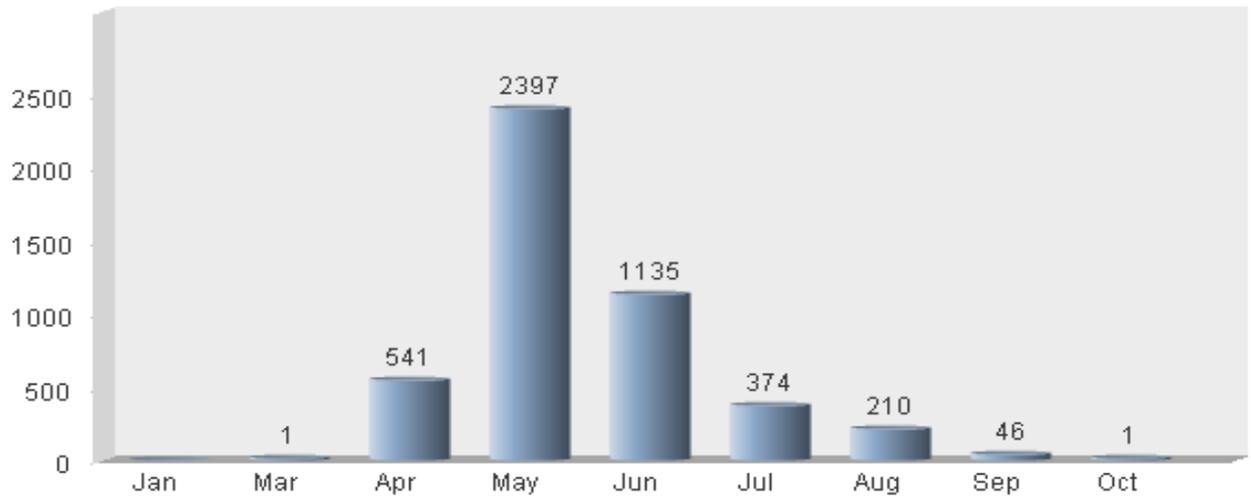
April Sightings 2005 - 2014



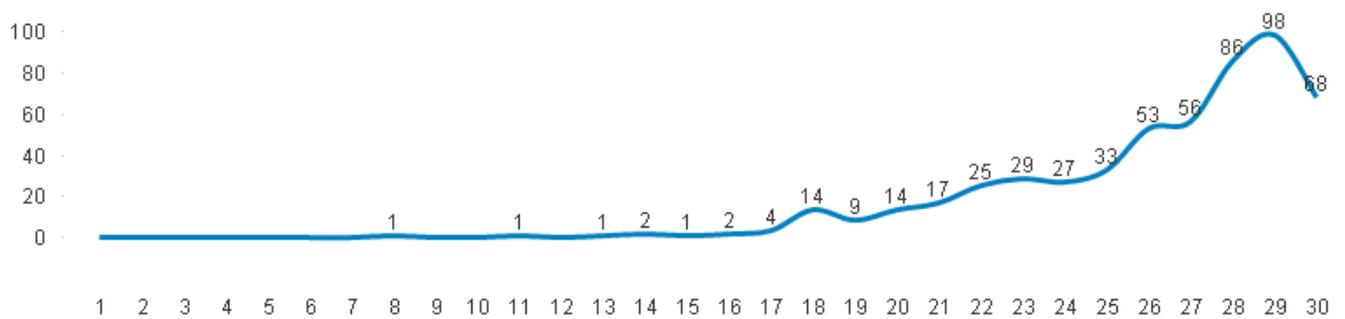
Garden Warbler

Garden Warblers start arriving mid-April and are on territory by the month end. The annual sightings suggest a static population.

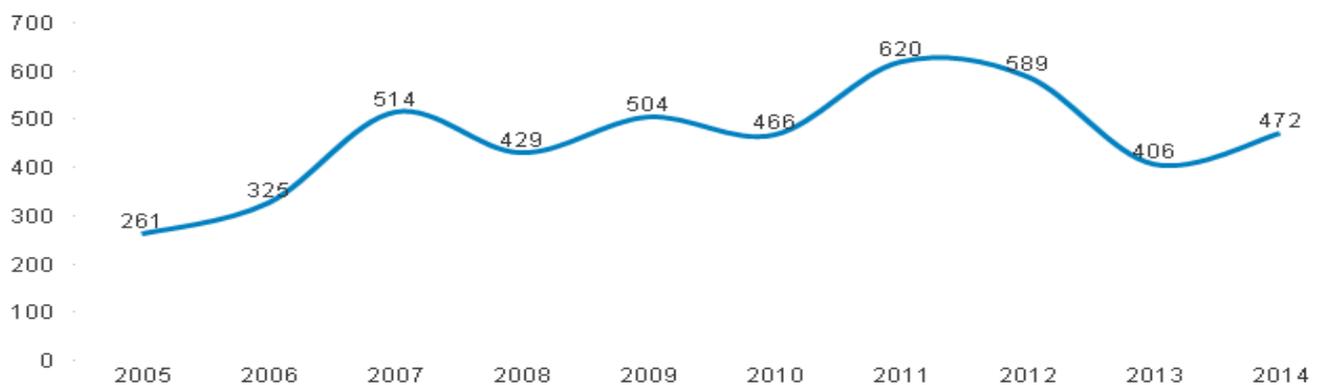
Sighting Counts by Month, 2005 - 2014



April Sightings 2005 - 2014



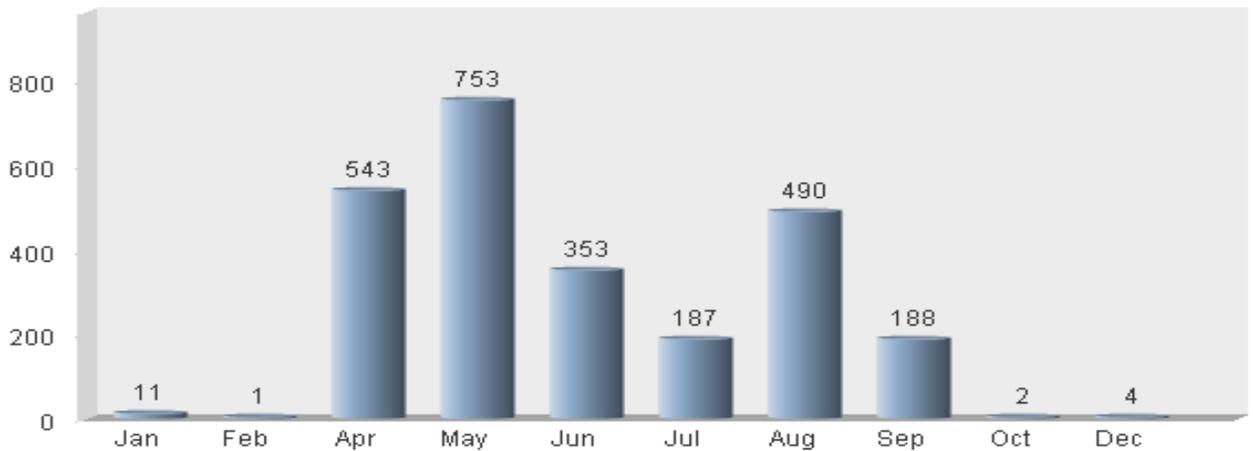
Sightings by Year



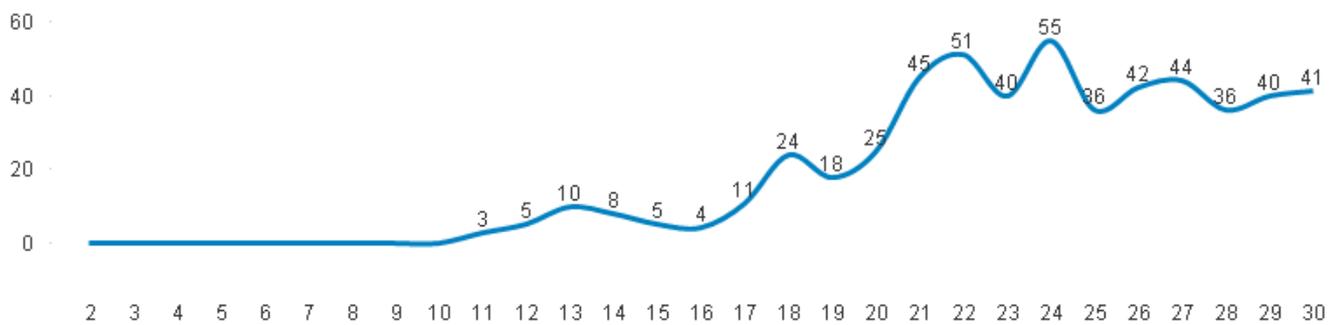
Lesser Whitethroat

Birds arrive over a short period of time from April 11th – 20th with steady numbers from 21st onwards. As with some other warblers, there is also an autumn increase in sightings as passage birds pass through and/or local birds become easier to view. The records in December and January are accounted for by an individual bird which over-wintered at Fenton Park, Stoke-on-Trent during 2011-12. The records by year show a relatively static population to 2011, then some sharp increases in 2012 and 2014 suggesting a potential increase in numbers.

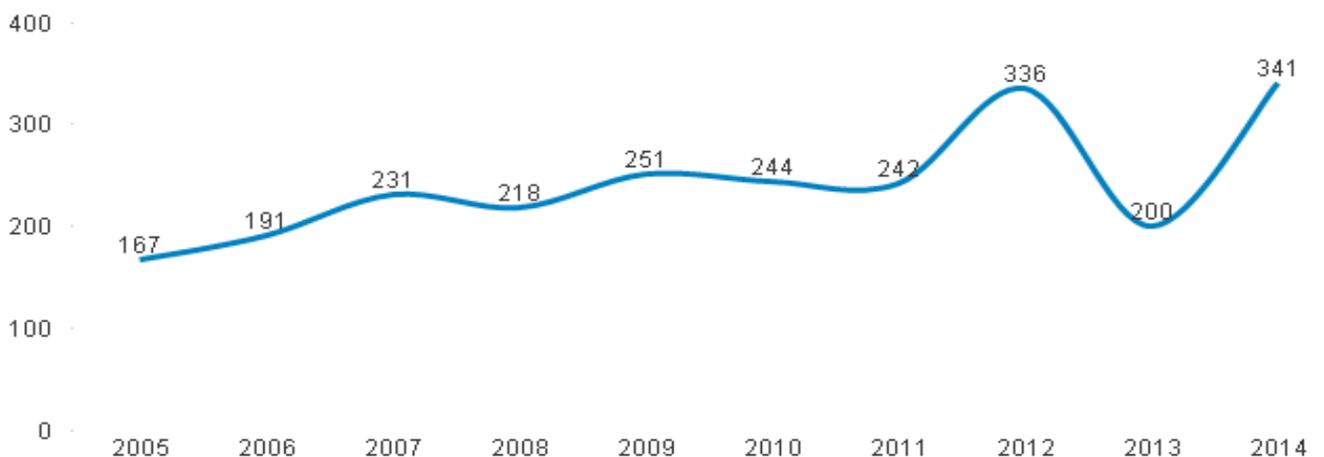
Sighting Counts by Month, 2005 - 2014



April Sightings 2005 - 2014



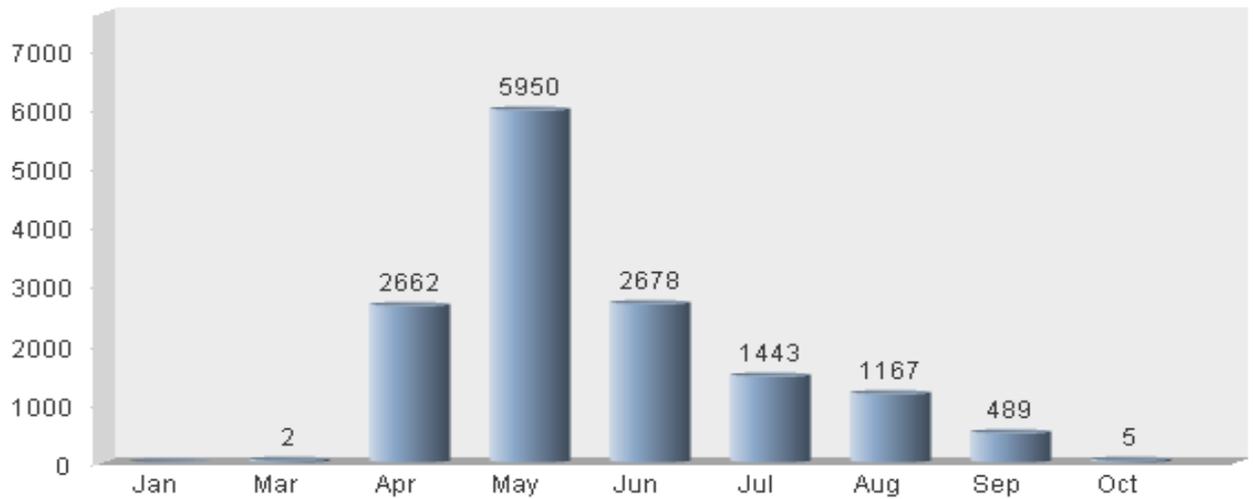
Sightings by Year



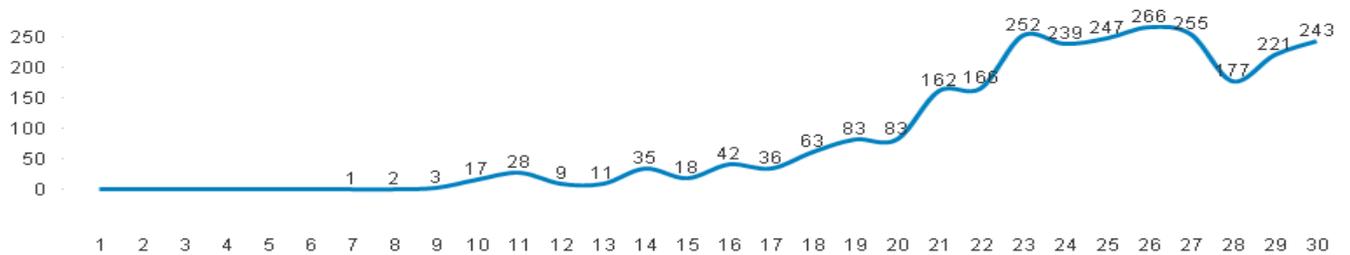
Whitethroat

Whitethroat arrival takes place from the second week of April until about 23rd at which point steady numbers suggest the majority are on territory by this time. Annual counts showed a steady increase in numbers until 2012 after which there has been a significant drop.

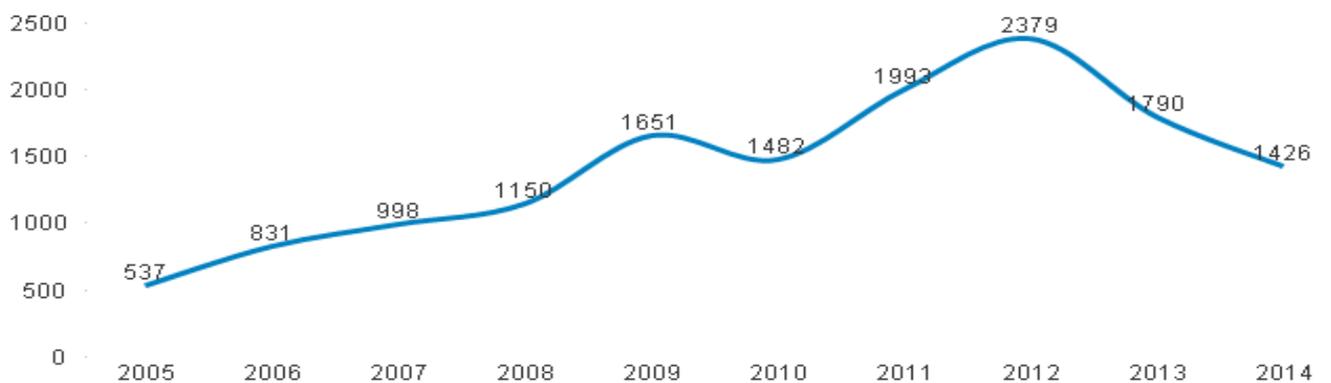
Sighting Counts by Month, 2005 - 2014



April Sightings 2005 - 2014



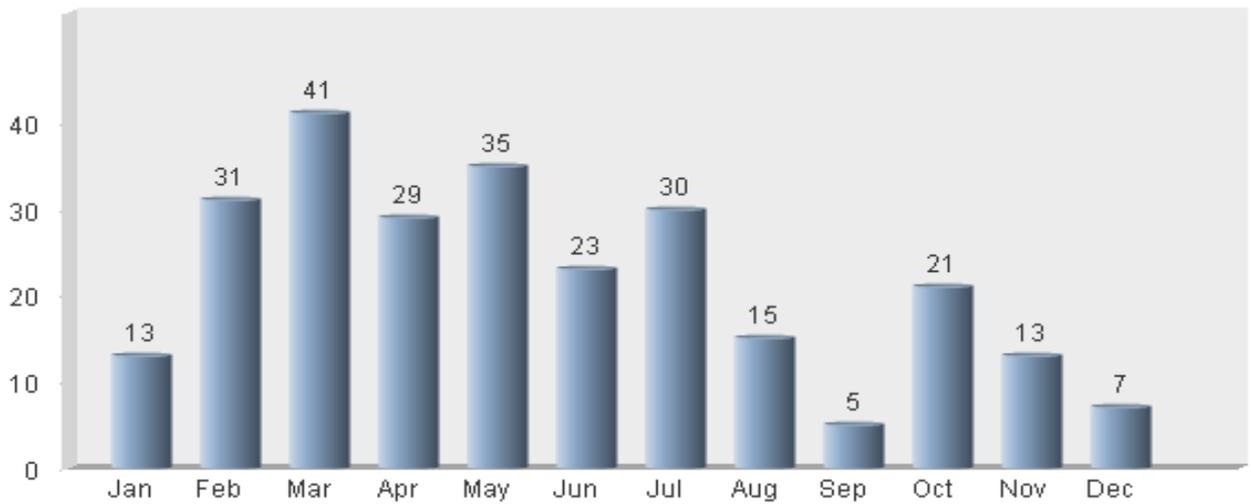
Sightings by Year



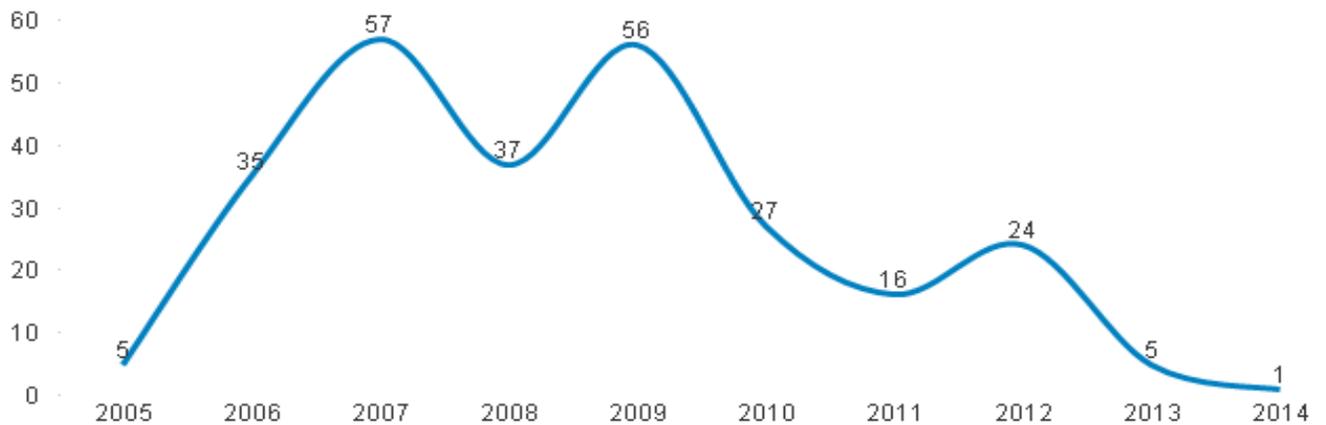
Dartford Warbler

The annual counts during 2005-14 document the arrival and ultimate loss of this species as a county breeding bird. First seen on Cannock Chase in 2004, the subsequent harsh winters of 2012 and 2013, particularly the snow cover in spring, spelt the end for this outlying population. Perhaps persistent egg theft had an impact on the population too. There have been no further sightings from 2015 onwards.

Sighting Counts by Month, 2005 - 2014



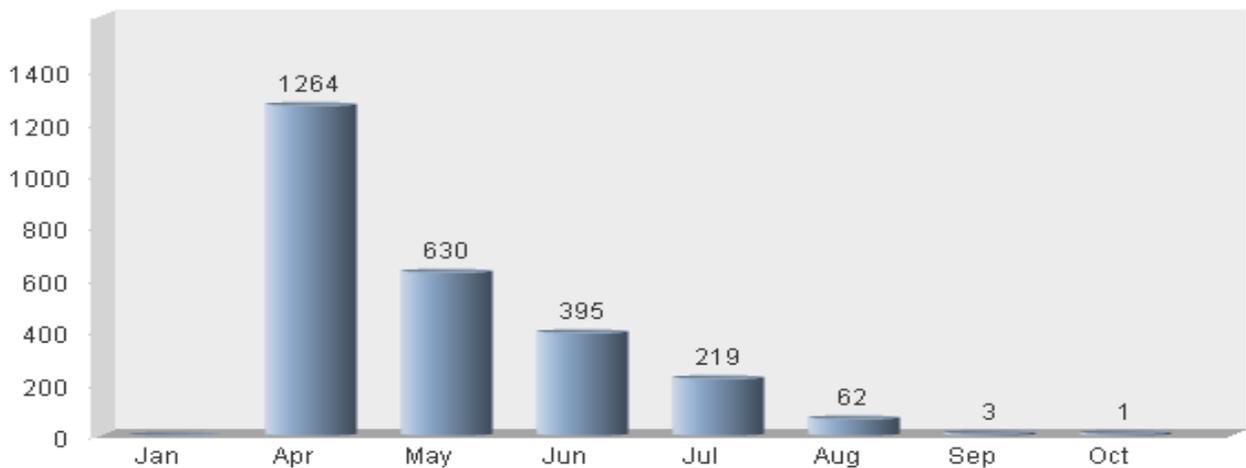
Sightings by Year



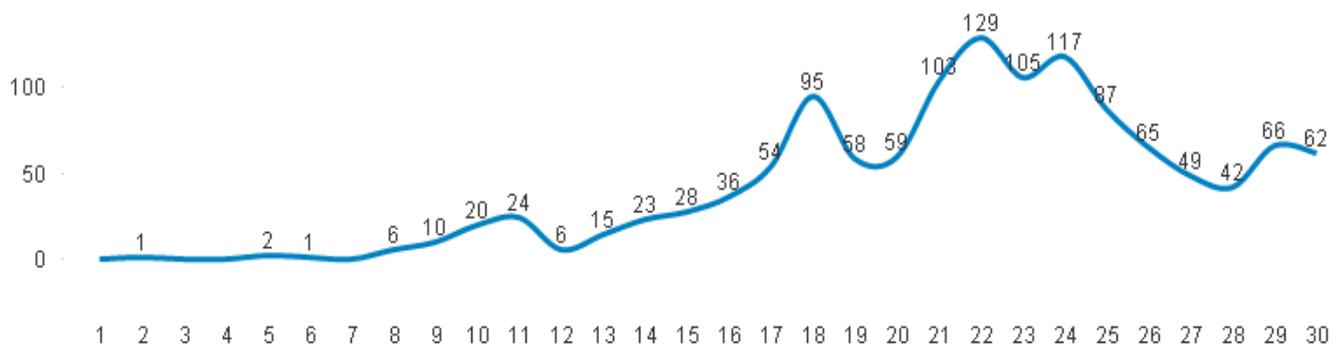
Grasshopper Warbler

The most interesting chart for this species is the annual counts, which show a significant increase in numbers between 2005 and 2011, then a sharp decline in 2012 followed by slight increases thereafter. There were no reasons why the cause of this crash were caused by local conditions, so there must have been some exceptional adverse events on their wintering grounds or during passage which caused the drop in numbers. Birds typically arrive from the second week in April and most appear to be on territory by 21st – 22nd.

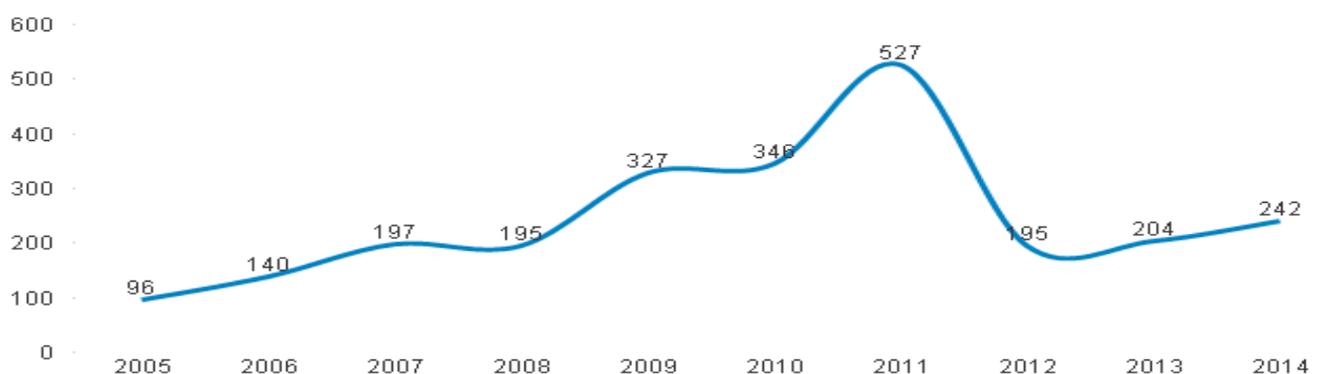
Sighting Counts by Month, 2005 - 2014



April Sightings 2005 - 2014



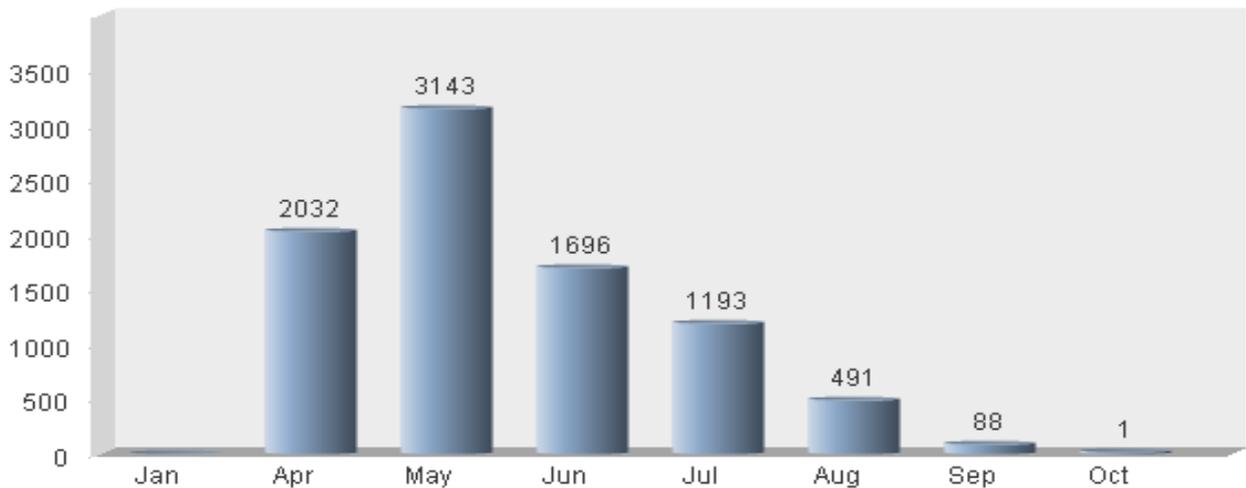
Sightings by Year



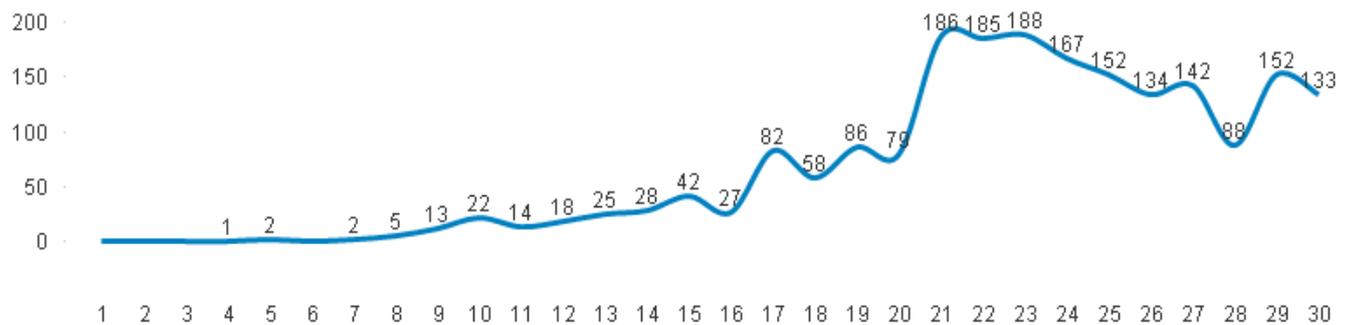
Sedge Warbler

Sedge Warblers start arriving from the second week in April, with most on territory by 21st. The annual records show a fairly static population with peaks in 2009 and 2011.

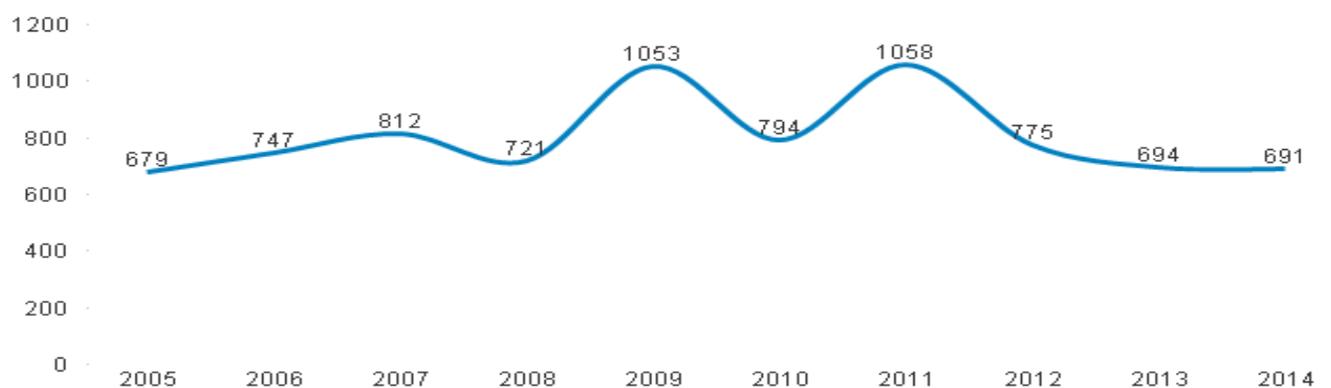
Sighting Counts by Month, 2005 - 2014



April Sightings 2005 - 2014



Sightings by Year



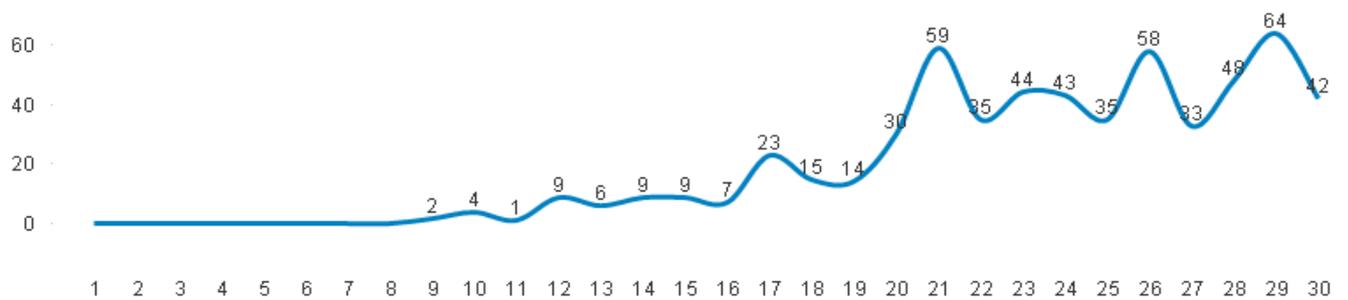
Reed Warbler

The monthly breakdown shows good numbers get recorded well into July. This bird continues to be very vocal throughout the breeding season unlike others. The annual counts display a generally static population until 2011, after which increasing numbers suggest a population expansion. Birds arrive in the second and third week of April with most on territory by the first week in May.

Sighting Counts by Month, 2005 - 2014



April Sightings 2005 - 2014



Sightings by Year

