

An Analysis of Staffordshire Bird Records 2005 – 2014

Waterfowl

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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 Waterfowl species and 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 although duplicate counts from different recorders have been removed. It would take much work to filter all 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 two 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.

2. Commentary on Waterfowl Records

Many of the annual counts for the commoner species show a spike in numbers in 2009. This is due to increased coverage in that year, when many observers took part in the national bird census for the BTO Bird Atlas and should not be interpreted as an actual significant increase. Scarcer species do not show this spike.

A few species where there is little change in numbers have been omitted – such as Mallard and Tufted Duck.

3. Acknowledgements

My thanks go to all recorders who have provided bird records for Staffordshire over the years, enabling this analysis to take place.

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.

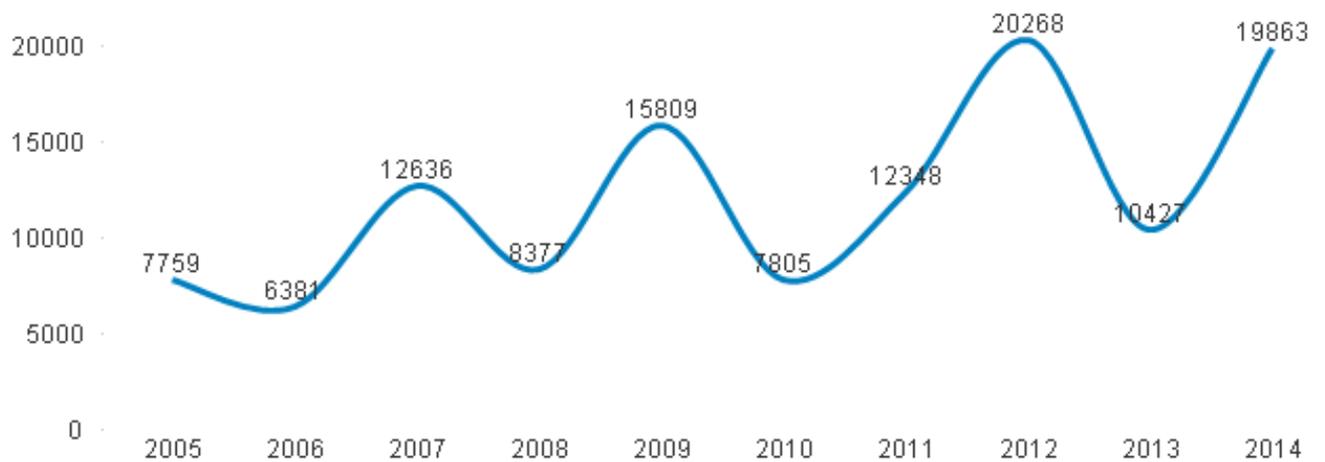
Mute Swan

Unlike most species, Mute Swans are commonest in the summer and winter with dips in the spring and autumn. The annual counts vary quite widely from year to year but do show a general upward trend.

Records 2005 - 2014



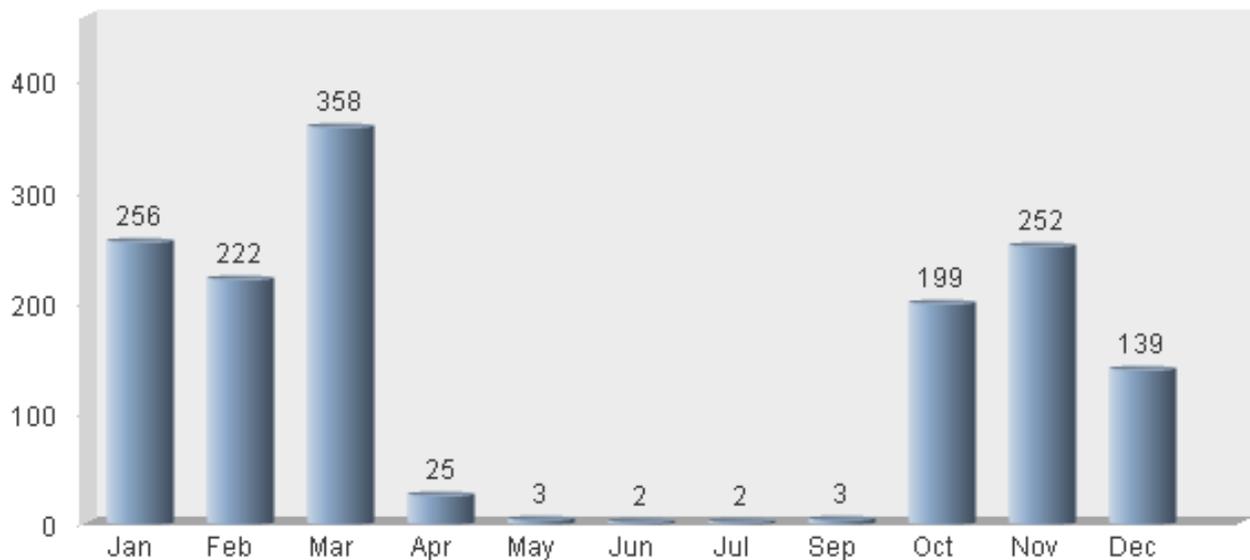
Records by Year



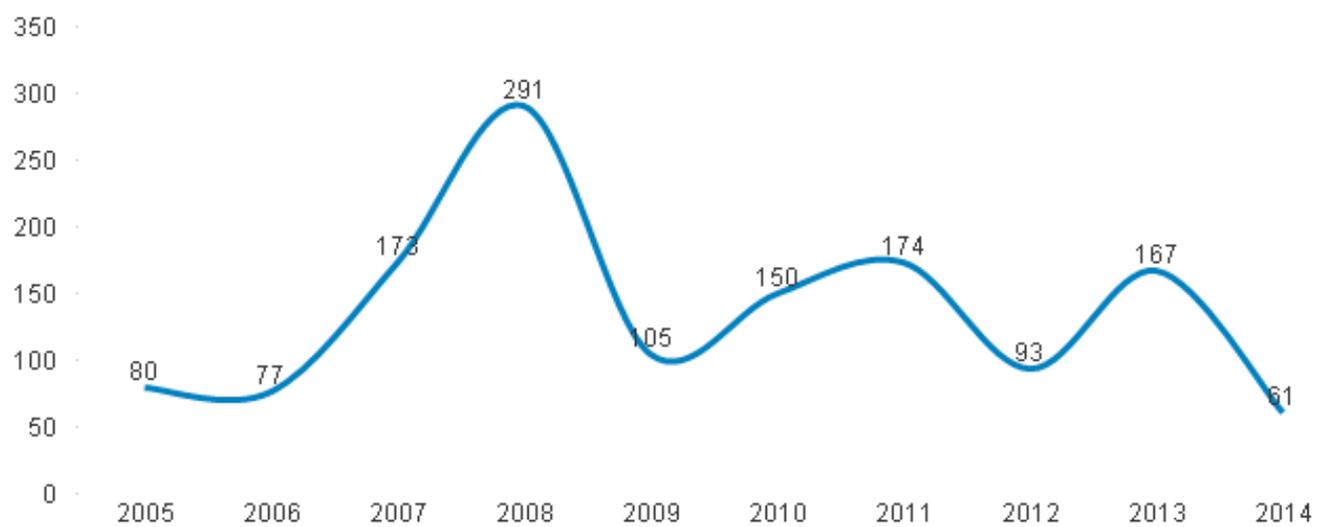
Whooper Swan

Whooper Swans are winter visitors with peak numbers showing in March presumably when migrants are passing through the county back to their breeding grounds. The annual numbers show some variation but appear to be fairly stable overall.

Records 2005 - 2014



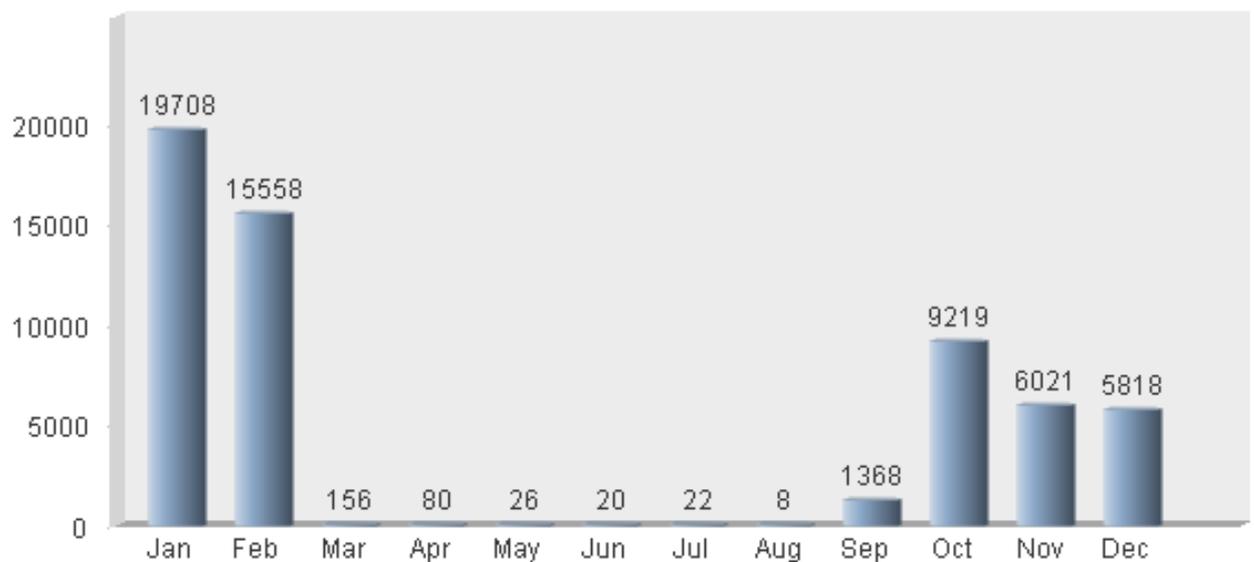
Records by Year



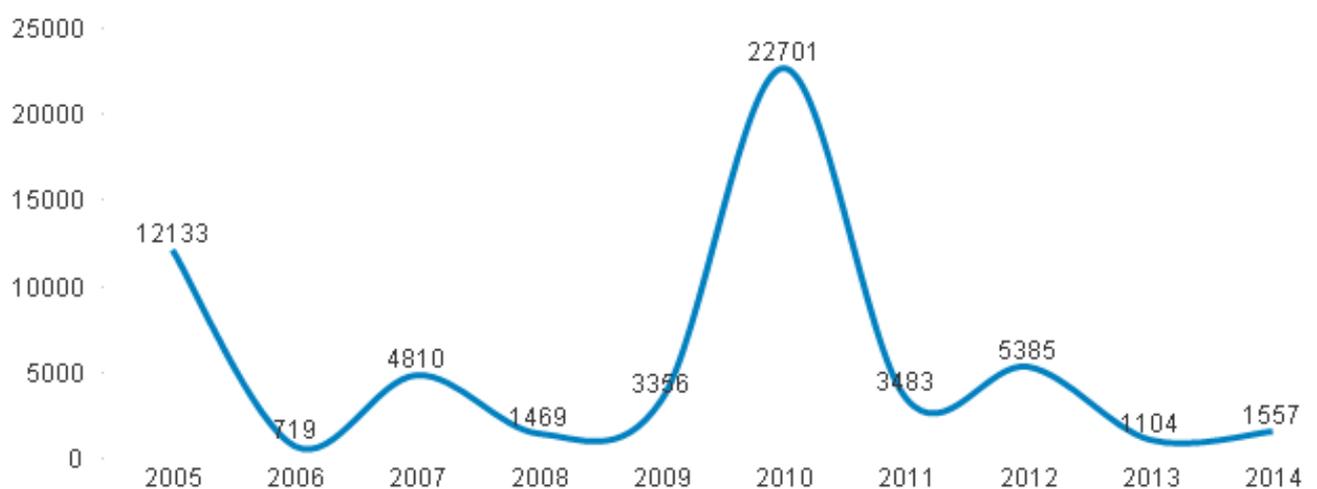
Pink-footed Goose

Large flocks of Pink-footed Geese are only seen flying through the county and are linked to the flyway between their wintering grounds on the Ribble estuary in Lancashire and the North Norfolk area. Birds move between these sites according to weather conditions and as can be seen on the annual counts, this was particularly notable during the very cold winter of 2010.

Records 2005 - 2014



Records by Year



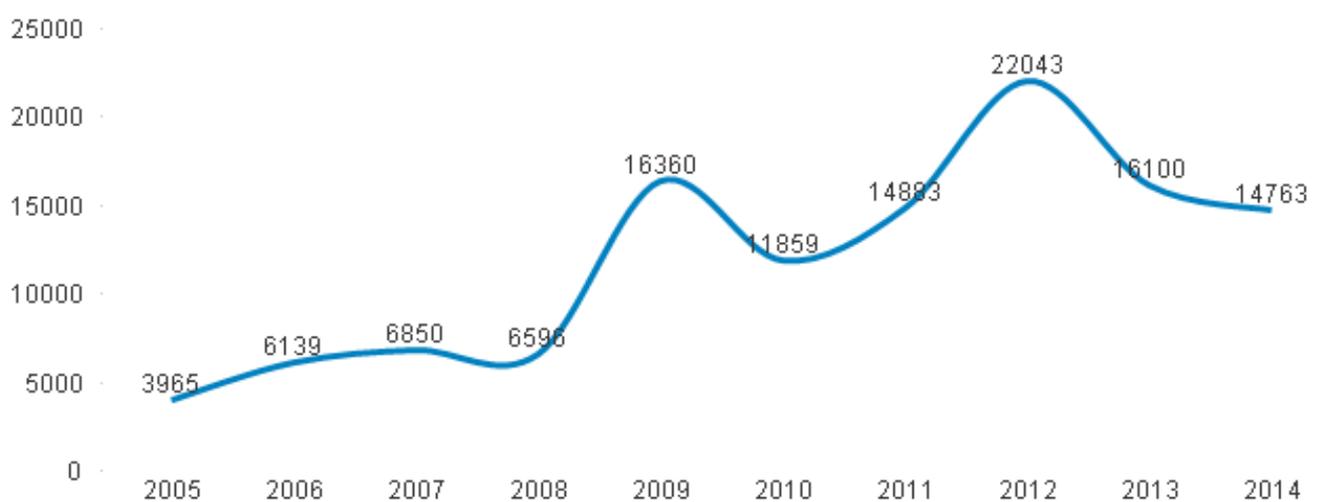
Greylag Goose

The annual chart shows that there has been a general increase in numbers over the period, although this has apparently dropped off in 2013-14. The monthly breakdown shows peak counts during the autumn and winter periods.

Records 2005 - 2014



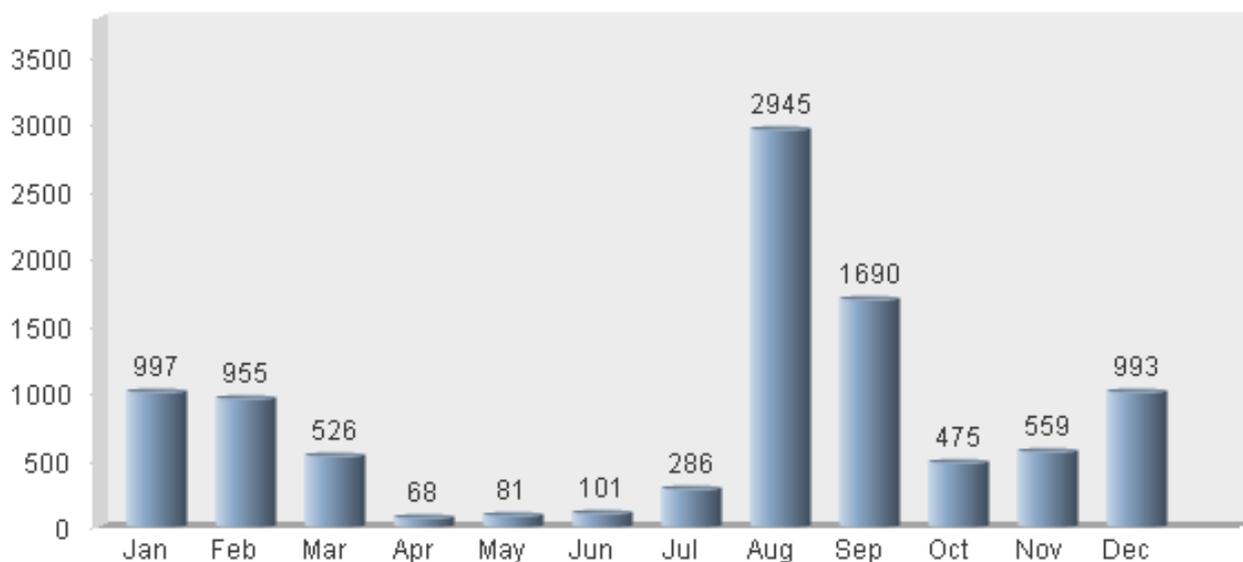
Records by Year



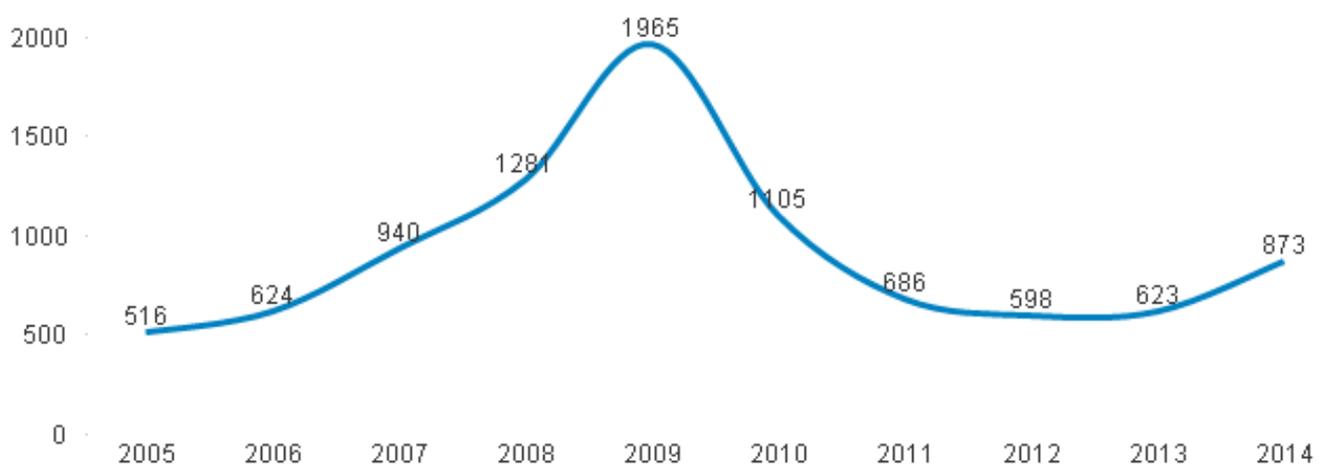
Barnacle Goose

Most Barnacle Geese in the county are from the feral breeding population in Great Britain and there is an appreciable influx immediately after the breeding season in August and September. Annual numbers peaked from 2008-10 before dropping back again.

Records 2005 - 2014



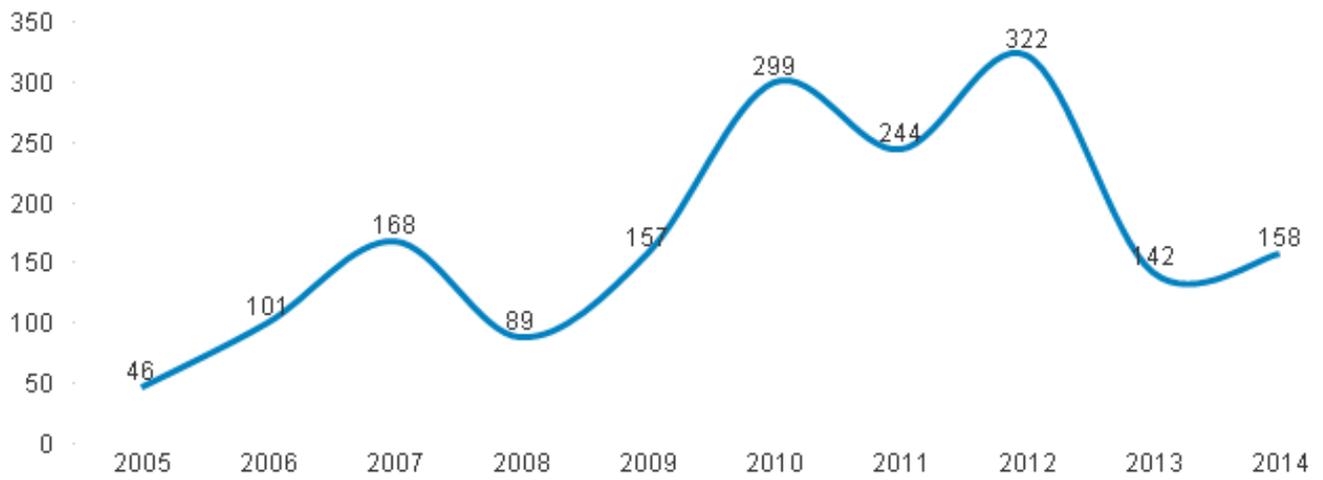
Records by Year



Egyptian Goose

Numbers appeared to be increasing steadily up until 2012, after which they have dropped off, back to the levels of 2007-09.

Records by Year



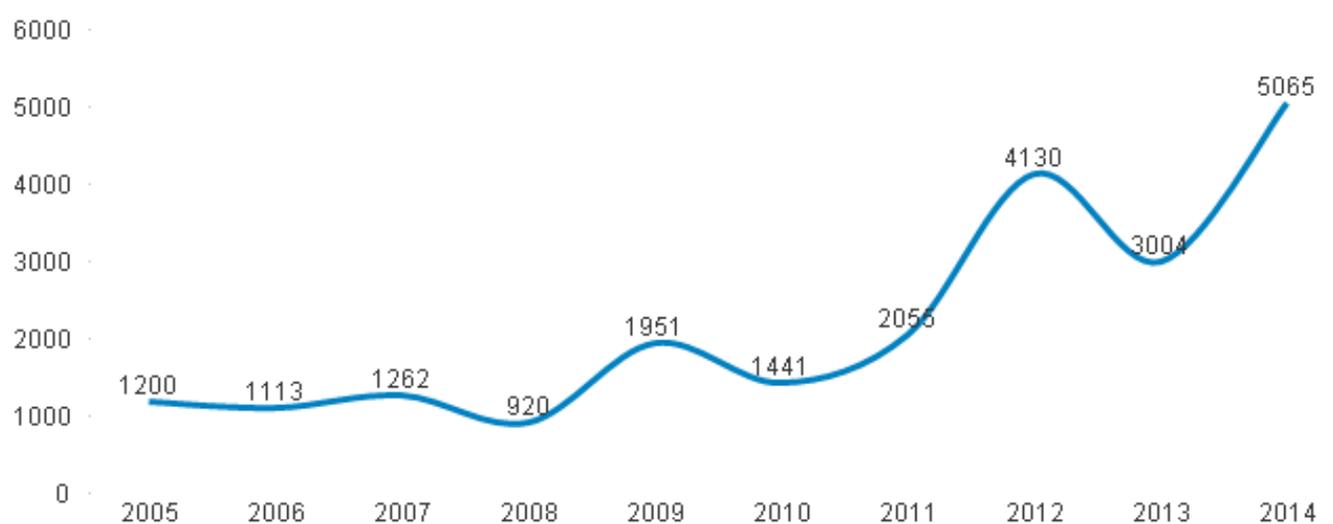
Shelduck

Shelduck numbers have increased considerably during the ten year period and with the highest monthly counts during the breeding period, this suggests the breeding population has also expanded. National research has shown that most adult Shelducks move to coastal waters from July (the Heligoland Bight in Germany and Forth Estuary in Scotland being notable examples), to undertake their annual feather moult, leaving a few adults behind to tend creches of juveniles. This trend is matched in the monthly breakdown, where the autumn population is at its' lowest.

Records 2005 - 2014



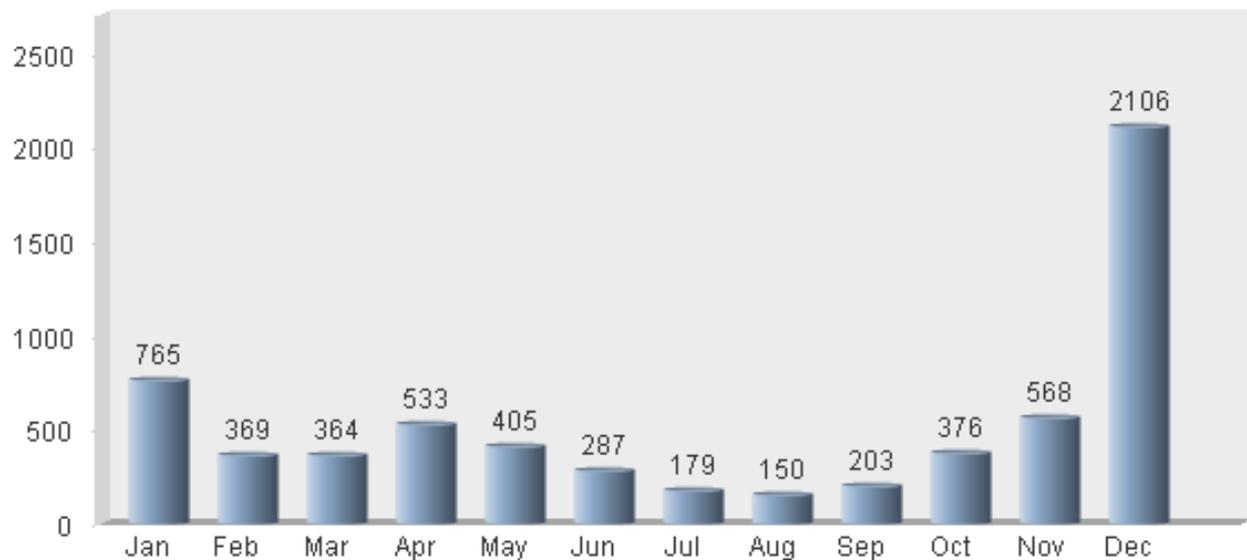
Records by Year



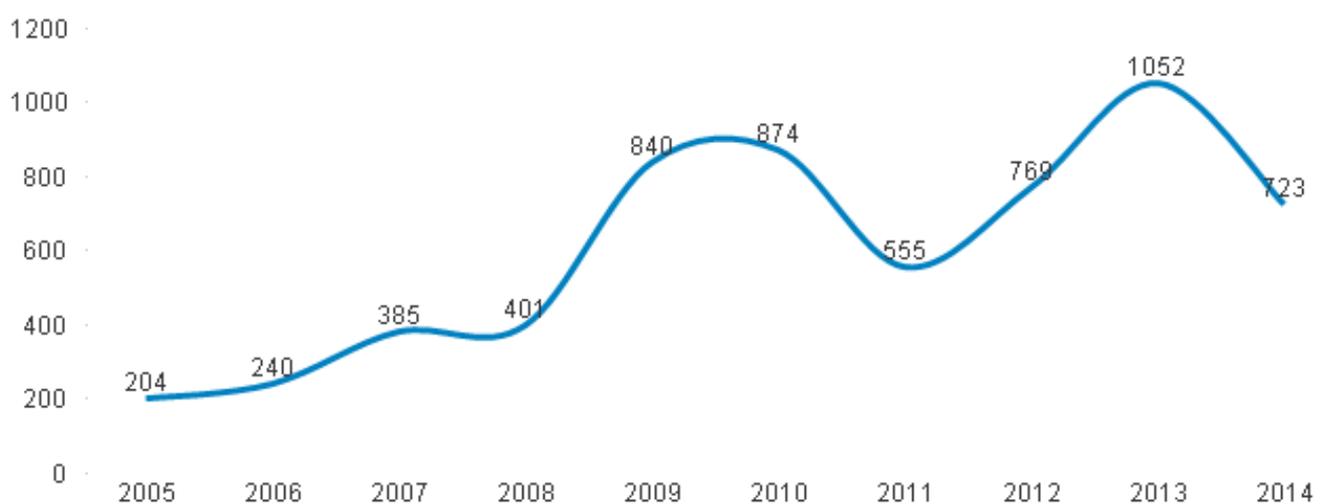
Mandarin

Numbers are noticeably higher in December and this is accounted for by the large numbers found at Brookley's Lake at this time. There appears to be an upward trend in numbers over the first five years, until 2010, after which numbers have, in general, levelled off.

Records 2005 - 2014



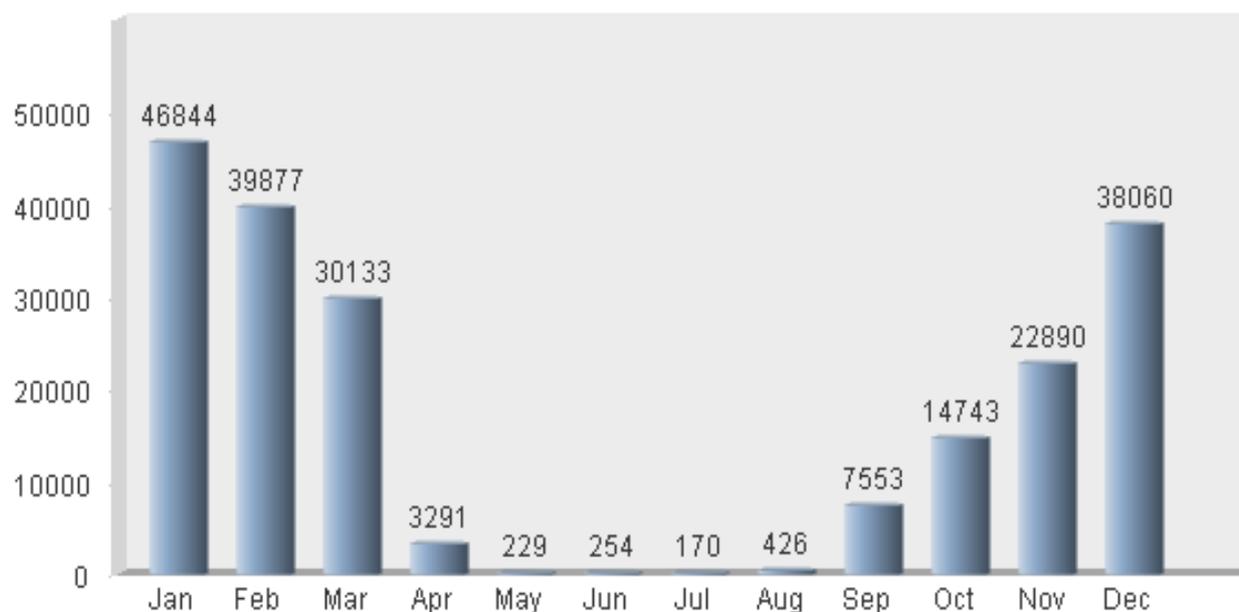
Records by Year



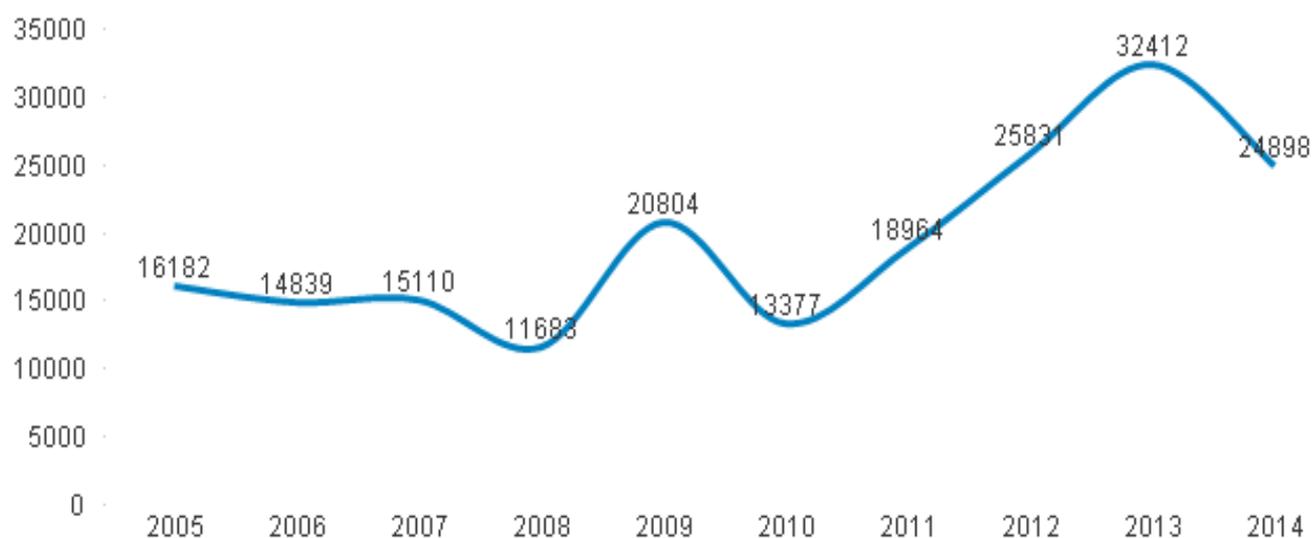
Wigeon

Numbers wintering in the county appear to have increased in the latter half of the period.

Records 2005 - 2014

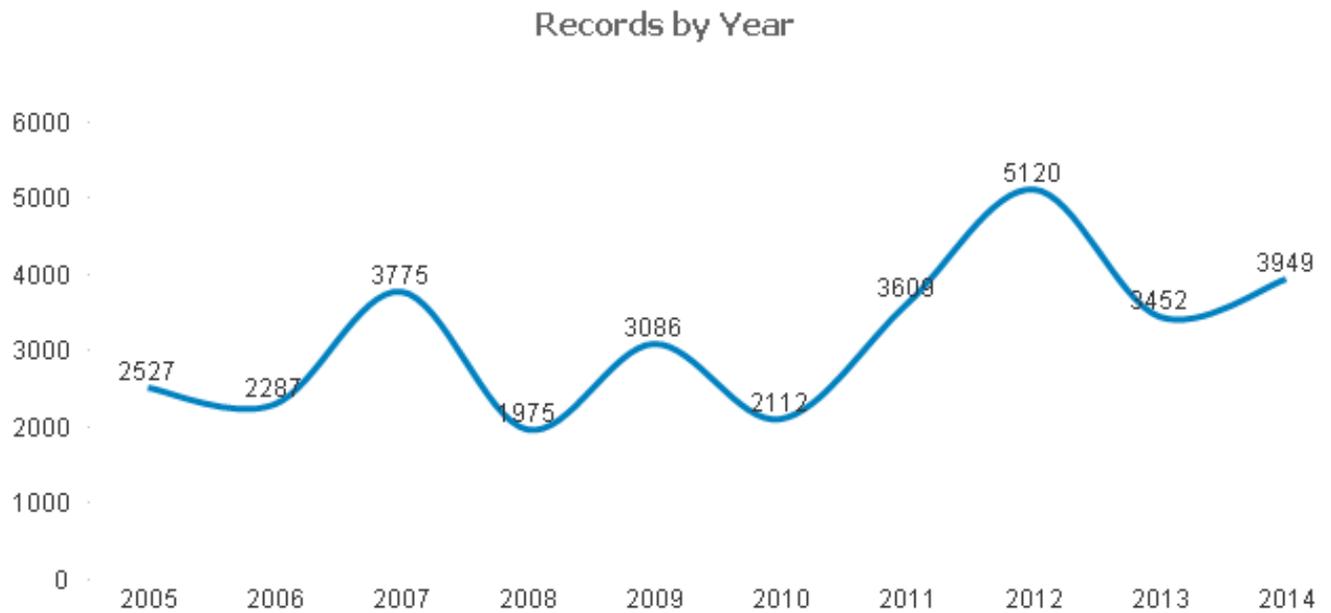


Records by Year



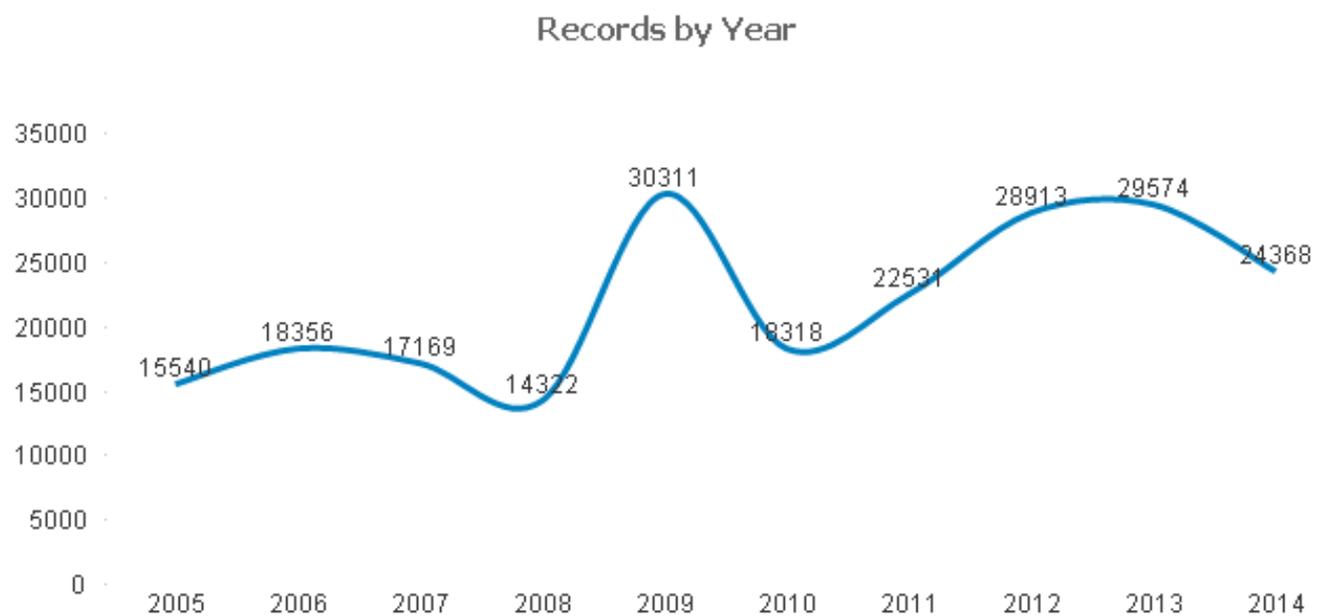
Gadwall

Numbers have fluctuated over the ten year period, but do appear to have increased gradually over the last four of these years.



Teal

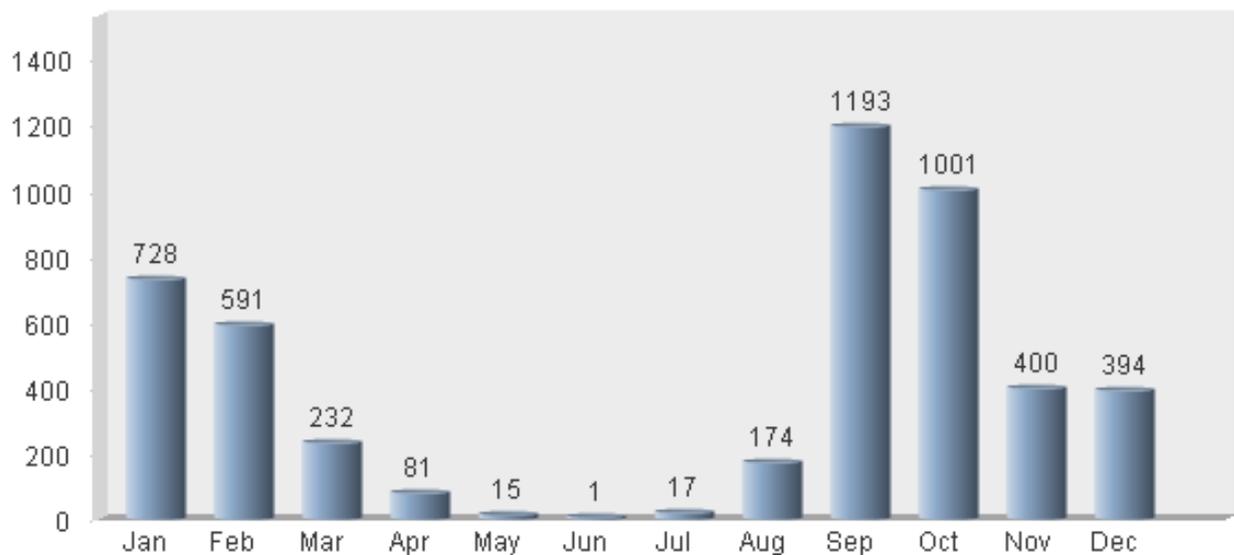
Wintering numbers appear to have increased over the period.



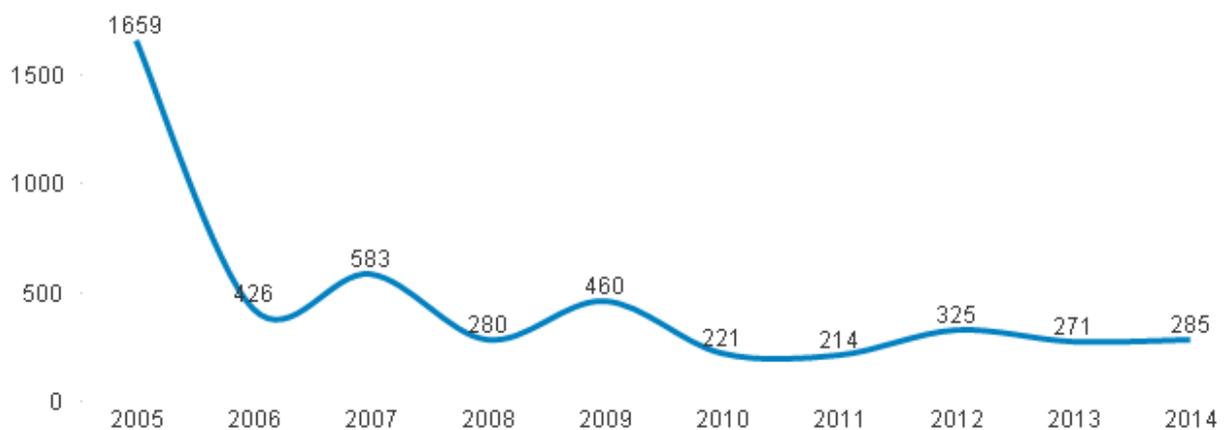
Pintail

Numbers show a general decline over the ten year period, which is in line with the national trend. The monthly distribution shows a peak in the autumn, when migrating birds are passing through to their wintering grounds. Whilst there is a regular winter presence, most of the autumn birds don't linger on.

Records 2005 - 2014



Records by Year



Garganey

Birds are primarily spring and autumn passage migrants, with more in the autumn than in spring. A few occasionally stay and breed.



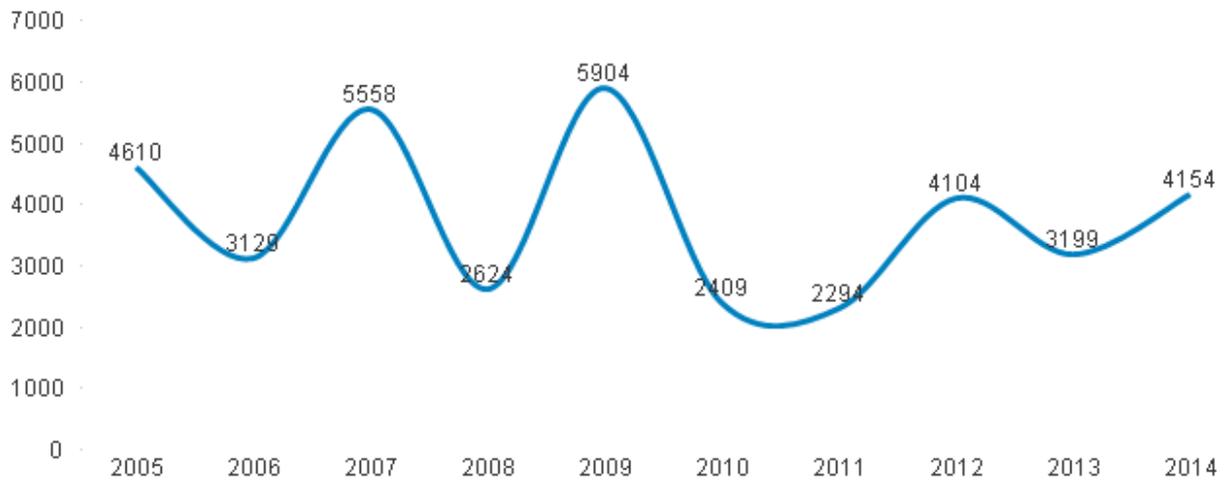
Shoveler

Although numbers vary widely from year to year, there has been no particular change over the ten year period. Numbers are highest in the autumn, particularly September and October.

Records 2005 - 2014



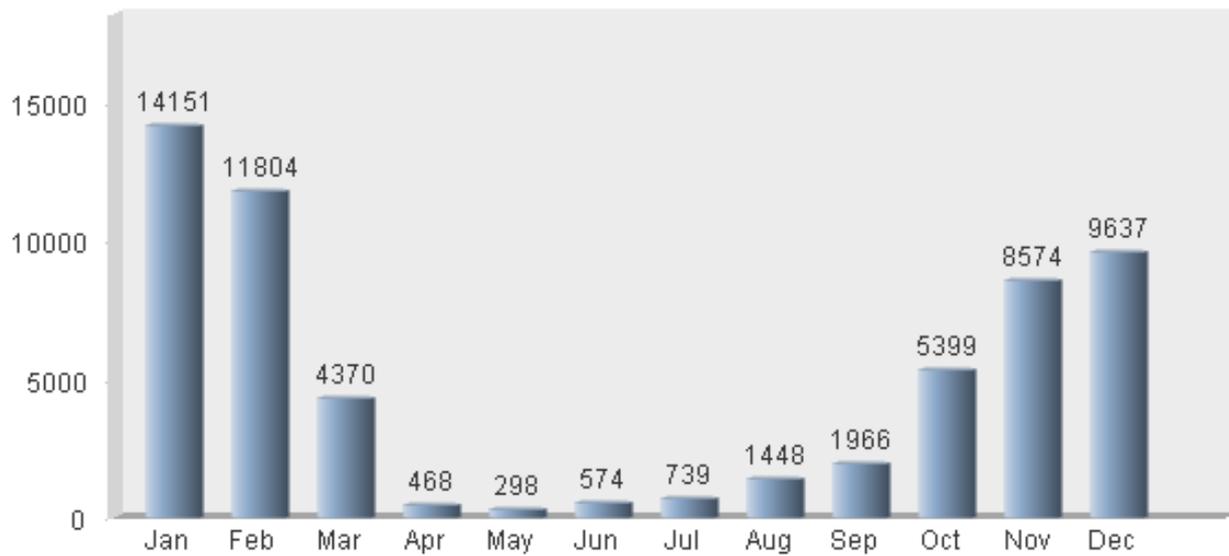
Records by Year



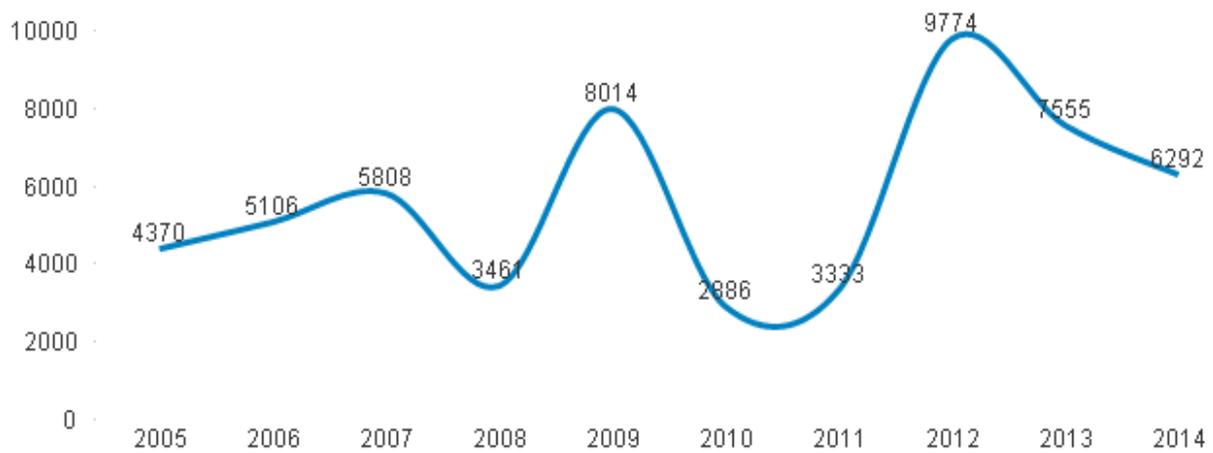
Pochard

Principally a winter visitor, numbers have shown a general increase over the period although they do vary year on year.

Records 2005 - 2014



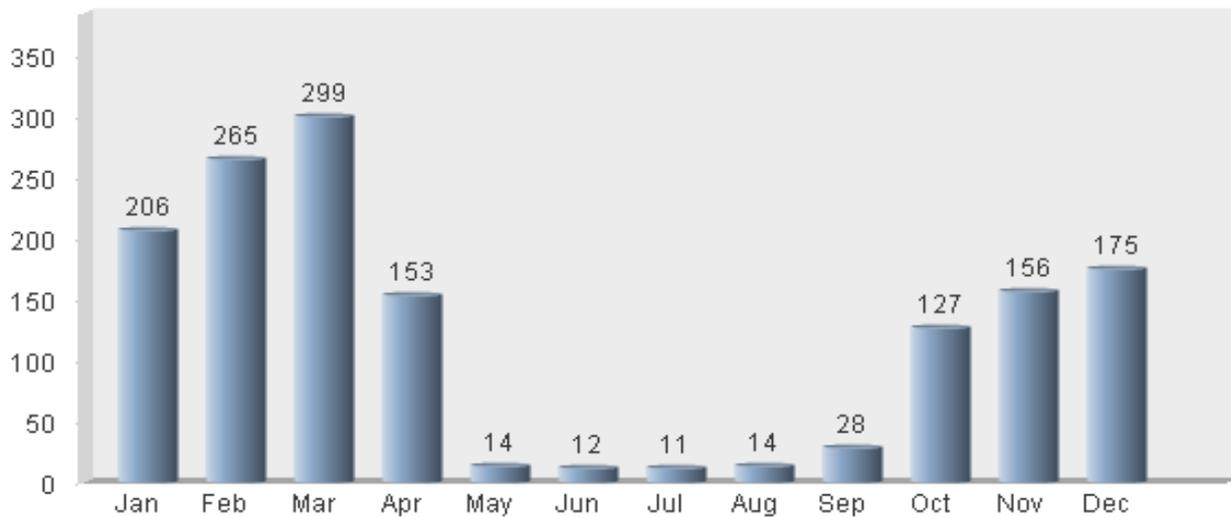
Records by Year



Greater Scaup

This bird is principally a winter visitor although birds have been recorded in all months of the year.

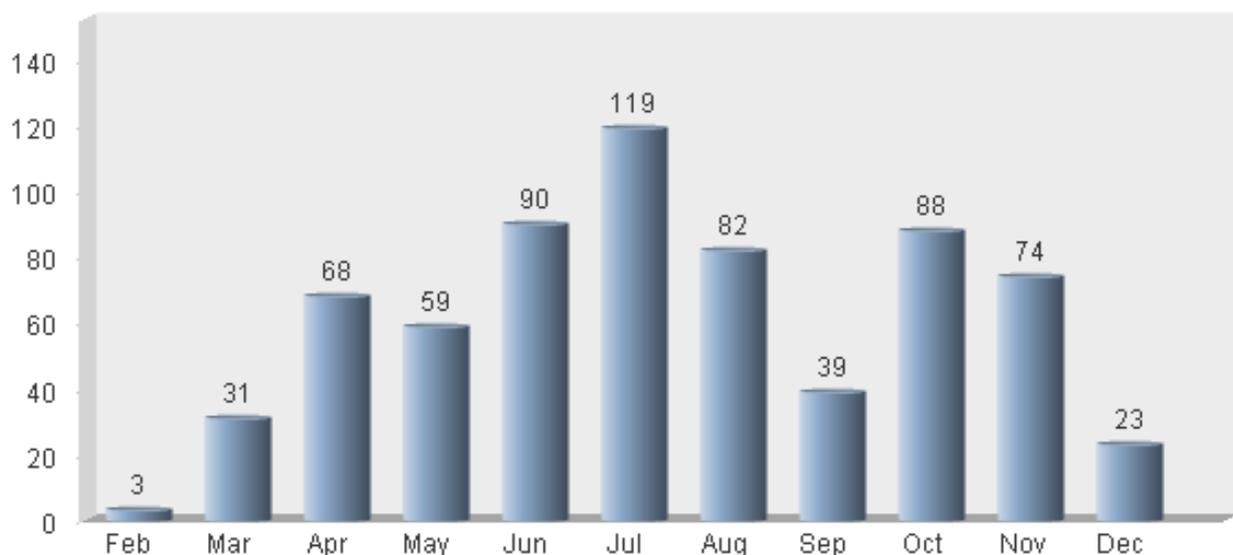
Records 2005 - 2014



Common Scoter

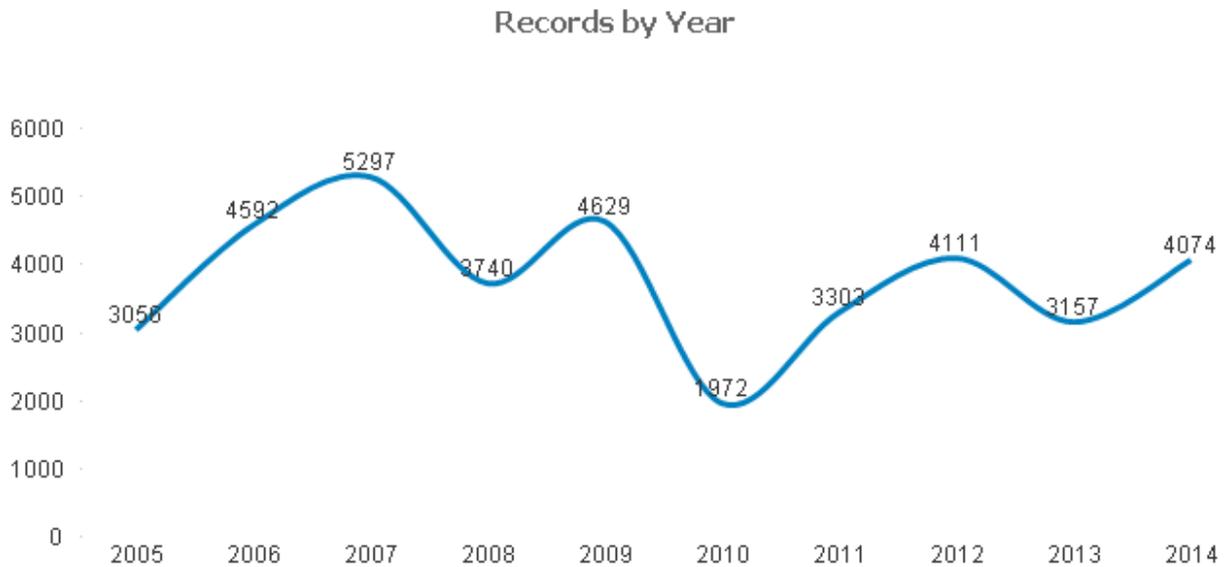
Although this is not a breeding bird in Staffordshire, July holds the highest total count and winter numbers the lowest, with none in January. This is unusual given that the numbers in the UK, especially on the coast, are highest in winter.

Records 2005 - 2014



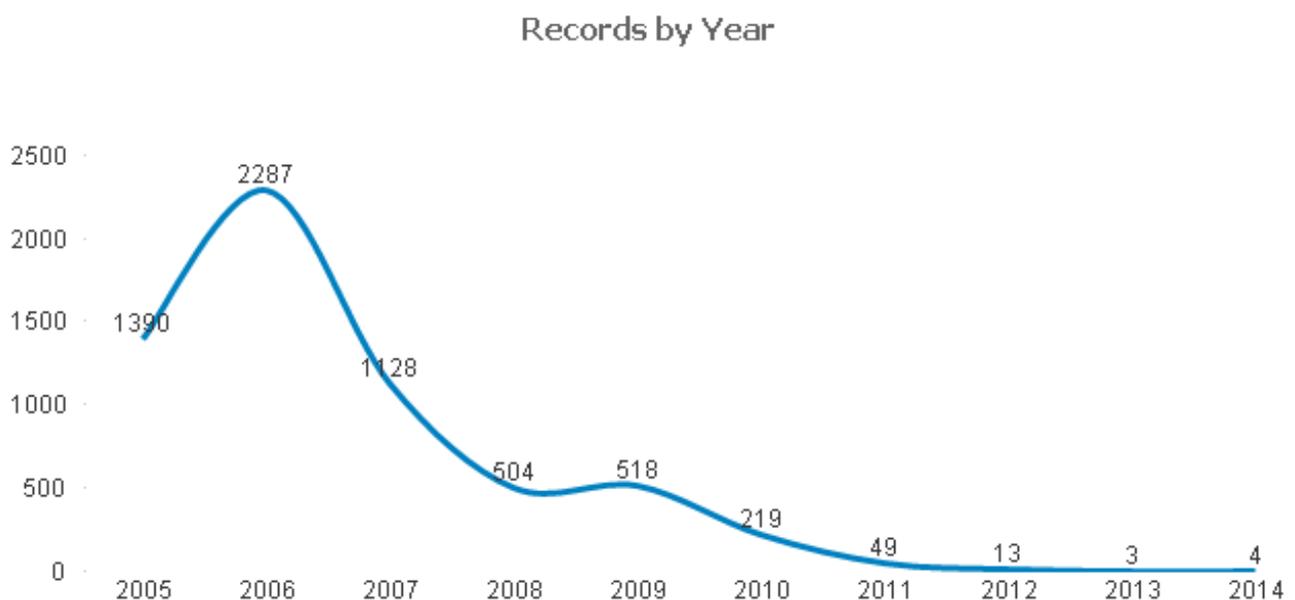
Goldeneye

Numbers of this wintering bird have shown little change over the period other than a drop during the particularly icy winters of 2010 – 11.



Ruddy Duck

The chart vividly displays the result of the national cull of this North American species, authorised to prevent it spreading and hybridising with White-headed Ducks resident in other European countries.



Cormorant

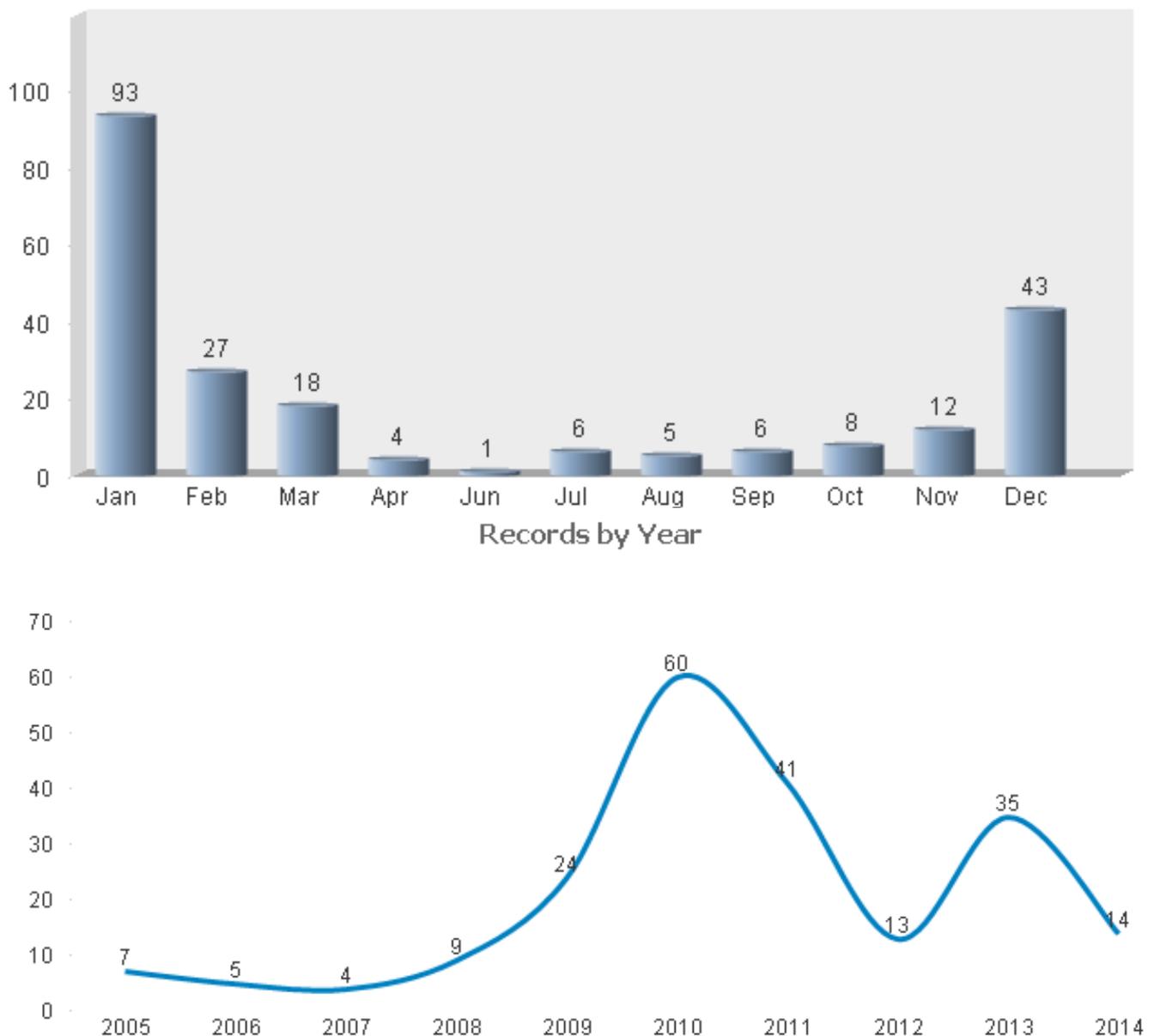
The monthly breakdown shows that this species is commonest in the autumn and that post-breeding dispersal brings good numbers into the county. There has been little change in numbers during the period (chart not shown).



Great Bittern

Annual numbers vary greatly and this is principally due to variation in winter arrivals. In the winter periods birds arrive both from the dispersal of our national breeding population and also from the continent, especially during severe cold spells. This is nicely reflected in the largest counts occurring during the very cold winters of 2010 and 2011.

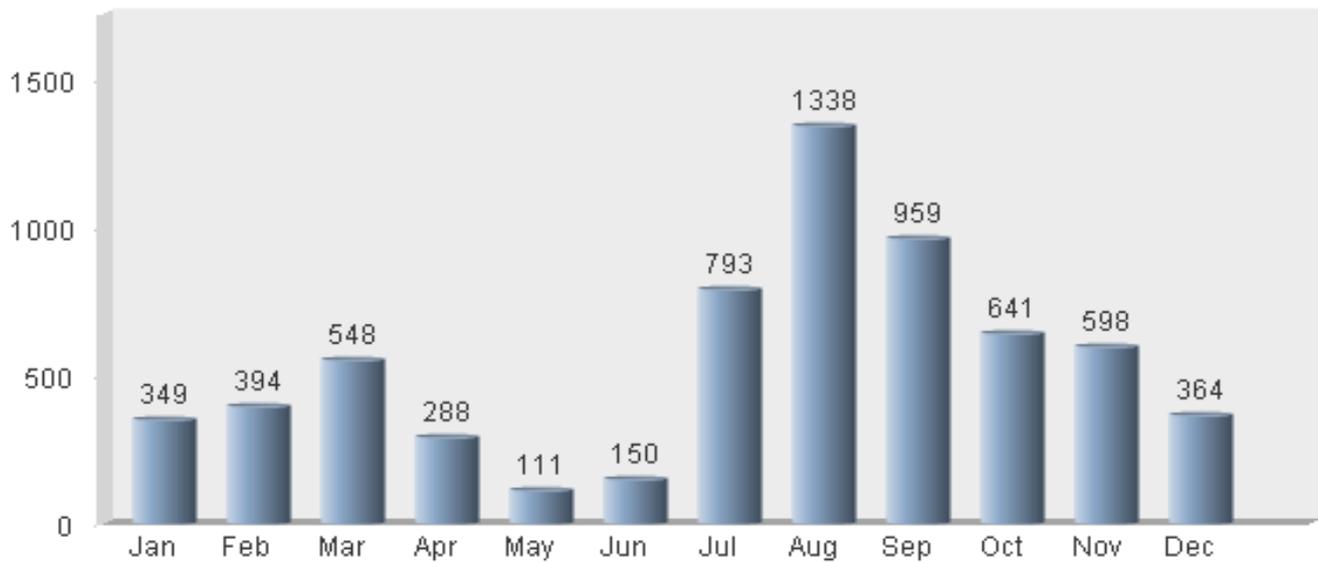
Records 2005 - 2014



Little Egret

The annual chart shows the rapid rise in numbers in the county and it surely remains a matter of time before we have our first breeding birds. Peak numbers occur in the autumn

Records 2005 - 2014

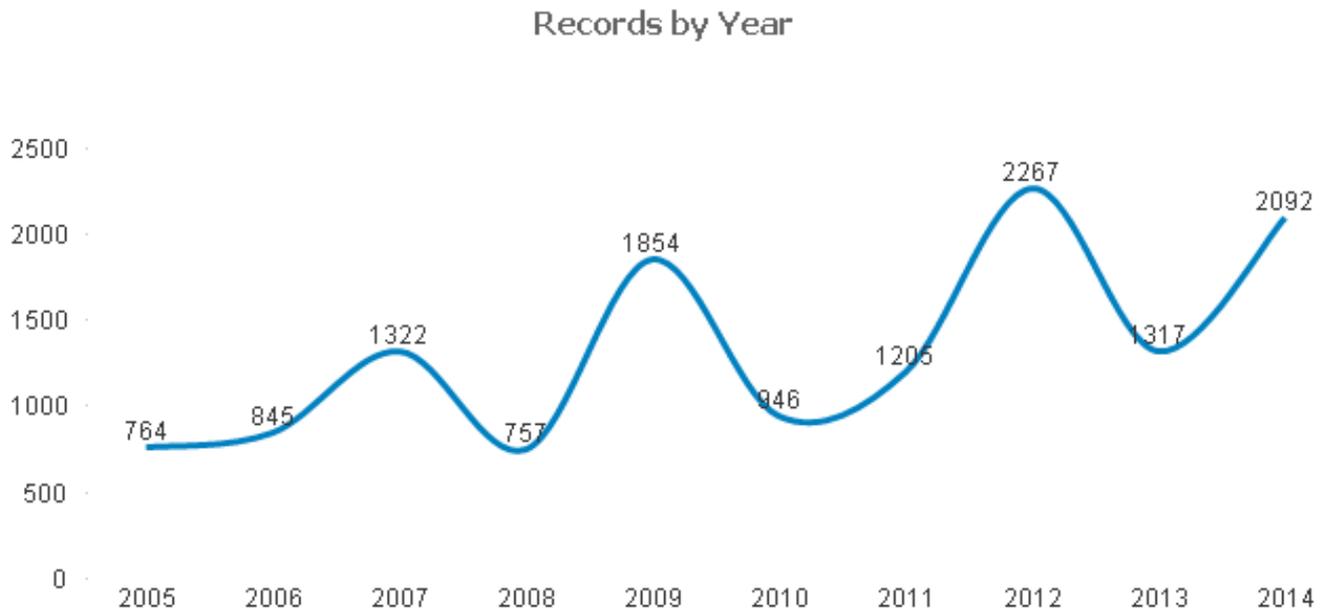


Records by Year



Little Grebe

Annual numbers appear to have increased over the period



Great Crested Grebe

The variation in annual counts is almost the same as for Little Grebe. Numbers appear to be increasing.

