Applied Data Science Capstone Project

1. Introduction

1.1. Background

Birdwatching is becoming one of the main recreational activities in the UK, Netherlands, Denmark, France and Sweden[1]. In the USA, the activities related to birdwatching and bird photography have been found the most persistent growth rate form of recreational activity (from 1982 to 2009 287%)[2]. For 2016, the number of bird-watching people in the USA has grown up to 45.1 million (including trips devoted to birdwatching, 16.3 million). Also, economic sectors in Europe and North America, which are related with birdwatching services, ~~in~~ have been showing one of the strongest and steadiest growth rates during last decades.

1.2. Problem

One of the main objectives of birdwatchers is to see during their trips as many species as possible. Due to this, the aim of this capstone project is to provide an analytical overview of the main target locations of birdwatchers in England and Wales at counties level and to analyse whether the pattern of the species observed differs from one another.

The gain of this exercise will be to assist birdwatchers´ to plan their birdwatching trips to see as many different species as possible by choosing the trip road through the maximum different counties (or choosing the trip to the county that is most different comparison their home county). Thereby achieving the best satisfactory result from their trip.

Another goal is to provide an overview of whether the species pattern changes with connection with the increase in the number of observations.

1.3. Target audience

In the context of this exercise, the target audience is either the British birdwatchers, or birdwatchers from other countries who are planning the birdwatching trips to England or Wales.

[1] CBI Ministry of Foreign Affairs. (2013). CBI Product Fact Sheet.
[2] H.K.Cordell, G.T. Green, and C.J. Betz (2009). Long-Term National Trends in Outdoor Recreation Activity Participation. USDA Forest Service.

2. Data

2.1. Data sources

Instead of Foursquare, this work relies on very similar the xeno-canto API. There are observations instead of a venue and instead of a venues category there are name of species in the xeno-canto. The more precise description is available on the web page: https://www.xeno-canto.org/article/153.

Reason why the different API is used is to understand and acquire the course material better (and likewise the example work added to 5th week ("Predicting the Improvement of NBA players", Zhenfeng Liu, October 18, 2018) doesn't use also Foursquare).

A geographic information system ArcGIS is also used – to retrieve England and Wales counties names that correspond the coordinates retrieved from the xeno-canto.

For marking counties borders, the GeoJSON file from the web page https://data.gov.uk/dataset/d6f97a1a-25dc-485c-9af3-0e5681465d77/counties-and-unitary-authorities-december-2016-full-clipped-boundaries-in-england-and-wales have been used.

From xeno-canto database during the current analysis the following features/data fields have been used:

- **id:** the catalogue number of the recording on xeno-canto
- **en:** the English name of the species
- **loc:** the name of the locality
- **lat:** the latitude of the recording in decimal coordinates
- **lng:** the longitude of the recording in decimal coordinates
- **time:** the time of day that the recording was made
- **date:** the date that the recording was made

2.2. Data cleaning

The original database (were restriction as United Kingdom as country was replaced), retrieved from the xeno-canto have sample with 26706 observations. For this data, it was possible to find a county match through the ArcGIS in the case of 18319 observations. For some reason, the ArcGIS was unable to locate the location counties in the rest of the observations.

The next stage was data extraction from the xeno-canto *loc* field to find additional data about location county and matching results with England and Wales counties list. Thereupon after removing missed values a final sample remained for analysis consist of 23782 observations.

3. Methodology

Data visualisation and k-means clustering from the machine learnings side have been used in the current exercise to follow the course materials.

Visual data exploratory data analysis is presented in paragraph 4. To analyse difference between the counties bird species pattern and look whether these differences are rather due from number of

observations in counties or for example geographical location, result of k-means clustering on the counties level are presented and geographically visualised in paragraph 5.

4. Data Description

There are 266 unique species in a final sample. As expected, most observations (recordings) have been made in the morning (see following Figure 1).

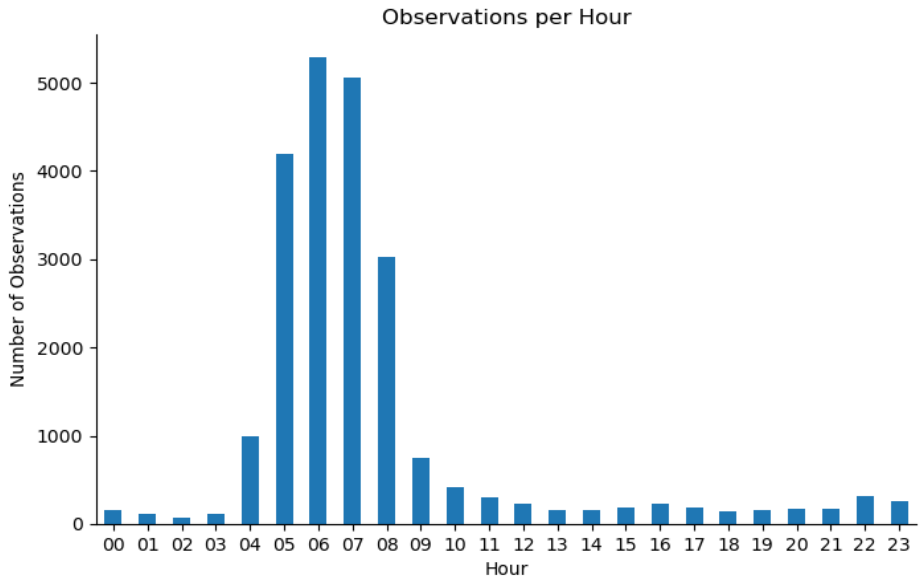

FIGURE 1 DAILY DISTRIBUTION OF OBSERVATIONS (RECORDINGS)

Also, in line with expectations, most observations (recordings) have been made in the spring (see following Figure 2).

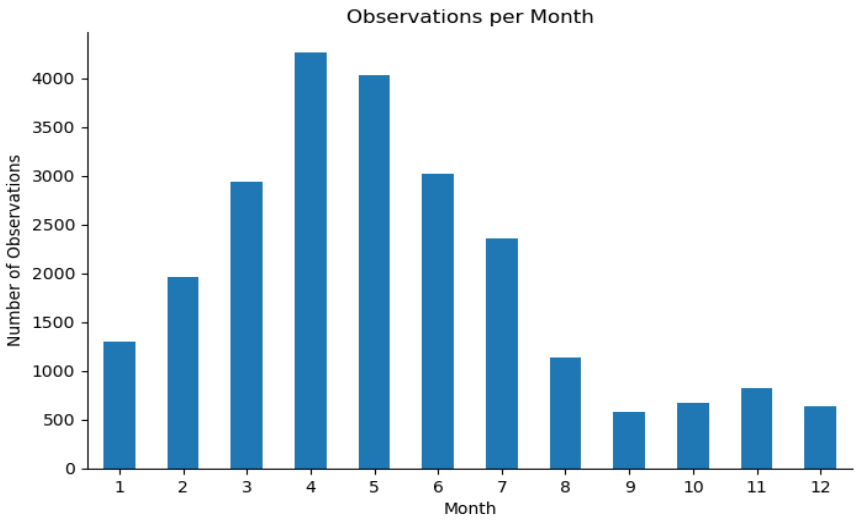

FIGURE 2 YEARLY DISTRIBUTION OF OBSERVATIONS (RECORDINGS)

However, the distribution of observations between counties is extremely uneven (see following Figure 3 and 4). Unfortunately, that makes the problem solution of the current exercise (marked in section 1.2) quite fragile and questionable.

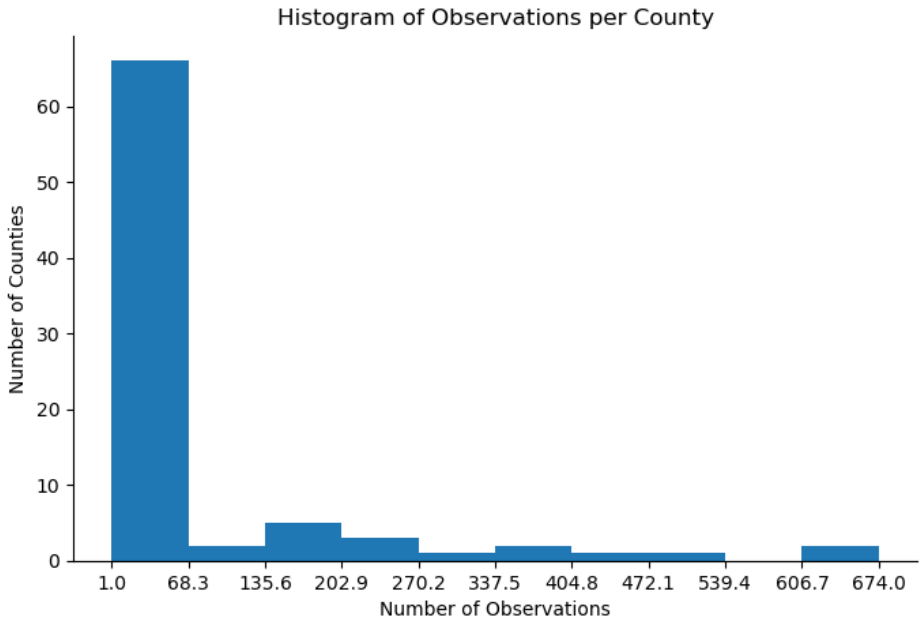

FIGURE 3 HISTOGRAM OF OBSERVATIONS (RECORDINGS) PER ENGLAND AND WALES COUNTIES. NORTH YORKSHIRE COUNTY ARE EXCLUDED FROM HISTOGRAM AS IT HAVE 17781 OBSERVATIONS OUT OF 23782 (TOTAL NUMBER) AND SO SIGNIFICANTLY OUT OF RANGE.

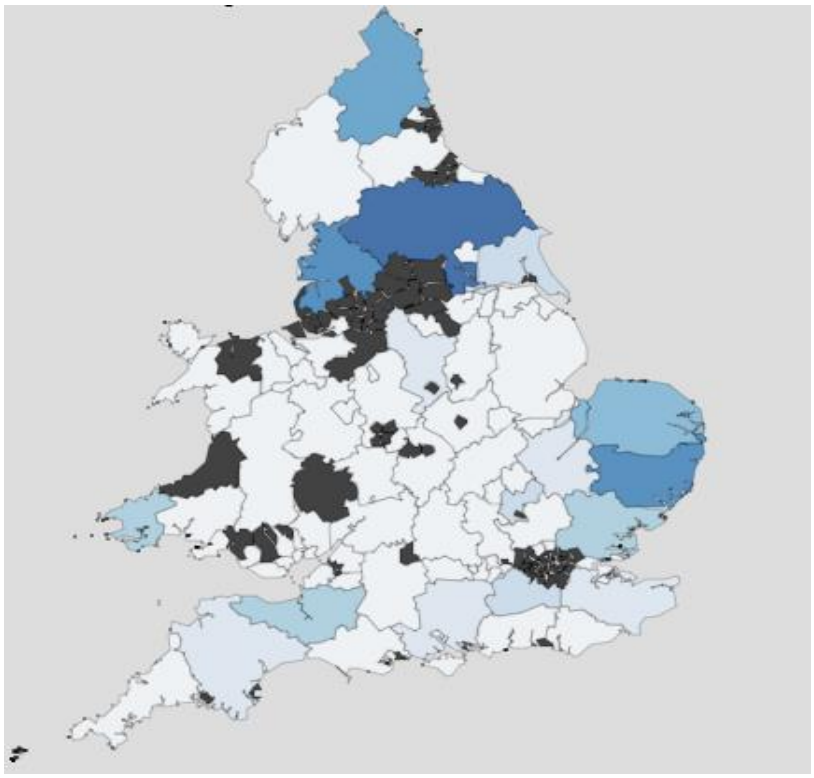

FIGURE 4 GEOGRAPHICAL DISTRIBUTION OF OBSERVATIONS (RECORDINGS) PER ENGLAND AND WALES COUNTIES. DARKER BLUE MARKED MORE RECORDINGS PER COUNTY. BLACK MARKED COUNTY WITH MISSING OBSERVATIONS.

5. Results

To analyse difference between the counties bird species pattern and look whether these differences are rather due from number of observations in the counties or for example the geographical location, the England and Wales counties divided into five clusters using k-means clustering. A result is presented in the following figure 5.

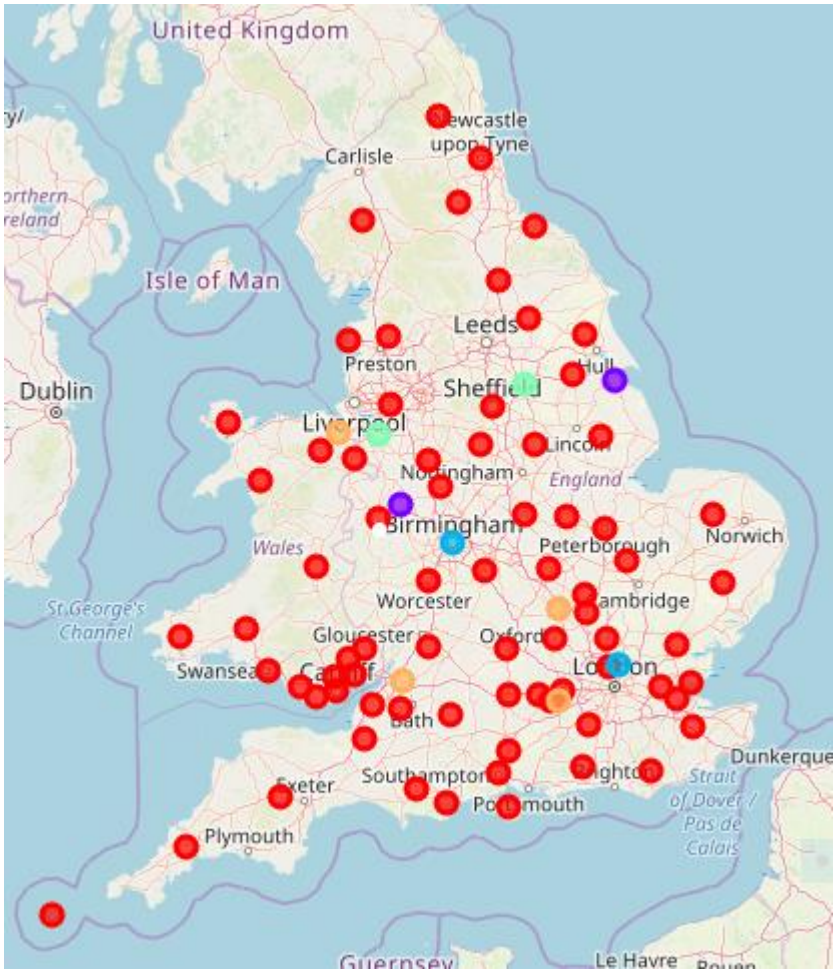

FIGURE 5 GEOGRAPHICAL PRESENTATION THE ENGLAND AND WALES COUNTIES DIVIDED ON FIVE CLUSTERS ON THE BASIS OF OBSERVED (RECORDED) BIRD SPECIES PATTERN.

As shown in figure 5, there is no remarkable distinction between the counties (in recorded bird pattern), based on geographical location doesn't emerged.

If to compare figure 5 and figure 4 it can be seen that no remarkable correlations between the number of recording per county and the observed bird pattern doesn't also emerged.

74 of the 84 counties (where we have a data) belonged to the first cluster. Two counties belonged to the second, third and fourth cluster and four counties belonged to the fifth cluster. The counties which belonged to the second or fifth cluster having only one observation (recording) per county. Therefore, it is possible to mark them as the outliers. A similar assessment is also valid for the third and fourth cluster, where is only two or three observations (recording) per county.

If to look the cluster species pattern (see appendix), then all clusters described similarly by birds which are broadly rather common to cultural landscape.

Reason of that kind results is probably quite uneven distribution of the observation per counties which is described in figure 3.

6. Discussion

The main result of current exercise is that despite representative overall number of recordings in xeno-canto database according England and Wales, the distribution of these recordings on counties level is too uneven to analyse difference between those counties.

Therefore, the main recommendation emerged of the current exercise is to use in further analyses about difference between England and Wales (or as the United Kingdom as whole) counties birds species pattern other public science open databases (which is also possible to find). The other recommendation is if to limit this exercise only in the counties level, it can be restrictive. If it possible to find a geoJSON file which describe rather borders between natural/ecological landscapes, it will be probably more useful.

7. Conclusion

The gain of this exercise was to assist birdwatchers´ to plan their birdwatching trips, by analysing difference between bird species pattern between the England and Wales counties. Another goal was to analyse whether the species pattern changes with connection with the increase in the number of observations.

For this purpose, the public science open database xeno-canto API was used. The GeoJSON file from the web page https://data.gov.uk/dataset/d6f97a1a-25dc-485c-9af3-0e5681465d77/counties-and-unitary-authorities-december-2016-full-clipped-boundaries-in-england-and-wales was used for marking counties borders.

After data cleaning a final sample remained for analysis consisted of 23782 observations (recordings). Data visualisation and k-means clustering from machine learnings side was used to follow course materials in current exercise

As exercise result, no remarkable distinction between counties (in recorded bird pattern), based on geographical location doesn't appeared. Also, no remarkable correlations between the number of recording per county and the observed bird pattern doesn't emerged. If counties divided into clusters, vast majority of counties belonged to one cluster. Other clusters describing rather sample outliers. If to look the cluster species pattern, then all clusters described similarly by birds which are broadly rather common to the cultural landscape. Reason of that kind results is probably quite uneven distribution of the observation per counties which is described in figure 3.

The main result of the current exercise is that despite representative overall number of recordings in the xeno-canto database according England and Wales, the distribution of these recordings on the counties level is too uneven to analyse difference between those counties.

PLEASE NOTE: If you find that the methodology or results are not clearly stated and explained, the discussion or conclusion have some problem or similar – please give me feedback on this regard. Thank you!

Appendix: England and Wales counties observed bird pattern clusters and most common birds of them

County	Cluster Labels	1st Most Common Species	2nd Most Common Species	3rd Most Common Species	4th Most Common Species	5th Most Common Species	6th Most Common Species	7th Most Common Species	8th Most Common Species	9th Most Common Species	10th Most Common Species	11th Most Common Species	12th Most Common Species	13th Most Common Species	14th Most Common Species	15th Most Common Species	16th Most Common Species	17th Most Common Species	18th Most Common Species	19th Most Common Species	20th Most Common Species
Norfolk	0	Common Blackbird	Common Swift	Western Barn Owl	Long-eared Owl	Woodlark	Common Chiffchaff	Eurasian Blackcap	Pink-footed Goose	Water Rail	Yellowhammer	Common Chaffinch	European Goldfinch	Great Tit	Common Redshank	Eurasian Collared Dove	Eurasian Wren	Identity unknown	Spectacled Warbler	Cetti's Warbler	Parrot Crossbill
Kent	0	Identity unknown	Eurasian Blackcap	Common Whitethroat	European Green Woodpecker	Stock Dove	Corn Bunting	Grey Partridge	Water Rail	Common Chiffchaff	Soundscape	Iberian Chiffchaff	Yellowhammer	Red Crossbill	Eurasian Jay	Common Nightingale	Mediterranean Gull	Common Redshank	Common Kingfisher	Eurasian Skylark	Lesser Spotted Woodpecker
Essex	0	Song Thrush	Identity unknown	Great Tit	European Robin	Eurasian Blackcap	Common Chiffchaff	Eurasian Magpie	Common Nightingale	Common Blackbird	Eurasian Blue Tit	Eurasian Wren	House Sparrow	Cetti's Warbler	Garden Warbler	Eurasian Wigeon	Eurasian Skylark	Eurasian Reed Warbler	Common Wood Pigeon	Little Grebe	Common Whitethroat
Suffolk	0	Black-headed Gull	Soundscape	Common Linnet	Pied Avocet	Bearded Reedling	Canada Goose	Common Ringed Plover	Common Shelduck	Eurasian Oystercatcher	Barnacle Goose	Mew Gull	Cetti's Warbler	Sandwich Tern	Brant Goose	European Nightjar	European Herring Gull	House Sparrow	Eurasian Curlew	Willow Warbler	Whimbrel
Lincolnshire	0	Identity unknown	Parrot Crossbill	Marsh Warbler	Hume's Leaf Warbler	Corn Bunting	Great Tit	Eurasian Rock Pipit	Brant Goose	Common Nightingale	Little Stint	Coal Tit	Common Chaffinch	Goldcrest	Fieldfare	European Robin	Common Kingfisher	Eurasian Wren	Eurasian Tree Sparrow	Pink-footed Goose	Eurasian Nuthatch
Hampshire	0	Black-tailed Godwit	Common Chiffchaff	Black-headed Gull	Dartford Warbler	Eurasian Oystercatcher	Canada Goose	House Sparrow	European Turtle Dove	Coal Tit	Brant Goose	Eurasian Wren	Common Redstart	Mute Swan	Common Blackbird	Song Thrush	Wood Warbler	Identity unknown	European Stonechat	Eurasian Siskin	Woodlark
West Sussex	0	Common Nightingale	Common Firecrest	Meadow Pipit	European Nightjar	Eurasian Blue Tit	Eurasian Oystercatcher	Sandwich Tern	Identity unknown	Eurasian Reed Warbler	Common Whitethroat	Eurasian Blackcap	Great Tit	Eurasian Treecreeper	Eurasian Wren	Cetti's Warbler	Common Chaffinch	Common Blackbird	Common Moorhen	Common Chiffchaff	Eurasian Stone-curlew
Surrey	0	Common Blackbird	Eurasian Wren	Common Chiffchaff	Eurasian Collared Dove	Dunnock	Common Reed Bunting	Great Tit	Common Snipe	European Robin	Song Thrush	Tawny Owl	Eurasian Bullfinch	Water Rail	Common Whitethroat	Redwing	Willow Warbler	Common Chaffinch	Eurasian Nuthatch	Eurasian Blackcap	Eurasian Jay
Rutland	0	Eurasian Blackcap	Marsh Tit	Common Chiffchaff	Eurasian Bullfinch	European Robin	Egyptian Goose	Eurasian Blue Tit	Eurasian Coot	Common Pheasant	Coal Tit	Eurasian Wigeon	Carrion Crow	Greylag Goose	Northern Raven	White Wagtail	Great Cormorant	Eurasian Treecreeper	Gadwall	Spotted Flycatcher	Common Chaffinch
Leicestershire	0	Eurasian Tree Sparrow	Mute Swan	Yellowhammer	Western Osprey	Canada Goose	Common Blackbird	Common Buzzard	Common Linnet	Common Reed Bunting	Common Starling	Common Wood Pigeon	European Goldfinch	Identity unknown	Mallard	Great Tit	Gadwall	Lesser Whitethroat	Stock Dove	Greylag Goose	Eurasian Teal
Oxfordshire	0	Red Kite	Identity unknown	European Turtle Dove	Eurasian Reed Warbler	Dunnock	Garden Warbler	Eurasian Wren	Common Cuckoo	Common Chaffinch	Iberian Chiffchaff	European Goldfinch	Long-tailed Tit	Mistle Thrush	European Robin	Northern Lapwing	European Pied Flycatcher	European Greenfinch	Goldcrest	Yellowhammer	Eurasian Wigeon
Isle of Wight	0	Common Firecrest	Common Wood Pigeon	Common Moorhen	Mallard	European Herring Gull	European Greenfinch	Canada Goose	European Goldfinch	Eurasian Wren	Common Chaffinch	Eurasian Reed Warbler	Blyth's Reed Warbler	Meadow Pipit	Eurasian Dotterel	Eurasian Coot	Eurasian Collared Dove	Eurasian Blackcap	Peregrine Falcon	Dunnock	European Nightjar
Nottinghamshire	0	Common Chaffinch	Identity unknown	Common Scoter	Melodious Warbler	Tree Pipit	Great Tit	Common Blackbird	Common Chiffchaff	Dunnock	Fieldfare	Gadwall	Sedge Warbler	Rook	Red-crested Pochard	Long-tailed Tit	Eurasian Blue Tit	European Green Woodpecker	Eurasian Coot	Common Whitethroat	Common Moorhen
Northumberland	0	Pink-footed Goose	Eurasian Curlew	Western Jackdaw	Ruddy Turnstone	Black-headed Gull	Common Murre	European Herring Gull	Sedge Warbler	Sanderling	Northern Gannet	Common Starling	Black-legged Kittiwake	Arctic Tern	Red Crossbill	Common Ringed Plover	Common Redshank	Common Redstart	Lesser Whitethroat	Eurasian Blackcap	Common Whitethroat
Derbyshire	0	Soundscape	Great Tit	Long-tailed Tit	European Robin	Eurasian Nuthatch	Coal Tit	Tawny Owl	Dunnock	Common Redstart	European Goldfinch	Northern Raven	Eurasian Treecreeper	Common Chaffinch	Eurasian Wren	Willow Warbler	Eurasian Blue Tit	Fieldfare	Western Jackdaw	European Green Woodpecker	Song Thrush
Windsor and Maidenhead	0	Identity unknown	Garden Warbler	Great Tit	Eurasian Nuthatch	Eurasian Blackcap	European Goldfinch	European Robin	Eurasian Blue Tit	Western Jackdaw	Common Swift	Rose-ringed Parakeet	Common Kingfisher	Common Chiffchaff	Common Chaffinch	Common Blackbird	Coal Tit	Canada Goose	Great Spotted Woodpecker	Black-headed Gull	Black-necked Grebe
Lancashire	0	Identity unknown	Eurasian Coot	Whimbrel	Eurasian Wren	Dunlin	Common Sandpiper	Little Grebe	Common Scoter	Brambling	Common Moorhen	Eurasian Teal	Western Barn Owl	Common Shelduck	Western Yellow Wagtail	Eurasian Collared Dove	Northern Raven	Eurasian Rock Pipit	Common Greenshank	Common Snipe	Song Thrush
Somerset	0	Eurasian Reed Warbler	Cetti's Warbler	Eurasian Bittern	Great Crested Grebe	Common Chiffchaff	Willow Warbler	Mute Swan	Common Reed Bunting	Eurasian Blackcap	Common Cuckoo	Common Chaffinch	Canada Goose	Eurasian Wren	Little Grebe	Eurasian Blue Tit	Common Whitethroat	Greylag Goose	Sedge Warbler	Long-tailed Tit	Eurasian Coot
North Yorkshire	0	Willow Warbler	Great Tit	Common Chaffinch	Eurasian Tree Sparrow	Eurasian Blue Tit	Corn Bunting	Yellowhammer	Common Whitethroat	Common Blackbird	Common Chiffchaff	Song Thrush	Eurasian Wren	Lesser Whitethroat	Dunnock	European Robin	Eurasian Skylark	Barn Swallow	Little Owl	Eurasian Blackcap	Western Yellow Wagtail
Central Bedfordshire	0	Eurasian Reed Warbler	Common Reed Bunting	Corn Bunting	Common Nightingale	Identity unknown	Common Redshank	Common Moorhen	Lady Amherst's Pheasant	Water Rail	Little Ringed Plover	Song Thrush	Common Blackbird	Whimbrel	Bar-headed Goose	Western Barn Owl	Little Owl	Eurasian Teal	Redwing	Eurasian Bittern	Tawny Owl
Bedford	0	Common Chiffchaff	Soundscape	White Wagtail	Barnacle Goose	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Siskin	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Collared Dove	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Skylark	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Yellowhammer
Wiltshire	0	Common Chaffinch	Eurasian Wren	Eurasian Blue Tit	Sedge Warbler	Cetti's Warbler	Western Yellow Wagtail	White Wagtail	Greylag Goose	Common Kingfisher	Identity unknown	Eurasian Blackcap	Song Thrush	Grey Wagtail	Common Snipe	Grey Heron	Common Whitethroat	Dunlin	Eurasian Hobby	Eurasian Reed Warbler	Eurasian Penduline Tit
East Riding of Yorkshire	0	Black-legged Kittiwake	Northern Gannet	Eurasian Tree Sparrow	Common Murre	Razorbill	Common Grasshopper Warbler	Identity unknown	Dunlin	Lesser Whitethroat	Red Knot	Marsh Warbler	Richard's Pipit	Hume's Leaf Warbler	Iberian Chiffchaff	Yellow-browed Warbler	Common Rosefinch	Savi's Warbler	Common Scoter	Melodious Warbler	Eurasian Skylark
Isles of Scilly	0	Greater White-fronted Goose	Great Tit	Common Chiffchaff	Dusky Warbler	Common Chaffinch	Iberian Chiffchaff	Yellow-browed Warbler	Song Thrush	Eurasian Wren	European Robin	European Herring Gull	Little Bunting	Common Blackbird	Water Rail	Western Bonelli's Warbler	Gadwall	Common Greenshank	Meadow Pipit	Cetti's Warbler	Melodious Warbler
Devon	0	House Sparrow	Northern Wheatear	Cirl Bunting	Common Blackbird	Song Thrush	Tawny Owl	Mistle Thrush	Great Grey Shrike	Eurasian Reed Warbler	European Robin	European Goldfinch	Sandwich Tern	Garden Warbler	European Stonechat	Soundscape	European Nightjar	Carrion Crow	Eurasian Wren	European Green Woodpecker	Meadow Pipit
Cambridgeshire	0	Identity unknown	Eurasian Reed Warbler	Spotted Crake	European Robin	Corn Crake	Marsh Tit	Common Whitethroat	Eurasian Wren	Common Scoter	Sedge Warbler	Common Grasshopper Warbler	Eurasian Blackcap	Eurasian Coot	Common Redshank	Yellowhammer	Common Nightingale	Little Egret	Common Chiffchaff	Little Ringed Plover	Willow Warbler
Staffordshire	0	Common Chiffchaff	Goldcrest	Garden Warbler	Black-headed Gull	Common Cuckoo	Rook	Carrion Crow	Mute Swan	European Green Woodpecker	Common Redstart	Identity unknown	Long-eared Owl	European Pied Flycatcher	Great Spotted Woodpecker	Common Whitethroat	Common Wood Pigeon	Willow Warbler	Willow Tit	White-throated Dipper	Eurasian Curlew
Gloucestershire	0	Common Chiffchaff	Eurasian Coot	Eurasian Blackcap	European Nightjar	Carrion Crow	Lesser Spotted Woodpecker	Two-barred Crossbill	Rook	Eurasian Blue Tit	Northern Pintail	Eurasian Wigeon	Common Shelduck	Eurasian Nuthatch	Little Grebe	Willow Warbler	Common Greenshank	Eurasian Dotterel	Eurasian Jay	Eurasian Magpie	Eurasian Hobby
Pembrokeshire	0	Manx Shearwater	Eurasian Wren	European Storm Petrel	Lesser Black-backed Gull	Great Black-backed Gull	Eurasian Skylark	Identity unknown	Razorbill	Eurasian Oystercatcher	Atlantic Puffin	Northern Raven	Sedge Warbler	Rook	Red-billed Chough	Eurasian Rock Pipit	Common Murre	Western Jackdaw	Rock Dove	Northern Fulmar	Common Reed Bunting
Thurrock	0	European Green Woodpecker	Eurasian Teal	Eurasian Reed Warbler	Grey Plover	European Golden Plover	Yellowhammer	Eurasian Jay	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Magpie	Eurasian Collared Dove	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Rock Pipit	Eurasian Coot	Eurasian Bullfinch	Eurasian Skylark
Blackpool	0	Common Scoter	Eurasian Magpie	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Jay	Yellowhammer	Eurasian Bullfinch	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Sparrowhawk	Eurasian Blackcap
Wrexham	0	Black Grouse	Willow Ptarmigan	Yellowhammer	Eurasian Jay	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Magpie	Eurasian Bullfinch	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Sparrowhawk
Denbighshire	0	Black Grouse	Common Cuckoo	Wood Warbler	Song Thrush	Willow Warbler	Whinchat	Lesser Redpoll	Eurasian Hobby	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Magpie	Eurasian Jay	Eurasian Collared Dove	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Coot
Warwickshire	0	Identity unknown	Cetti's Warbler	Common Firecrest	Western Barn Owl	Red-legged Partridge	Common Quail	European Golden Plover	Redwing	Yellow-browed Warbler	Little Owl	Water Rail	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Nuthatch	Eurasian Bullfinch	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Oystercatcher
Cumbria	0	Common Whitethroat	Tawny Owl	Grey Heron	European Herring Gull	European Stonechat	Identity unknown	Great Spotted Woodpecker	Red Crossbill	Peregrine Falcon	Common Redstart	Little Tern	Eurasian Reed Warbler	Sandwich Tern	Eurasian Bullfinch	Eurasian Blue Tit	Eurasian Blackcap	Rook	European Goldfinch	Song Thrush	Eurasian Nuthatch
East Sussex	0	Great Tit	Eurasian Wren	Northern Fulmar	Song Thrush	Common Chaffinch	Common Starling	Common Wood Pigeon	European Goldfinch	European Robin	Great Spotted Woodpecker	Western Jackdaw	Eurasian Skylark	Eurasian Treecreeper	Mediterranean Gull	Yellowhammer	Woodlark	Tree Pipit	European Stonechat	European Greenfinch	House Sparrow
Gwynedd	0	Tawny Owl	Manx Shearwater	Whinchat	Common Sandpiper	Yellowhammer	Eurasian Jay	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Nuthatch	Eurasian Magpie	Eurasian Collared Dove	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Coot	Eurasian Blue Tit	Eurasian Bullfinch
Worcestershire	0	Common Chiffchaff	Identity unknown	Western Jackdaw	Tree Pipit	Common Blackbird	Black-headed Gull	Little Grebe	Dunnock	Common Whitethroat	Eurasian Blackcap	Eurasian Bullfinch	Eurasian Wren	Carrion Crow	Tawny Owl	Common Redstart	European Green Woodpecker	Common Ringed Plover	Eurasian Tree Sparrow	Mistle Thrush	Common Reed Bunting
Newcastle upon Tyne	0	Little Bittern	Yellowhammer	Eurasian Collared Dove	Eurasian Siskin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Bullfinch	Eurasian Sparrowhawk	Eurasian Blue Tit	Eurasian Blackcap
Cornwall	0	Iberian Chiffchaff	Common Blackbird	European Serin	Peregrine Falcon	European Robin	Identity unknown	Carrion Crow	Eurasian Wren	Common Buzzard	Willow Warbler	Eurasian Nuthatch	Eurasian Coot	Eurasian Magpie	Eurasian Jay	Eurasian Oystercatcher	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Dotterel
Carmarthenshire	0	Sedge Warbler	Eurasian Blackcap	Song Thrush	Common Chaffinch	Meadow Pipit	Eurasian Reed Warbler	European Nightjar	European Robin	Coal Tit	Barn Swallow	Common Linnet	Common Blackbird	Eurasian Jay	Common Grasshopper Warbler	Common Chiffchaff	Common Redstart	Wood Warbler	Great Spotted Woodpecker	Eurasian Blue Tit	Water Rail
Bridgend	0	Spotted Crake	Yellowhammer	Eurasian Bullfinch	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Skylark	Eurasian Blackcap	Eurasian Bittern
Hertfordshire	0	Identity unknown	Goldcrest	Willow Warbler	Common Chaffinch	Eurasian Wren	Coal Tit	European Robin	Redwing	Common Blackbird	Song Thrush	Common House Martin	Rook	Common Reed Bunting	Great Tit	Parrot Crossbill	Eurasian Blackcap	Cetti's Warbler	Eurasian Oystercatcher	Eurasian Treecreeper	European Greenfinch
Medway	0	Common Nightingale	Common Chiffchaff	Eurasian Blackcap	Common Grasshopper Warbler	Pied Avocet	Eurasian Magpie	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Jay	Eurasian Nuthatch	Eurasian Coot	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Curlew	Eurasian Collared Dove	Corn Crake
Dorset	0	Common House Martin	Great Black-backed Gull	European Nightjar	Common Linnet	Cetti's Warbler	Tawny Owl	European Stonechat	Eurasian Rock Pipit	European Golden Plover	Eurasian Wren	Lesser Whitethroat	Common Firecrest	Soundscape	Identity unknown	Savi's Warbler	Sandwich Tern	Eurasian Nuthatch	Common Nightingale	Rook	Common Wood Pigeon
County Durham	0	Tawny Owl	Eurasian Bullfinch	Eurasian Curlew	Song Thrush	Fieldfare	Soundscape	Common Chiffchaff	Little Bunting	European Nightjar	Eurasian Blackcap	Great Tit	Spotted Flycatcher	Barn Swallow	Willow Warbler	Eurasian Hobby	Crimson Rosella	Curlew Sandpiper	Dartford Warbler	Eurasian Reed Warbler	Desert Wheatear
Southend-on-Sea	0	Ruddy Turnstone	Mediterranean Gull	Eurasian Bullfinch	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Collared Dove	Yellowhammer	Eurasian Skylark	Eurasian Blue Tit	Eurasian Blackcap
Swansea	0	Red-billed Chough	Identity unknown	Crimson Rosella	European Herring Gull	Eurasian Hobby	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Jay	Eurasian Bullfinch	Eurasian Magpie	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Skylark
Poole	0	Sandwich Tern	Yellowhammer	Eurasian Bullfinch	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Skylark	Eurasian Blackcap	Eurasian Bittern
Northamptonshire	0	Common Chiffchaff	Spotted Flycatcher	Common Cuckoo	Long-tailed Tit	Eurasian Treecreeper	Marsh Tit	Western Jackdaw	Eurasian Bullfinch	Goldcrest	Willow Warbler	Desert Whitethroat	Eurasian Golden Oriole	Crimson Rosella	Curlew Sandpiper	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Dartford Warbler	Desert Wheatear
Shropshire	0	Iberian Chiffchaff	Western Barn Owl	Eurasian Wren	Common Whitethroat	Willow Warbler	Eurasian Hobby	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Magpie	Eurasian Jay	Eurasian Bullfinch	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Collared Dove	Eurasian Blue Tit
Caerphilly	0	Tawny Owl	Redwing	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Jay	Eurasian Magpie	Eurasian Bullfinch	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Collared Dove	Yellowhammer	Eurasian Skylark	Eurasian Blackcap
York	0	Tawny Owl	European Robin	Eurasian Siskin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Sparrowhawk	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Collared Dove	Eurasian Magpie	Eurasian Bullfinch	Eurasian Blue Tit	Eurasian Blackcap
Buckinghamshire	0	Yellowhammer	Tawny Owl	Willow Warbler	Eurasian Blackcap	Common Chiffchaff	Eurasian Reed Warbler	Common Blackbird	Identity unknown	Rose-ringed Parakeet	Eurasian Wren	Eurasian Hobby	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Nuthatch	Eurasian Jay	Eurasian Magpie	Eurasian Coot	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Rock Pipit
Reading	0	Tawny Owl	Eurasian Bullfinch	Eurasian Siskin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Sparrowhawk	Eurasian Blackcap	Eurasian Bittern
Bath and North East Somerset	0	Great Spotted Woodpecker	Common Blackbird	European Green Woodpecker	European Robin	Northern Raven	White Wagtail	Eurasian Wren	Eurasian Treecreeper	Tawny Owl	Song Thrush	Common Chiffchaff	Eurasian Nuthatch	Eurasian Magpie	Eurasian Coot	Eurasian Jay	Eurasian Oystercatcher	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Penduline Tit
Sheffield	0	Tawny Owl	Lesser Whitethroat	European Robin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Sparrowhawk	Eurasian Jay	Eurasian Hobby	Eurasian Siskin	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Magpie	Eurasian Collared Dove	Eurasian Bullfinch	Eurasian Blue Tit
Newport	0	European Nightjar	Yellowhammer	Eurasian Collared Dove	Eurasian Siskin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Bullfinch	Eurasian Sparrowhawk	Eurasian Blue Tit	Eurasian Blackcap
Warrington	0	Lesser Spotted Woodpecker	Yellowhammer	Eurasian Collared Dove	Eurasian Siskin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Bullfinch	Eurasian Sparrowhawk	Eurasian Blue Tit	Eurasian Blackcap
Peterborough	0	Great Spotted Woodpecker	Great Tit	Eurasian Nuthatch	Eurasian Blue Tit	Marsh Tit	Coal Tit	Song Thrush	Eurasian Jay	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Great Grey Shrike	Eurasian Magpie	Eurasian Collared Dove	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Coot	Eurasian Bullfinch
Barnet	0	Great Spotted Woodpecker	Coal Tit	Carrion Crow	Eurasian Siskin	Eurasian Skylark	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Stone-curlew	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Collared Dove	Eurasian Bullfinch
West Berkshire	0	Eurasian Blue Tit	Rook	Willow Warbler	Cetti's Warbler	Eurasian Magpie	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Jay	Eurasian Nuthatch	Eurasian Collared Dove	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Coot	Yellowhammer	Eurasian Bullfinch
North Lincolnshire	0	Common Chiffchaff	Common Whitethroat	Bohemian Waxwing	Two-barred Crossbill	Great Reed Warbler	Baillon's Crake	Bar-headed Goose	Eurasian Skylark	Eurasian Siskin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew
Torfaen	0	Great Tit	Common Firecrest	Eurasian Collared Dove	Eurasian Siskin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Bullfinch	Eurasian Sparrowhawk	Eurasian Blue Tit	Eurasian Blackcap
Wokingham	0	Common House Martin	Common Blackbird	European Goldfinch	European Robin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Curlew	Eurasian Nuthatch	Eurasian Siskin	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Yellowhammer	Eurasian Coot	Eurasian Sparrowhawk	Dusky Warbler
Redcar and Cleveland	0	Common House Martin	Yellowhammer	Eurasian Collared Dove	Eurasian Siskin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Bullfinch	Eurasian Sparrowhawk	Eurasian Blue Tit	Eurasian Blackcap
Cardiff	0	Eurasian Wren	Long-tailed Tit	Song Thrush	European Robin	Mistle Thrush	Dunnock	Cetti's Warbler	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Jay	Eurasian Magpie	Eurasian Coot	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Curlew	Yellowhammer
Stoke-on-Trent	0	Common Chaffinch	Common Chiffchaff	Long-tailed Tit	Dartford Warbler	Desert Wheatear	Eurasian Sparrowhawk	Eurasian Skylark	Eurasian Siskin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot
Powys	0	Melodious Warbler	European Pied Flycatcher	Wood Warbler	Willow Warbler	Song Thrush	Eurasian Hobby	Eurasian Collared Dove	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Yellowhammer	Eurasian Jay	Eurasian Bullfinch	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Magpie	Eurasian Blue Tit
Southampton	0	Arctic Warbler	Yellowhammer	Eurasian Nuthatch	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Jay	Eurasian Magpie	Eurasian Oystercatcher	Eurasian Collared Dove	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Skylark	Eurasian Coot	Eurasian Bullfinch	Eurasian Stone-curlew	Eurasian Blue Tit
Isle of Anglesey	0	Blyth's Reed Warbler	Yellowhammer	Eurasian Magpie	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Jay	Eurasian Nuthatch	Eurasian Stone-curlew	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Skylark	Eurasian Coot	Eurasian Collared Dove	Eurasian Bullfinch	Eurasian Blue Tit
Monmouthshire	0	Marmora's Warbler	Common Firecrest	Tree Pipit	Yellowhammer	Eurasian Magpie	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Jay	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Skylark	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Coot	Eurasian Collared Dove	Eurasian Bullfinch	Eurasian Blue Tit
Vale of Glamorgan	0	Eurasian Wren	Yellowhammer	Eurasian Collared Dove	Eurasian Siskin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Bullfinch	Eurasian Sparrowhawk	Eurasian Blue Tit	Eurasian Blackcap
North Somerset	0	House Sparrow	Yellowhammer	Eurasian Jay	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Magpie	Eurasian Bullfinch	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Sparrowhawk	Eurasian Blackcap
Telford and Wrekin	1	Marsh Warbler	Yellowhammer	Eurasian Collared Dove	Eurasian Siskin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Bullfinch	Corn Bunting	Eurasian Blue Tit	Eurasian Blackcap
North East Lincolnshire	1	Marsh Warbler	Yellowhammer	Eurasian Collared Dove	Eurasian Siskin	Eurasian Rock Pipit	Eurasian Reed Warbler	Eurasian Penduline Tit	Eurasian Oystercatcher	Eurasian Nuthatch	Eurasian Magpie	Eurasian Jay	Eurasian Hobby	Eurasian Golden Oriole	Eurasian Dotterel	Eurasian Curlew	Eurasian Coot	Eurasian Bullfinch	Corn Bunting	Eurasian Blue Tit	Eurasian Blackcap
Birmingham	2	Common Whitethroat	Willow Warbler	Eurasian Magpie	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Jay	Eurasian Nuthatch	Eurasian Bullfinch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Sparrowhawk	Eurasian Blackcap
Enfield	2	Willow Warbler	Yellowhammer	Eurasian Magpie	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Jay	Eurasian Nuthatch	Eurasian Bullfinch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Sparrowhawk	Eurasian Blackcap
Cheshire West and Chester	3	Identity unknown	Iberian Chiffchaff	Little Egret	Yellowhammer	Eurasian Jay	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Magpie	Eurasian Collared Dove	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Coot	Eurasian Blue Tit	Eurasian Bullfinch
Doncaster	3	Iberian Chiffchaff	Yellowhammer	Eurasian Jay	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Magpie	Eurasian Bullfinch	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Sparrowhawk	Eurasian Blackcap
Bracknell Forest	4	Identity unknown	Yellowhammer	Eurasian Jay	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Magpie	Eurasian Bullfinch	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Sparrowhawk	Eurasian Blackcap
South Gloucestershire	4	Identity unknown	Yellowhammer	Eurasian Jay	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Magpie	Eurasian Bullfinch	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Sparrowhawk	Eurasian Blackcap
Flintshire	4	Identity unknown	Yellowhammer	Eurasian Jay	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Magpie	Eurasian Bullfinch	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Sparrowhawk	Eurasian Blackcap
Milton Keynes	4	Identity unknown	Yellowhammer	Eurasian Jay	Eurasian Coot	Eurasian Curlew	Eurasian Dotterel	Eurasian Golden Oriole	Eurasian Hobby	Eurasian Magpie	Eurasian Bullfinch	Eurasian Nuthatch	Eurasian Oystercatcher	Eurasian Penduline Tit	Eurasian Reed Warbler	Eurasian Rock Pipit	Eurasian Siskin	Eurasian Collared Dove	Eurasian Blue Tit	Eurasian Sparrowhawk	Eurasian Blackcap