

The Birds of the Phoenix Park, County Dublin: Results of a Repeat Survey in Winter 2014 / 2015



Photo by Dick Coombes

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Executive Summary

Urban parks offer a variety of habitats which are of benefit to birds and other wildlife. The Phoenix Park in Dublin City is over 700 hectares in size, and is among the largest enclosed urban parks in Europe. A thorough survey of the breeding and wintering birds of the Phoenix Park was carried out between 2007 and 2008 and the results formed a baseline for future surveys. A follow-up survey was undertaken between December 2014 and February 2015 aimed to quantify the current abundance and distribution of birds in the park and any changes that had taken place since the first survey.

The methods used were identical to those in 2007/ 08. Bird data were gathered from 29 sections, each manageable within a survey session. Each section was visited twice December and February. Observers mapped all birds seen or heard whilst walking along a survey route which took them to within 50m of every part of the section.

A total of 63 species was recorded, that included 37 residents, 24 migrants and two species derived from released/ ornamental stock. This total included three species recorded flying over the park only, namely Light-bellied Brent Goose *Branta bernicla hrota*, Cormorant *Phalacrocorax carbo* and Little Egret *Egretta garzetta*. At the section level the total number of species recorded ranged between 9 (15 Acres, SW9) and 41 (Zoo, NE13).

Woodpigeon *Columba palumbus*, Magpie *Pica pica*, Jackdaw *Corvus monedula* and Blue Tit *Cyanistes caeruleus* were the most widely distributed species, occurring in all sections of the park, while Jackdaw and Woodpigeon were the most numerous. Some seven new species were recorded when compared with the 2007/ 08 survey, and they were Mute Swan *Cygnus olor*, Mandarin Duck *Aix galericulata*, Bahama Pintail *Anas bahamensis*, Lapwing *Vanellus vanellus*, Woodcock *Scolopax rusticola*, Raven *Corvus corax* and Chiffchaff *Phylloscopus collybita*.

The density of birds overall peaked at 9.2 birds per hectare during the first winter visit and represents an increase when compared with the peak of 7.9 recorded in winter 2007/ 08. At a section level, highest densities were recorded in the Zoo sections as a result of a broad diversity of habitats, including wetlands which support high concentrations of waterbirds in winter, along with the availability of supplementary food. When compared with those densities recorded in 2007/08, increases were shown in 15 sections and declines in the remaining 14 sections.

The winter bird populations present in the Phoenix Park in 2014/ 15 were more diverse and more numerous when compared with the baseline survey in 2007/ 08. However, flocks in winter are highly variable and transitory and much less consistent than during the breeding season when pairs are holding territories and movements are much more restricted.

Introduction

The Phoenix Park in Dublin City is over 700 hectares in size, and is among the largest enclosed urban parks in Europe. It includes a number of significant features such as the residences of both the President of Ireland and the American Ambassador, a number of monuments, including the Papal Cross and the Wellington Monument. It also includes many facilities, including the Phoenix Park Visitor Centre, Zoological Gardens, St. Mary's Hospital, Ordnance Survey Ireland offices and shop and several sports grounds for Gaelic football, soccer, cricket and polo. Thus, the park is well visited by the public throughout the year.

The park offers a broad diversity of habitats for birds and other wildlife, including large areas of grassland, and a relatively high proportion of deciduous woodland. Previous observations have shown that the park supports a variety of bird species throughout the year, and a total of 88 species has been recorded in recent years (S. Geraty *in litt.*), 49 of which occur regularly. A thorough survey of the birds of the Phoenix Park was undertaken during the breeding season in 2007 and in winter 2007/08 as part of a wider stock-take of biodiversity, prior to the publication of an updated Conservation Management Plan for the park (OPW 2011). During that survey, a total of 72 species was recorded, including 62 species during the breeding season and 58 species in winter (Crowe 2011). As part of these biodiversity surveys, a number of recommendations was made that would help to enhance the habitats for biodiversity within the park and several of these measures have since been implemented.

In November 2014, the Office of Public Works contracted BirdWatch Ireland to carry out a repeat survey of the birds in the Phoenix Park during the winter of 2014/15 to examine the distribution and abundance of birds within the park and to assess any changes since the last survey during the winter of 2007/08. This report summarises the results of this assessment.

Methods

The scientific names of all bird species mentioned in the text are presented in Table 1.

Survey design

The methodology used to survey the park in 2014/15 was the same as that in 2007/08 and closely follows a method set out by Chamberlain *et al.* (2007). This included using the same 29 sections (Fig. 1), each manageable during a survey session, and which aided in minimising duplication of counts of the same birds. Sections were labeled according to whether they were northeast (e.g. NE1) or southwest (e.g. SW1) of the main park road. Divisions were roughly based on the discrete areas within the park, such as the Ordnance Survey grounds (section SW3 in Fig. 1) and/or habitat type, such as the large grassland section known as the Fifteen Acres (section SW9 in Fig. 1). Sections ranged from 5.5ha (NE8, a long linear stretch along the northern edge of the park) to 97.9ha (SW9) in size.



Figure 1. Bird survey sections.

Outside the breeding period, many species form more clustered distributions, i.e. they tend to flock together in larger numbers, and activity tends to be not restricted to the early morning hours. Furthermore, observers must rely a lot more on sightings (compared with the summer) due to the lack of singing outside the breeding period. Survey work during the winter was carried out throughout the day, with two visits to account for winter migrants, and to increase the chances of detecting birds, especially flocks of thrushes which are extremely mobile during the winter period. The first winter visits took place between 3rd December 2014 and 13th January 2015. All sections were surveyed by 19th December with the exception of NE5, NE6 and NE9 (Fig. 1) which were surveyed on 13th January. The later, second, visits were all made between 30th January and 27th February 2015.

Field methods

During each visit, observers walked along a survey route which took them to within 50m of every point in all sections. Playing fields (or similar areas of short grass) were surveyed from a greater distance (within 100m of every point). A field-map of each section was provided, with a grid, 50m x 50m overlain (e.g. Fig. 2). All species seen and heard were recorded directly onto the maps, and bird totals were later summarised. Birds flying over and obviously not interacting with the park in any way were not recorded. Observers also searched for owl pellets under suitable trees.



Figure 2. An example of a survey section (SW1) with the 50m grid overlain.

Data analysis & interpretation

Data are presented for each of the 29 sections and for the overall park combined. Bird densities were estimated for each visit in each season as the total number recorded per hectare, and in each case the peak of each visit is presented.

Results

Overview of species recorded

In total, 63 species were recorded during this survey (Table 1). This included 37 residents, 23 winter migrants (including 10 species which also have a resident population in Ireland), one summer migrant (Chiffchaff) and two feral species derived from released/ ornamental stock (Mandarin Duck and Bahama Pintail). It also included 28 species that are on the most recent Birds of Conservation Concern in Ireland lists (Colhoun and Cummins 2013), including 10 that are Red-listed and are of highest concern and a further 18 species that are Amber-listed. However, this total of 63 species included three species recorded in flight only, and not necessarily interacting with the park features. They were Light-bellied Brent Goose, Cormorant and Little Egret.

The species recorded this winter can be described within the following 14 bird groups:

- Waterbirds – Some 19 waterbird species were recorded (excluding three species recorded in flight only over the park). This total includes seven winter visitors and a further eight resident species whose numbers are augmented by winter visitors. The waterbodies within the park are of particular importance, especially those within the Zoo, with supplementary feeding opportunities undoubtedly adding to the attraction of these sections. The open grasslands were shown to support grassland feeding waders, albeit in small numbers. It is likely that Light-bellied Brent Goose and Little Egret, both of which were seen only in flight over the park, will occur within the Phoenix Park in the near future should their numbers and distribution continue to increase (Crowe and Holt 2013). Woodcock is a wintering migrant wader, a group that is included among the waterbirds. However, Woodcock is much less dependent on wetlands, and not at all in Ireland. Rather it is a woodland species here, and was recorded in a predominantly woodland section to the southwest of the park.
- Birds of prey – Small numbers of just three species were recorded, Sparrowhawk, Kestrel and Buzzard. This latter species has been expanding in numbers and range throughout Ireland in recent decades (Balmer *et al.* 2013), and it is likely that they will continue to become more widely dispersed and abundant in the park over time, especially during the winter.
- Gamebirds – Just Pheasant was recorded. It is a known breeder in the park and is extremely widespread in farmland habitats throughout Ireland. It was recorded in small numbers and in just three sections of the park this winter.
- Pigeons & doves – Three species were recorded. Woodpigeon was the most widespread and numerous, present in all sections. Feral Pigeon and Collared Dove were much less prevalent, present in relatively few sections. Unfortunately no Stock Doves were recorded, but would be expected to be present during the breeding season.
- Crows – A total of six species was recorded. Magpie, Jackdaw and Hooded Crow were most prevalent among the group, occurring in all sections, Rook and Jay were also relatively widespread. Jay was recorded in 17 sections, which is relatively widespread for a woodland specialist and a species that is thought to be relatively timid in Ireland. Raven was present in five sections.
- Kinglets – Goldcrest was highly widespread, present in all sections with the exception of the 15 Acres (SW15).
- Tits – All four regularly occurring tit species in Ireland are resident, and were relatively widespread and abundant throughout the park during this survey.

- Larks – Skylark was present only in the 15 Acres this winter.
- Warblers – Just Blackcap and Chiffchaff were recorded. Blackcap is a winter migrant and was recorded in three woodland sections NE8, NE9 and NE13. Chiffchaff is a summer migrant and was recorded in SW11.
- Treecreepers – Treecreeper is a resident species, and was widespread and abundant throughout the park, especially where Cypress trees were present. It was recorded in 27 sections.
- Starling, Chats & thrushes – Starling was relatively widespread occurring in 15 sections. The resident population is enhanced in winter by immigrant birds from eastern Europe and Scandinavia (Wernham *et al.* 2002) This species is highly congregatory, and regularly features among the most abundant species recorded during both the CBS and BirdWatch Ireland's winter Garden Bird Survey (GBS). A further 10 Chat and Thrush species were well represented in the park, with the exception of Dunnock. The limited number of records of Dunnock was especially noteworthy.
- Sparrows – House Sparrow was concentrated within the Zoo section NE13, presumably benefitting from additional food supplied. In addition, one individual recorded in NE8 during the early visit.
- Pipits & wagtails – Grey Wagtail, Pied Wagtail and Meadow Pipit were recorded in relatively few sections. Pied Wagtail was recorded in just three sections NE8, NE9 and NE13. Grey Wagtail was present in four sections, NE3, NE8, NE13 and SW12. Meadow Pipit was relatively widespread, recorded in 13 sections.
- Finches – Five species were recorded. It is likely that most of the Siskins recorded were winter visitors. Chaffinch was relatively widespread and abundant throughout the park. Greenfinch and Goldfinch were less widespread although they each occurred in 11 and 13 sections respectively, and a large notable flock of 220 Greenfinches was recorded in NE4 during the early visit (total 234 recorded in that section overall). Linnet, Lesser Redpoll and Bullfinch were scarce, especially Linnet; just 2 individuals were recorded in one section (NE13) during the late visit.



Photo by Clive Timmons

Plate 1: Chaffinch was widely distributed during winter surveys.

Excluding the birds recorded in flight only, some seven new species were recorded when compared to the last winter survey, namely:

- Mute Swan: Widespread in Ireland and reliant on waterbodies, this species was recorded in three sections to the east of the park, including the two zoo sections, NE11 and NE13, as well as NE14.
- Mandarin Duck: Reliant on waterbodies and recorded in SW4, this species does not naturally occur in Ireland and is from released/ ornamental stock.

- Bahama Pintail: Duck species reliant on waterbodies and recorded in the two zoo sections NE11 and NE13, this species does not naturally occur in Ireland and is from released/ ornamental stock.
- Lapwing: Winter and summer migrant (separate populations), this wader species is numerous and widespread in Ireland in winter although it is declining and is Red-listed (BoCCI, Colhoun & Cummins 2013), often occurring alongside Golden Plover, and both species while dependent on wetlands feed in grassland invertebrates. Just one individual was recorded along with Golden Plover on the 15 Acres (SW9) during the first visit.
- Woodcock: Winter migrant that is declining in Ireland and is Red-listed (BoCCI) and often difficult to detect, this was an especially welcome record from a relatively well wooded section SW2 to the west of the park.
- Raven: Resident species that occurs mostly in the uplands, this species was recorded in five sections during this census, NE1, NE2, NE9, SW13 and SW9, although it was likely the same two birds moving around the Park.
- Chiffchaff: Summer migrant with increasing numbers of individuals remaining in Ireland over the winter, this is a woodland species and was recorded in SW11 during the second visit.

In contrast, there were five species recorded in 2007/ 08 that were not recorded within the park during this survey, namely Wigeon, Cormorant, Lesser Black-backed Gull, Fieldfare and Brambling. The absence of Fieldfare and Brambling was perhaps surprising given that they were reported in five and three sections respectively in 2007/08. However, the occurrence and distribution of these winter migrants is highly influenced by winter conditions. This was a relatively mild winter and perhaps not cold enough to push them into urban gardens.

Distribution & abundance

Woodpigeon, Magpie, Jackdaw and Blue Tit were the most widely distributed species, occurring in all sections of the park (Table 1), although Magpie was notably absent from several sections during the second visit. Hooded Crow, Goldcrest, Great Tit and Robin were also relatively widely distributed, occurring in at least 26 of the 29 sections. Jackdaw and Woodpigeon were the most numerous species, with overall peaks of 1,409 and 867 recorded respectively. However, given that the coverage for each visit spanned several weeks it is likely that these the totals do include some duplication and numbers involved are slightly over-estimated.

The number of species in each section ranged between a low of 9 and a peak of 41. The sections to the east of the park between Áras an Uachtaráin (NE9) and the easternmost section (NE14) were the most species rich (Table 2). The highest number of species was recorded in the easternmost zoo section (NE13), and Áras an Uachtaráin (NE9) with 41 and 37 species respectively recorded in these two sections. The two relatively open grassland sections SW7 and SW9 supported fewest species.



Photo by Dick Coombes



Photo by Michael Finn

Plate 2. Woodpigeon and Jackdaw were the most widely distributed and most numerous species recorded.

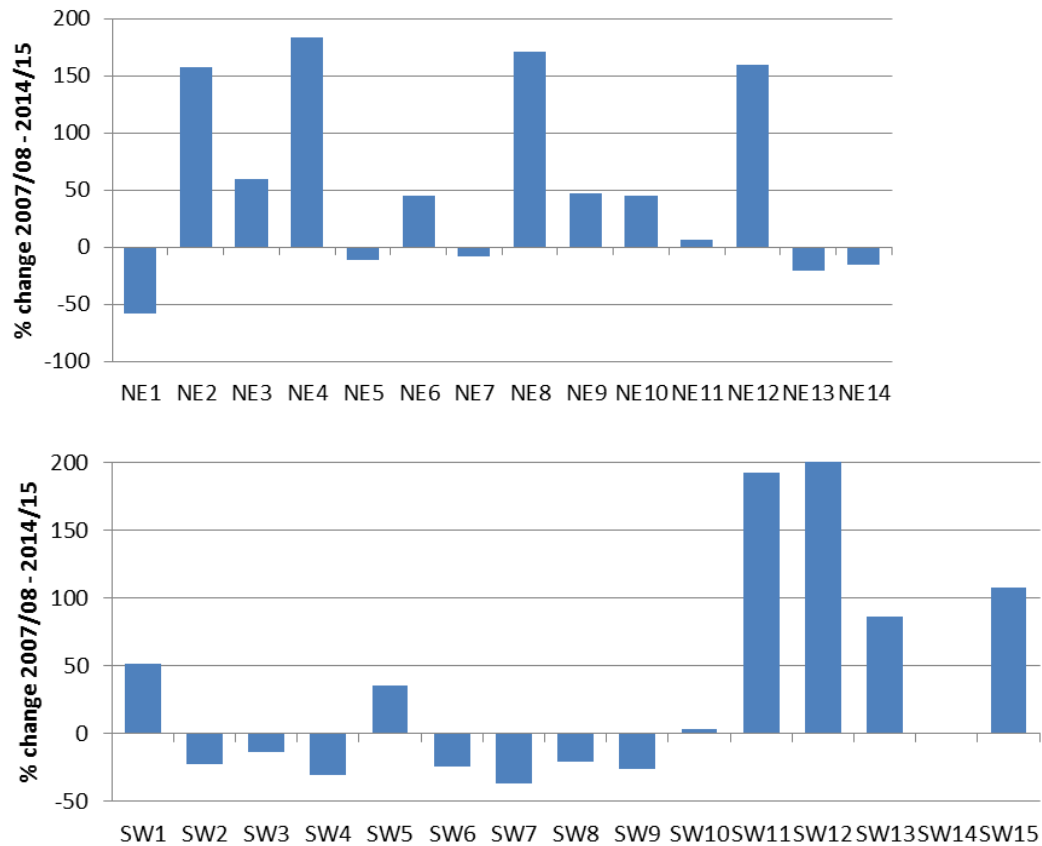


Figure 3. Percentage change in the densities of birds recorded in each of the park sections between winters 2007/08 and 2014/15, illustrating changes in NE sections (top graph) and SW sections (bottom graph).

The overall density of bird recorded was calculated at 9.2 and 8.2 birds per hectare during the early and late visits respectively. This represents an increase when compared with the survey in 2007/08 when total bird densities were 7.5 and 7.9 birds per hectare during the early and late visits.

Highest densities of birds were recorded in two Zoo sections (NE11 and NE13) and in the adjacent linear stretch of woodland (NE8). Densities were lowest in three relatively open grassland sections SW9, SW12 and NE2. The full list of sections and species present is presented in the Appendix.

When compared with those densities recorded in 2007/08, increases were shown in 15 sections and declines in the remaining 14 sections (Fig. 3). Among the most noteworthy of the winter flocks were:

- Large flocks of Black-headed Gull (155), Jackdaw (111), Chaffinch (73), Mallard (114) and Tufted Duck (189) within the two Zoo sections (NE11 and NE13).
- 146 Rooks in SW9 during the second visit.
- 95 Redwings in SW11, early visit.
- 118 Jackdaws in SW13, early visit
- 85 Starlings in SW15, early visit.

Table 1. Species recorded in the Phoenix Park during winter 2014/15, showing the total number of sections in which each species was recorded, the species' status (Resident, Feral (released), Winter migrant, Summer migrant) and an indication of conservation concern in Ireland (BoCCI, Red or Amber-listed).

Common name	Latin name	Status	BoCCI	Number sections		Totals recorded*	
				Early	Late	Early	Late
Mute Swan	<i>Cygnus olor</i>	R	A	2	3	4	6
**Brent Goose (light-bellied)	<i>Branta bernicla hrota</i>	W	A	1		0 (75)	0
Mandarin	<i>Aix galericulata</i>	F			1	0	5
Teal	<i>Anas crecca</i>	WR	A		1	0	2
Mallard	<i>Anas platyrhynchos</i>	WR		7	5	237	184
Bahama Pintail	<i>Anas bahamensis</i>	F			2	0	154
Shoveler	<i>Anas clypeata</i>	W	R	1	1	4	2
Pochard	<i>Aythya ferina</i>	W	R	2	1	20	24
Tufted Duck	<i>Aythya fuligula</i>	W	R	5	4	236	26
Pheasant	<i>Phasianus colchicus</i>	R		3	1	4	1
**Cormorant	<i>Phalacrocorax carbo</i>	W	A	1		0 (1)	0
**Little Egret	<i>Egretta garzetta</i>	WR			1	0	0 (1)
Grey Heron	<i>Ardea cinerea</i>	WR		3	4	9	10
Little Grebe	<i>Tachybaptus ruficollis</i>	WR	A	3	1	3	2
Sparrowhawk	<i>Accipiter nisus</i>	R	A	2	4	2	4
Buzzard	<i>Buteo buteo</i>	R		4	7	4 (2)	6 (6)
Kestrel	<i>Falco tinnunculus</i>	R	A		1	0	1
Moorhen	<i>Gallinula chloropus</i>	WR		7	8	86	66
Coot	<i>Fulica atra</i>	WR	A	7	6	68	62
Golden Plover	<i>Pluvialis apricaria</i>	W	R		1	0	2
Lapwing	<i>Vanellus vanellus</i>	W	R	1		1	0
Snipe	<i>Gallinago gallinago</i>	W	A		1	0	1
Woodcock	<i>Scolopax rusticola</i>	W	R	1		1	0
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	WR	R	14	15	308	308 (33)
Common Gull	<i>Larus canus</i>	WR	A	3	4	15	9
Herring Gull	<i>Larus argentatus</i>	R	R	5	12	19	53 (12)
Feral pigeon	<i>Columba livia</i>	R		7	2	68	38
Woodpigeon	<i>Columba palumbus</i>	R		29	28	867	599 (2)
Collared Dove	<i>Streptopelia decaocto</i>	R		4	2	5	3
Magpie	<i>Pica pica</i>	R		29	19	305	173
Jay	<i>Garrulus glandarius</i>	R		13	10	30	24
Jackdaw	<i>Corvus monedula</i>	R		29	28	1,409	1,038 (15)
Rook	<i>Corvus frugilegus</i>	R		14	12	184	217 (1)
Hooded Crow	<i>Corvus corone cornix</i>	R		27	27	239	175
Raven	<i>Corvus corax</i>	R		4	1	6 (1)	1
Goldcrest	<i>Regulus regulus</i>	R	A	22	27	70	95
Blue Tit	<i>Cyanistes caeruleus</i>	R		26	29	271	557
Great Tit	<i>Parus major</i>	R		22	27	121	214
Coal Tit	<i>Parus ater</i>	R		20	25	89	106
Skylark	<i>Alauda arvensis</i>	R	A	1	1	3	4
Long-tailed Tit	<i>Aegithalos caudatus</i>	R		15	19	130	119
Chiffchaff	<i>Phylloscopus collybita</i>	S			1	0	1
Blackcap	<i>Sylvia atricapilla</i>	W		3		3	0
Treecreeper	<i>Certhia familiaris</i>	R		13	23	23	59
Wren	<i>Troglodytes troglodytes</i>	R		21	19	79	76
Starling	<i>Sturnus vulgaris</i>	WR	A	10	9	277	88
Blackbird	<i>Turdus merula</i>	R		23	21	314	255
Song Thrush	<i>Turdus philomelos</i>	R		10	19	22	39
Redwing	<i>Turdus iliacus</i>	W		6	10	123 (2)	64
Mistle Thrush	<i>Turdus viscivorus</i>	R	A	17	23	51	107
Robin	<i>Erithacus rubecula</i>	R	A	22	26	129	201
Dunnock	<i>Prunella modularis</i>	R		4	8	5	11
House Sparrow	<i>Passer domesticus</i>	R	A	2	1	11	25
Grey Wagtail	<i>Motacilla cinerea</i>	R	R	1	4	1	3 (1)
Pied Wagtail	<i>Motacilla alba</i>	R		2	2	2	3
Meadow Pipit	<i>Anthus pratensis</i>	R	R	4	12	17	175 (1)
Chaffinch	<i>Fringilla coelebs</i>	R		21	25	243	193
Greenfinch	<i>Chloris chloris</i>	R	A	11	6	255 (1)	40
Goldfinch	<i>Carduelis carduelis</i>	R		8	13	26 (4)	61
Siskin	<i>Carduelis spinus</i>	W		4	6	12	13
Linnet	<i>Carduelis cannabina</i>	R	A		1	0	2
Lesser Redpoll	<i>Carduelis cabaret</i>	W		4		14 (2)	0
Bullfinch	<i>Pyrrhula pyrrhula</i>	R		5	7	11	11

* Totals recorded with birds recorded in flight presented in parentheses.

** Species recorded in flight only during the survey.

Table 2. Diversity and density of birds throughout the park sections.

	Total species	Density (Early)	Density (Late)
NE1	19	8.3	7.4
NE2	26	4.1	5.3
NE3	19	10.9	20.2
NE4	27	22.4	10.1
NE5	21	11.4	6.7
NE6	25	12.8	15.0
NE7	20	10.8	12.7
NE8	28	39.5	18.2
NE9	37	9.5	10.7
NE10	19	4.3	6.5
NE11	35	24.9	39.0
NE12	19	9.7	5.3
NE13	41	35.4	21.4
NE14	33	12.1	8.3
SW1	19	7.7	6.4
SW2	19	3.7	7.3
SW3	23	8.1	8.3
SW4	29	4.6	5.7
SW5	19	10.0	9.0
SW6	25	6.7	8.5
SW7	9	6.3	5.5
SW8	22	10.3	21.5
SW9	15	1.5	2.6
SW10	28	7.3	11.7
SW11	19	8.0	2.5
SW12	24	4.8	1.7
SW13	29	13.0	11.6
SW14	25	10.7	5.2
SW15	27	9.2	5.1

Discussion

Diversity & abundance

This survey work has shown that the Phoenix Park continues to support large numbers as well as a great diversity of birds, including a variety of residents and winter migrants. The total number of species recorded represents roughly 41% of all species regularly occurring in Ireland in winter.

Previous observations in the park have indicated that a variety of other species may also be present. S. Geraty (*in litt.*) reported the presence of both Long-eared Owls *Asio otus* and Barn Owls *Tyto alba*. Both species are nocturnal and difficult to survey. Neither was recorded during the present surveys, and no owl pellets were found during searches during this survey.

Light-bellied Brent Geese were recorded flying over the park. Ireland plays host to almost the entire population which breeds in high-arctic Canada, and which has been expanding considerably in recent years. Their numbers continue to increase and their grassland feeding range continues to expand also. It was surprising that they were not recorded on some of the pitches within the Phoenix Park. Tighter mowing regimes in part of the 15 Acres in future years may render these grasslands suitable for feeding in future winters.

Little Egret was only recorded in flight over the park. They have been observed using the Zoo during the summers in the past (Steve Newton pers comm.) and it is possible that they may well be breeding there in the future. But as yet there is no information on the presence of heronries.

Birds of conservation concern in Ireland and Europe

There has been much change to Ireland's landscape over the past century, especially with the intensification of agriculture since the early 1970s, and increased afforestation. Birds and other wildlife

have had to either adapt to these changes, or shift in range. A recently complete bird atlas (Balmer *et al.* 2013) has shown ongoing change in the distribution and abundance of several species, especially declines in farmland birds and shifting distributions in several breeding migrants (Sharrock 1976, Gibbons *et al.* 1993, Balmer *et al.* 2013). The last assessment of species of conservation concern in Ireland (Colhoun and Cummins 2013) has shown 37 species that are of high conservation concern and which are Red-listed, and a further 89 species that are of medium conservation concern (Amber-listed).

This survey has shown that the Phoenix Park supports a 10 Red-listed species and a further 18 Amber – listed species. The Red-listed species are largely waterbirds, and include three duck species, three waders and two gulls. The two terrestrial species, Grey Wagtail and Meadow Pipit, have been red-listed because of unusually steep rates of decline since 2008 (Crowe *et al.* 2014) caused by the exceptionally cold winters between 2009/ 10 and 2011/12 inclusive.

Variation in species diversity and abundance throughout the park

Consistent with the former surveys undertaken in 2007/ 08, there was considerable variation in bird species richness and abundance throughout the Phoenix Park. It is not too surprising that the sections with waterbodies supported the greatest diversity and abundance of birds, given the relatively high numbers of waterbird species present, most of which are entirely dependent on waterbodies, and are highly congregatory. As before, the high densities was not restricted to the waterbirds, and high densities of several other species were reported from these sections, most notably Jackdaws and Chaffinches, due to a combination of provisioning of food, especially spilt grain, to animals, production of manure by herbivores, compost spreading in certain areas which would naturally enhance invertebrate communities, and predator control.

The abundance of woodland, particularly broad-leaved, situated in the middle of this city park was illustrated by the relatively widespread distribution of many woodland specialists such as Jay and Treecreeper, and a prevalence of woodland generalists such as the tit species. But again the paucity of undergrowth throughout the park was also reflected in the limited records of Dunnock, a species that is typically very widespread in Ireland, yet was recorded in just nine sections.

Also consistent with the last winter survey, the open grassland sections supported small numbers and few species. However, the importance of this habitat and maintaining a diverse density of swards is unquestionable. These grassland sections were used by many grassland specialists such as Golden Plover, Lapwing, Skylark and Meadow Pipit.



Plate 3. Dunnock is highly widespread in Ireland but was surprisingly sparse throughout the park owing to its dependence on scrub vegetation.



Plate 4. Long-tailed Tit flocks are a pleasant addition, and were present in a maximum of 19 sections, reflecting the abundance of woodland vegetation throughout the park.

Change between 2007/08 and 2014/15

The winter bird populations present in the Phoenix Park in 2014/ 15 were more diverse and more numerous when compared with the baseline survey in 2007/ 08. Furthermore, bird densities showed an increase in marginally more sections than those which showed declines.

However, it must be noted that flocks in winter are highly variable and transitory and much less consistent than during the breeding season when pairs are holding territories and movements are much more restricted. In this respect, the results of a follow-up breeding survey will give a truer reflection on whether or not there has been a genuine increase in bird diversity and abundance within the park.

Further, winter flocks are extremely highly influenced by winter conditions. For example, it is known that particularly cold winters can cause significant movements of birds (Wernham *et al.* 2002), with migrants continuing west and south in search of milder conditions. During such cold winters, there is often an increase in numbers in gardens of small-bodied residents (Garden Bird Survey data unpublished). However, neither winter (2007/ 08 or 2014/ 15) was especially extreme and the current winter was drier and slightly colder than that in 2007/ 08 (Met Éireann 2007¹, 2015²).

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¹ <http://www.met.ie/climate/MonthlyWeather/clim-2008-win.pdf>

² <http://www.met.ie/climate/MonthlyWeather/clim-2015-win.pdf>

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Appendix

The distribution of all bird species recorded this winter survey, indicating the section and the totals present during the early and late visits (early, late).

NE1

Blackbird (2, 1)
Blue Tit (7, 14)
Chaffinch (0, 4)
Coal Tit (1, 3)
Dunnock (0, 1)
Goldcrest (5, 7)
Goldfinch (9, 2)
Great Tit (2, 4)
Hooded Crow (2, 1)
Jackdaw (23, 8)
Jay (2, 0)
Lesser Redpoll (0, 0)
Long-tailed Tit (0, 2)
Magpie (6, 2)
Raven (1, 0)
Robin (2, 1)
Treecreeper (0, 4)
Woodpigeon (3, 5)
Wren (3, 3)

NE2

Blackbird (3, 0)
Black-headed Gull (2, 2)
Blue Tit (2, 18)
Chaffinch (0, 5)
Coal Tit (0, 3)
Dunnock (0, 4)
Goldcrest (0, 4)
Great Tit (0, 1)
Herring Gull (0, 2)
Hooded Crow (13, 22)
Jackdaw (31, 62)
Jay (1, 6)
Long-tailed Tit (7, 3)
Magpie (20, 0)
Meadow Pipit (2, 15)
Mistle Thrush (1, 4)
Moorhen (1, 1)
Raven (1, 0)
Redwing (0, 2)
Robin (0, 2)
Rook (27, 15)
Song Thrush (0, 1)
Sparrowhawk (0, 1)
Starling (65, 44)
Treecreeper (0, 1)
Woodpigeon (13, 24)

NE3

Blackbird (7, 9)
Blue Tit (5, 15)
Chaffinch (0, 2)
Coal Tit (0, 5)
Goldcrest (3, 2)
Great Tit (0, 10)
Greenfinch (2, 0)
Grey Wagtail (0, 1)
Hooded Crow (4, 1)
Jackdaw (42, 54)
Kestrel (0, 1)
Long-tailed Tit (0, 6)
Magpie (7, 12)
Mistle Thrush (0, 3)
Robin (2, 4)
Rook (4, 13)
Starling (1, 0)
Treecreeper (3, 5)
Woodpigeon (9, 23)

NE4

Blackbird (18, 10)
Black-headed Gull (1, 0)
Blue Tit (14, 19)
Chaffinch (52, 11)
Coal Tit (5, 4)
Dunnock (0, 1)
Goldcrest (2, 2)
Goldfinch (0, 17)
Great Tit (3, 5)
Greenfinch (234, 10)
Herring Gull (0, 0)
Hooded Crow (12, 10)
Jackdaw (88, 59)
Jay (0, 1)
Lesser Redpoll (4, 0)
Long-tailed Tit (0, 2)
Magpie (8, 12)
Mistle Thrush (4, 4)
Redwing (0, 1)
Robin (4, 9)
Rook (0, 4)
Siskin (1, 0)
Song Thrush (5, 2)
Starling (77, 15)
Treecreeper (1, 1)
Woodpigeon (14, 23)
Wren (1, 1)

NE5

Blackbird (9, 8)
Blue Tit (2, 5)
Bullfinch (0, 2)
Buzzard (0, 0)
Chaffinch (5, 1)
Coal Tit (1, 2)
Feral pigeon (2, 1)
Goldcrest (1, 1)
Goldfinch (0, 2)
Great Tit (0, 3)
Hooded Crow (6, 0)
Jackdaw (28, 8)
Long-tailed Tit (0, 3)
Magpie (5, 1)
Mistle Thrush (3, 0)
Pheasant (1, 0)
Robin (1, 2)
Song Thrush (0, 1)
Treecreeper (0, 1)
Woodpigeon (28, 13)
Wren (3, 1)

NE6

Blackbird (22, 17)
Blue Tit (14, 20)
Bullfinch (0, 1)
Buzzard (0, 2)
Chaffinch (10, 14)
Coal Tit (14, 4)
Dunnock (1, 1)
Feral pigeon (15, 0)
Goldcrest (2, 5)
Goldfinch (0, 4)
Great Tit (3, 14)
Greenfinch (0, 15)
Hooded Crow (2, 4)
Jackdaw (20, 24)
Jay (1, 1)
Long-tailed Tit (8, 2)
Magpie (13, 25)
Mistle Thrush (0, 8)

Robin (5, 18)
Siskin (0, 3)
Song Thrush (0, 4)
Sparrowhawk (0, 1)
Treecreeper (2, 4)
Woodpigeon (48, 20)
Wren (6, 7)

NE7

Blackbird (2, 0)
Blue Tit (8, 30)
Chaffinch (2, 1)
Coal Tit (0, 2)
Goldcrest (2, 2)
Goldfinch (0, 0)
Great Tit (4, 7)
Greenfinch (0, 0)
Hooded Crow (0, 1)
Jackdaw (19, 30)
Jay (6, 1)
Long-tailed Tit (20, 0)
Magpie (2, 0)
Meadow Pipit (0, 3)
Mistle Thrush (0, 1)
Robin (1, 1)
Song Thrush (0, 1)
Treecreeper (3, 0)
Woodpigeon (4, 4)
Wren (2, 2)

NE8

Blackbird (8, 12)
Blackcap (1, 0)
Blue Tit (17, 19)
Brent Goose (light-bellied) (0, 0)
Bullfinch (1, 1)
Chaffinch (4, 3)
Coal Tit (1, 0)
Collared Dove (1, 0)
Goldcrest (3, 3)
Goldfinch (2, 2)
Great Tit (2, 2)
Greenfinch (4, 0)
Grey Wagtail (1, 0)
Hooded Crow (2, 2)
House Sparrow (1, 0)
Jackdaw (20, 24)
Lesser Redpoll (8, 0)
Long-tailed Tit (20, 2)
Magpie (5, 4)
Mistle Thrush (0, 2)
Pied Wagtail (0, 1)
Redwing (3, 5)
Robin (4, 3)
Song Thrush (2, 4)
Starling (14, 1)
Treecreeper (2, 3)
Woodpigeon (15, 7)
Wren (1, 0)

NE9

Blackbird (30, 30)
Blackcap (1, 0)
Black-headed Gull (6, 0)
Blue Tit (28, 37)
Bullfinch (0, 2)
Buzzard (2, 1)
Chaffinch (25, 13)
Coal Tit (12, 9)
Collared Dove (1, 2)
Coot (2, 2)

Feral pigeon (4, 0)	Robin (14, 13)	Blue Tit (11, 22)
Goldcrest (5, 3)	Rook (0, 1)	Bullfinch (0, 1)
Goldfinch (1, 8)	Shoveler (4, 2)	Chaffinch (2, 13)
Great Tit (9, 20)	Siskin (6, 0)	Coal Tit (0, 1)
Greenfinch (2, 8)	Song Thrush (0, 2)	Coot (3, 5)
Grey Heron (0, 1)	Treecreeper (0, 1)	Feral pigeon (3, 0)
Herring Gull (0, 0)	Tufted Duck (37, 0)	Goldcrest (0, 7)
Hooded Crow (4, 11)	Woodpigeon (7, 11)	Goldfinch (3, 5)
Jackdaw (76, 77)	Wren (0, 4)	Great Tit (2, 7)
Little Grebe (1, 0)	NE12	Greenfinch (2, 1)
Long-tailed Tit (8, 9)	Black-headed Gull (31, 1)	Herring Gull (2, 0)
Magpie (15, 16)	Blue Tit (6, 7)	Hooded Crow (2, 1)
Mallard (2, 0)	Chaffinch (0, 8)	Jackdaw (79, 18)
Mistle Thrush (2, 3)	Coal Tit (1, 2)	Jay (1, 0)
Moorhen (3, 2)	Great Tit (2, 1)	Little Grebe (1, 0)
Pied Wagtail (1, 0)	Greenfinch (2, 0)	Long-tailed Tit (4, 11)
Raven (2, 0)	Herring Gull (0, 2)	Magpie (17, 11)
Robin (13, 32)	Hooded Crow (4, 2)	Mallard (15, 9)
Rook (2, 0)	Jackdaw (39, 12)	Mistle Thrush (0, 4)
Siskin (0, 1)	Long-tailed Tit (0, 3)	Moorhen (10, 5)
Song Thrush (0, 1)	Magpie (21, 0)	Mute Swan (1, 2)
Sparrowhawk (1, 0)	Meadow Pipit (0, 16)	Redwing (0, 2)
Starling (1, 0)	Mistle Thrush (0, 1)	Robin (6, 10)
Treecreeper (0, 4)	Robin (0, 1)	Rook (12, 1)
Tufted Duck (5, 17)	Rook (6, 2)	Song Thrush (1, 0)
Woodpigeon (72, 49)	Song Thrush (0, 1)	Sparrowhawk (0, 1)
Wren (2, 11)	Starling (0, 1)	Starling (1, 0)
NE10	Treecreeper (2, 0)	Treecreeper (0, 3)
Blackbird (4, 2)	Woodpigeon (44, 21)	Tufted Duck (2, 0)
Black-headed Gull (0, 1)	NE13	Woodpigeon (23, 15)
Blue Tit (4, 13)	Bahama Pintail (0, 1)	Wren (3, 5)
Chaffinch (1, 0)	Blackbird (31, 26)	SW1
Coal Tit (1, 3)	Blackcap (1, 0)	Blackbird (0, 6)
Duncock (1, 0)	Black-headed Gull (65, 75)	Black-headed Gull (0, 4)
Goldcrest (0, 2)	Blue Tit (12, 17)	Blue Tit (7, 23)
Great Tit (3, 6)	Bullfinch (0, 2)	Chaffinch (2, 1)
Herring Gull (0, 0)	Chaffinch (73, 28)	Coal Tit (0, 8)
Hooded Crow (0, 1)	Coal Tit (5, 0)	Goldcrest (6, 2)
Jackdaw (7, 14)	Common Gull (1, 0)	Great Tit (4, 8)
Long-tailed Tit (0, 3)	Coot (36, 29)	Herring Gull (0, 0)
Magpie (2, 0)	Duncock (0, 1)	Hooded Crow (7, 2)
Meadow Pipit (0, 4)	Feral pigeon (39, 37)	Jackdaw (77, 44)
Redwing (0, 0)	Goldcrest (6, 2)	Jay (5, 0)
Robin (1, 0)	Goldfinch (8, 4)	Long-tailed Tit (6, 0)
Treecreeper (1, 1)	Great Tit (5, 4)	Magpie (9, 0)
Woodpigeon (12, 7)	Grey Heron (6, 4)	Meadow Pipit (0, 6)
Wren (1, 1)	Grey Wagtail (0, 1)	Mistle Thrush (2, 5)
NE11	Herring Gull (7, 3)	Robin (0, 5)
Bahama Pintail (0, 153)	Hooded Crow (5, 2)	Treecreeper (1, 3)
Blackbird (10, 9)	House Sparrow (10, 25)	Woodpigeon (25, 6)
Black-headed Gull (64, 155)	Jackdaw (97, 86)	Wren (2, 1)
Blue Tit (1, 7)	Lesser Redpoll (2, 0)	SW2
Bullfinch (1, 0)	Linnet (0, 2)	Blackbird (7, 6)
Chaffinch (5, 6)	Long-tailed Tit (17, 11)	Blue Tit (0, 9)
Coal Tit (0, 1)	Magpie (22, 17)	Buzzard (0, 1)
Collared Dove (2, 0)	Mallard (114, 72)	Chaffinch (5, 6)
Common Gull (0, 1)	Mistle Thrush (3, 4)	Coal Tit (1, 2)
Coot (19, 19)	Moorhen (34, 21)	Goldcrest (1, 3)
Duncock (0, 1)	Mute Swan (3, 3)	Great Tit (0, 2)
Feral pigeon (1, 0)	Pied Wagtail (1, 2)	Hooded Crow (3, 2)
Goldcrest (0, 2)	Pochard (1, 0)	Jackdaw (6, 13)
Great Tit (1, 4)	Redwing (0, 5)	Long-tailed Tit (0, 6)
Greenfinch (1, 0)	Robin (6, 11)	Magpie (2, 2)
Grey Heron (2, 1)	Rook (12, 0)	Mistle Thrush (2, 0)
Herring Gull (1, 39)	Siskin (4, 0)	Pheasant (1, 0)
Hooded Crow (4, 7)	Song Thrush (4, 1)	Robin (4, 10)
Jackdaw (111, 64)	Starling (31, 0)	Song Thrush (0, 1)
Little Grebe (0, 2)	Treecreeper (2, 0)	Treecreeper (0, 1)
Long-tailed Tit (4, 0)	Tufted Duck (189, 6)	Woodcock (1, 0)
Magpie (16, 16)	Woodpigeon (5, 15)	Woodpigeon (10, 19)
Mallard (36, 35)	Wren (4, 4)	Wren (4, 9)
Moorhen (20, 23)	NE14	SW3
Mute Swan (0, 1)	Blackbird (13, 17)	Blackbird (4, 6)
Pochard (19, 24)	Black-headed Gull (78, 27)	Blue Tit (9, 11)

Bullfinch (1, 0)	Bullfinch (2, 0)	Blue Tit (16, 26)
Buzzard (0, 1)	Buzzard (0, 0)	Buzzard (2, 1)
Chaffinch (1, 26)	Chaffinch (0, 2)	Chaffinch (13, 3)
Coal Tit (5, 6)	Coal Tit (1, 9)	Coal Tit (15, 9)
Goldcrest (1, 1)	Coot (2, 3)	Common Gull (0, 1)
Goldfinch (0, 1)	Goldcrest (2, 2)	Duncock (1, 1)
Great Tit (5, 11)	Great Tit (2, 7)	Goldcrest (5, 7)
Greenfinch (3, 0)	Hooded Crow (4, 2)	Goldfinch (0, 2)
Hooded Crow (3, 28)	Jackdaw (2, 24)	Great Tit (11, 10)
Jackdaw (35, 31)	Little Grebe (1, 0)	Herring Gull (0, 0)
Jay (0, 2)	Long-tailed Tit (6, 2)	Hooded Crow (14, 13)
Long-tailed Tit (0, 2)	Magpie (2, 2)	Jackdaw (32, 52)
Magpie (5, 4)	Mallard (21, 28)	Jay (1, 7)
Mistle Thrush (3, 2)	Mistle Thrush (2, 1)	Long-tailed Tit (12, 16)
Pheasant (2, 1)	Moorhen (0, 3)	Magpie (13, 8)
Robin (1, 3)	Redwing (8, 0)	Meadow Pipit (0, 3)
Rook (1, 0)	Robin (3, 5)	Mistle Thrush (1, 10)
Song Thrush (1, 2)	Siskin (0, 1)	Redwing (2, 20)
Treecreeper (0, 2)	Song Thrush (0, 2)	Robin (27, 20)
Woodpigeon (80, 27)	Treecreeper (0, 3)	Rook (0, 5)
Wren (3, 1)	Tufted Duck (0, 1)	Siskin (0, 1)
SW4	Woodpigeon (16, 5)	Song Thrush (1, 5)
Blackbird (7, 13)	Wren (1, 0)	Starling (0, 12)
Black-headed Gull (3, 6)	SW7	Treecreeper (1, 5)
Blue Tit (5, 22)	Blue Tit (1, 1)	Woodpigeon (42, 125)
Chaffinch (2, 4)	Goldcrest (0, 2)	Wren (6, 6)
Coal Tit (0, 1)	Hooded Crow (3, 4)	SW11
Coot (4, 4)	Jackdaw (31, 15)	Black-headed Gull (3, 0)
Goldcrest (3, 1)	Magpie (2, 6)	Blue Tit (13, 21)
Great Tit (2, 3)	Mistle Thrush (0, 4)	Chaffinch (2, 2)
Grey Heron (1, 0)	Robin (0, 1)	Chiffchaff (0, 1)
Hooded Crow (21, 16)	Treecreeper (0, 1)	Coal Tit (4, 2)
Jackdaw (30, 29)	Woodpigeon (4, 2)	Goldcrest (5, 2)
Jay (4, 1)	SW8	Great Tit (9, 9)
Long-tailed Tit (8, 0)	Blackbird (11, 0)	Hooded Crow (11, 12)
Magpie (7, 5)	Blue Tit (10, 45)	Jackdaw (57, 0)
Mallard (42, 40)	Chaffinch (5, 16)	Jay (2, 0)
Mandarin (0, 5)	Coal Tit (1, 4)	Magpie (15, 0)
Mistle Thrush (6, 6)	Goldcrest (4, 10)	Meadow Pipit (0, 25)
Moorhen (9, 9)	Goldfinch (0, 5)	Mistle Thrush (6, 0)
Robin (3, 2)	Great Tit (4, 21)	Redwing (95, 0)
Rook (2, 2)	Greenfinch (0, 5)	Robin (0, 4)
Siskin (1, 6)	Herring Gull (0, 1)	Starling (1, 0)
Song Thrush (1, 1)	Hooded Crow (9, 0)	Treecreeper (1, 0)
Sparrowhawk (1, 1)	Jackdaw (29, 64)	Woodpigeon (63, 10)
Starling (1, 4)	Jay (0, 1)	Wren (0, 1)
Teal (0, 2)	Long-tailed Tit (0, 11)	SW12
Treecreeper (0, 1)	Magpie (5, 0)	Blackbird (0, 1)
Tufted Duck (3, 2)	Meadow Pipit (0, 19)	Black-headed Gull (33, 0)
Woodpigeon (21, 47)	Mistle Thrush (0, 7)	Blue Tit (10, 6)
Wren (3, 2)	Redwing (0, 7)	Chaffinch (1, 8)
SW5	Robin (5, 15)	Coal Tit (2, 3)
Blackbird (4, 5)	Song Thrush (0, 6)	Common Gull (11, 0)
Blue Tit (12, 37)	Treecreeper (2, 1)	Cormorant (0, 0)
Coal Tit (4, 4)	Woodpigeon (32, 13)	Goldcrest (3, 2)
Goldcrest (1, 4)	Wren (3, 0)	Golden Plover (0, 2)
Great Tit (0, 13)	SW9	Goldfinch (2, 0)
Hooded Crow (49, 3)	Black-headed Gull (2, 15)	Great Tit (7, 10)
Jackdaw (90, 45)	Blue Tit (0, 1)	Grey Wagtail (0, 1)
Jay (2, 0)	Buzzard (0, 0)	Hooded Crow (6, 3)
Magpie (8, 0)	Common Gull (3, 3)	Jackdaw (69, 4)
Meadow Pipit (0, 12)	Hooded Crow (30, 5)	Jay (2, 0)
Mistle Thrush (0, 11)	Jackdaw (41, 48)	Magpie (15, 12)
Redwing (0, 5)	Lapwing (1, 0)	Meadow Pipit (2, 0)
Robin (0, 4)	Magpie (9, 1)	Mistle Thrush (3, 5)
Rook (2, 0)	Meadow Pipit (12, 28)	Redwing (0, 16)
Song Thrush (0, 1)	Mistle Thrush (1, 1)	Robin (1, 0)
Starling (0, 2)	Raven (2, 0)	Rook (19, 1)
Treecreeper (0, 2)	Rook (33, 146)	Treecreeper (0, 2)
Woodpigeon (2, 9)	Skylark (3, 4)	Woodpigeon (59, 10)
Wren (2, 0)	Snipe (0, 1)	Wren (1, 0)
SW6	Woodpigeon (3, 0)	SW13
Blackbird (11, 4)	Blackbird (44, 38)	Blackbird (41, 25)
Blue Tit (0, 5)	Black-headed Gull (0, 9)	Black-headed Gull (4, 1)

Blue Tit (34, 49)
 Bullfinch (6, 2)
 Chaffinch (22, 4)
 Coal Tit (11, 7)
 Dunnock (2, 1)
 Feral pigeon (4, 0)
 Goldcrest (3, 13)
 Goldfinch (0, 4)
 Great Tit (30, 19)
 Greenfinch (1, 0)
 Grey Wagtail (0, 0)
 Herring Gull (7, 5)
 Hooded Crow (7, 6)
 Jackdaw (118, 92)
 Jay (0, 3)
 Long-tailed Tit (5, 15)
 Magpie (29, 0)
 Meadow Pipit (1, 36)
 Mistle Thrush (1, 10)
 Raven (0, 1)
 Robin (17, 17)
 Rook (1, 21)
 Song Thrush (4, 1)
 Starling (0, 7)
 Treecreeper (0, 4)
 Woodpigeon (88, 49)
 Wren (16, 10)

SW14

Blackbird (19, 10)
 Black-headed Gull (5, 1)
 Blue Tit (9, 16)
 Chaffinch (9, 7)
 Coal Tit (3, 8)
 Collared Dove (1, 1)
 Goldcrest (3, 1)
 Goldfinch (1, 5)
 Great Tit (5, 3)
 Greenfinch (4, 1)
 Hooded Crow (7, 5)
 Jackdaw (57, 13)
 Jay (2, 0)
 Long-tailed Tit (2, 10)
 Magpie (14, 17)
 Mistle Thrush (5, 3)
 Redwing (15, 1)
 Robin (7, 6)
 Rook (17, 0)
 Siskin (0, 1)
 Song Thrush (1, 2)
 Starling (0, 2)
 Treecreeper (2, 6)
 Woodpigeon (91, 18)
 Wren (12, 5)

SW15

Blackbird (7, 0)
 Black-headed Gull (11, 11)
 Blue Tit (14, 42)
 Chaffinch (2, 5)
 Coal Tit (1, 4)
 Common Gull (0, 4)
 Coot (2, 0)
 Goldcrest (4, 3)
 Great Tit (6, 10)
 Grey Heron (0, 4)
 Herring Gull (2, 1)
 Hooded Crow (5, 9)
 Jackdaw (55, 24)
 Jay (1, 1)
 Little Egret (0, 0)
 Long-tailed Tit (3, 0)
 Magpie (11, 0)
 Mallard (7, 0)
 Meadow Pipit (0, 8)
 Mistle Thrush (6, 8)

Moorhen (9, 2)
 Robin (2, 2)
 Rook (46, 6)
 Song Thrush (2, 0)
 Starling (85, 0)
 Woodpigeon (34, 22)
 Wren (0, 2)