

## BREEDING BIRD CENSUS

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Since 2003, we have been carrying out a census of the birds present in the breeding season in three areas around the shores of Lough Carra: the Doon peninsula, the Kilkeeran peninsula and the Partry House Estate. These three locations were chosen primarily to include examples of major terrestrial habitat types: woodland, fen, grassland, scrub and hedgerow, as well as the lakeshore and aquatic habitats (such as reedbed and open water).

The main objective of this regular census is:

***To monitor the populations of bird species breeding, or possibly breeding, around Lough Carra.***

In addition, the census provides a baseline inventory of bird species occurring around the lake in April/May as well as a comparative indication of bird diversity in these areas.

The methodology used is based on a standard technique for such monitoring work when only a relative estimate of abundance (a population “index”) is wanted: each location is censused twice in the breeding season, usually in late April and late May. A fixed transect route is walked by two observers who record every bird that is positively identified by sight or by song or call within approximately 100 metres of the route. Each transect is covered at approximately the same rate and weather conditions (dry and at least partially sunny) in the early morning between 06.30 and 09.30. The same two observers have carried out this work each year so far, but the method is such that results from other experienced observers should be broadly comparable.

For further background on such methods, see Bibby et al. 1998.

### **The Transects**

1. At the Doon peninsula, the transect route starts at the small “car park” area (grid ref. M 172760), follows the track into and through the woodland to the ancient fortified wall, and then follows the path around the peninsula until returning to the fortified wall, where the transect ends. The time taken for this route is approximately 1 hour 15 minutes. The main habitats include grassland, mature deciduous woodland and scrub as well as the lakeshore and the lake itself.
2. At the Kilkeeran peninsula, the transect starts at the far end of the causeway (grid ref. M 171712) and follows the lakeshore in an anticlockwise direction, ending at the starting point. The time taken for this is approximately 1 hour 15 minutes and the main habitats include grassland, fen, scrub, hedgerow, a small area of woodland and some reedbed, as well as the lakeshore, a couple of small islands and the lake itself.

3. On the Partry House Estate, the transect starts at Partry House (grid ref. M 166695), follows a northerly direction across farmland to the woodland edge (grid ref. M 166700), turns easterly along the woodland edge to M 168700, crosses the fen to the northern tip of Creggaun wood (M 171699), follows the path through Creggaun wood, across the fen via the “stepping stones” and then follows the lakeshore around the eastern side of Moynish to the southernmost point (M 169688), after which the main path north through the woodland is taken, to join the “famine causeway” at M 169695. The route follows the causeway and then the lakeshore as far as the Keel River at M 163682, where the transect ends. This route takes around three hours to complete and in some conditions the transect is completed in two parts over two days in order to avoid continuing after about 09.30. The habitat types covered include deciduous woodland, mixed coniferous/deciduous woodland, scrub, grassland, hedgerow, fen, reedbed and the lake.

Thus, each year a total of 11 hours of transect counts is recorded.

## The Results

The data collected through these surveys are presented below. However, there are several important points that must be stressed when examining and interpreting the figures:

- Two species are specifically excluded: the Black-headed gull and Common gull, as they both breed colonially in considerable numbers on islands at the Kilkeeran peninsula.
- The count data for **both** the April and May transects for each location are combined. For this reason (and because the method is, in any case, not suitable), the figures should not be used to estimate the number of birds or pairs of a species present in the area. Thus, the figures should be used only as an **index** of abundance. For example, if 12 Great crested grebes are recorded at Kilkeeran in one year, this is the total recorded in **both** census walks combined. It does **not** indicate that there were six pairs, nor that there were three pairs (i.e. 6 birds in April and the same 6 in May). Its value lies in the fact that, if the same methodology is used each year, any change in this number may be interpreted as a change in overall abundance of this species in the areas surveyed.
- The data for those species recorded in only very small numbers must be interpreted with great caution. The methodology is such that the presence of a species that occurs in only very small numbers may well be missed in one year, but recorded in another. For example, Jays occur regularly in two of the three locations, but may well be missed in a census if the timing is such that they are in another part of the woodland during the brief census period.
- The likelihood of recording large species or those with loud vocalisations is greater than for small and/or “quiet” species. This variation is increased in those habitats or areas where observation distances are limited (especially in mature woodland). Great care should be taken, therefore, when comparing relative abundance of different species.
- In 2007 and 2014, the census was incomplete as factors beyond our control prevented the Partry transect from being carried out. This does not affect the results for Doon and Kilkeeran, but prevents compilation of totals for 2007 and 2014.
- In all years and on all transects, species may be recorded that do not breed in the area. Most of these will be passage migrants or winter visitors that have yet to leave. Golden plover and

Black-tailed godwit, for example, are sometimes recorded in considerable numbers at Kilkeeran, but they do not breed there. Care must be taken therefore, in interpreting the data for such species.

Finally, we draw your attention to the (last) table showing the totals for all transects combined. This shows some very interesting trends, in particular the decline in wader species numbers (e.g. Ringed plover down from 11 in 2003 and 2004 to just 2 in 2010 and 2011 and none in 2012), and the dramatic effects of the extremely hard winters of 2009-2010 and 2010-2011 on some of the resident small birds. Song thrushes were worst hit, with numbers down from a peak of 52 in 2004 to just 4 in 2011, but Robins were down from a maximum of 65 to a minimum of 11, blackbirds from 70 down to 34, etc., etc. However, after the exceptionally mild winters of 2011-2012 and 2012-2013, there appears to have been some recovery for some of these species. For example, blackbird, wren and robin numbers all increased substantially in 2012 over 2011.

Some species have shown the opposite trend, with numbers steadily increasing. This appears to be mainly those species breeding in association with the gull colonies at Kilkeeran: Mallard, Tufted duck and Great-crested grebe have all increased in numbers, with this increase being almost entirely on the Kilkeeran transect. Perhaps the impact of American mink predation has been reduced by the gulls? Also, blackcaps are clearly becoming more abundant with numbers approaching those of the willow warbler in some years.

## **REFERENCES**

Bibby, C., M. Jones and S. Marsden. 1998. Expedition Field Techniques: Bird Surveys. Royal Geographical Society, London.

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### Breeding Bird Census by Site

Species	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Doon	Doon	Doon	Doon	Doon	Doon	Doon	Doon	Doon	Doon	Doon	Doon
Little grebe												
Great-crested grebe				2						1		1
Cormorant		1			1			1	2		1	
Grey heron	1											
Mute swan											5	
Barnacle goose												
Wigeon												
Gadwall												
Teal												
Mallard	2	3	8			3	10	8	1	10	10	6
Shoveler												
Tufted duck						3			2			
Red-breasted merganser	2									2		4
Sparrowhawk		1										
Kestrel												
Peregrine												
Pheasant												1
Water rail												
Moorhen												
Coot												
Oystercatcher												
Ringed plover												
Golden plover												
Lapwing												
Dunlin												
Snipe											1	
Black-tailed godwit												
Whimbrel								1				
Curlew						7					1	
Redshank												
Common sandpiper												
Common tern							1	2	3	2	5	1
Woodpigeon	9	7	2	5	8	20	9	5	17	12	17	9
Collared dove												
Cuckoo	1											
Swift						1						



Linnet												
Redpoll												
Bullfinch	2	2	6	2	7	4	2	4	6	2	4	2
Reedbunting	7	7	4	12	3	4	1	3	5	5	14	5
<b>TOTAL</b>	157	168	131	150	147	166	148	115	141	175	207	175
Number of Species	27	22	20	19	19	23	20	21	24	25	27	24
	19-Apr	18-Apr	16-Apr	19-Apr	24-Apr	28-Apr	25-Apr	25-Apr	17-Apr	14-Apr	25-Apr	20-Apr
	29-May	14-May	14-May	21-May	27-May	27-May	29-May	22-May	27-May	25-May	17-May	21-May



Kingfisher												
Skylark	3	3			2	1	1	2		1	1	
Sand martin	2	4										
Swallow	3			1	1			1	1	9		1
House martin												
Meadow pipit	6	3	4	10	10	9	6	6	2	2	4	2
Grey wagtail												
Pied wagtail												
Wren	11	20	16	11	14	18	7	4	2	9	9	15
Dunnock	3	3	3	2	1							
Robin	5	2	7	13	12	14	14					4
Stonechat												
Wheatear					1							
Blackbird	20	11	25	19	25	25	23	13	9	12	4	11
Song thrush	8	6	8	6	8	7	4	2	1		1	1
Mistle thrush												
Grasshopper warbler												
Sedge warbler		1		3		4	2				1	
Whitethroat	1					2	1				1	
Blackcap						2		1	1	7	2	2
Chiffchaff												
Willow warbler	11	14	15	19	12	8	8	17	18	14	17	13
Wood warbler												
Goldcrest				1		3			1		3	1
Long-tailed tit			1							4	2	1
Coal tit						1					2	1
Blue tit	3	2	5	7		1		3			2	
Great tit				3	1		1		1		3	
Treecreeper												
Jay											2	
Magpie	2											
Jackdaw	2							2		1		2
Rook										2	5	2
Hooded crow			2	2	5	1		2	16	1	1	2
Raven												
Starling					6	10		1				
House sparrow												
Chaffinch	15	11	12	7	5	11	9	14	12	12	6	12
Greenfinch		2		1		1						
Goldfinch							3	1				



Linnet	2	10	9		4	4		2		2	3	
Redpoll				2								
Bullfinch		3	2	2			3	4	1			1
Reedbunting	15	23	22	24	9	25	20	14	7	11	9	12
<b>TOTAL</b>	<b>324</b>	<b>199</b>	<b>227</b>	<b>199</b>	<b>259</b>	<b>306</b>	<b>236</b>	<b>281</b>	<b>239</b>	<b>242</b>	<b>210</b>	<b>229</b>
Number of Species	32	27	30	31	31	34	30	32	30	29	34	33
	21-Apr	24-Apr	29-Apr	23-Apr	26-Apr	28-Apr	2-May	3-May	25-Apr	15-Apr	27-Apr	25-Apr
	28-May	18-May	15-May	30-May	29-May	27-May	30-May	28-May	31-May	20-May	25-May	28-May



Cuckoo	1		1				2				1	
Swift												
Kingfisher												
Skylark												
Sand martin		1						1		1	1	
Swallow	3	11	6	4		17	13	23	35	8	16	
House martin												
Meadow pipit				1								
Grey wagtail		1		1								
Pied wagtail		4				5	2			1	3	
Wren	30	32	36	28		32	21	14	14	24	27	
Dunnock	2	1		1						1		
Robin	40	35	38	34		23	25	19	7	19	33	
Stonechat												
Wheatear												
Blackbird	33	39	30	26		33	24	26	17	27	21	
Song thrush	11	26	25	17		22	15	11	3	4	7	
Mistle thrush	1	5	8	16		6	1	6	4	4	4	
Grasshopper warbler	1	1				1				1		
Sedge warbler	3	5	3	3		9	3	9	4	2	5	
Whitethroat				1					1			
Blackcap	8	14	5	8		13	4	8	14	22	14	
Chiffchaff	5	6	3	5		5	3	5	9	9	3	
Willow warbler	32	32	31	27		23	27	30	33	29	32	
Wood warbler												
Goldcrest	8	15	16	14		16	9	9	13	34	19	
Spotted flycatcher						7		1	1	2		
Long-tailed tit	2		3			2		4	18	11	10	
Coal tit	12	10	7	3		3	5	10	11	10	7	
Blue tit	14	13	26	20		15	6	16	16	25	8	
Great tit	10	8	13	8		6	6	4	7	24	11	
Treecreeper	2		4	2		4		1	2	4	1	
Jay				2				2	2		3	
Magpie			2			1	3	2	2	1		
Jackdaw	18	1		8		4		5	5		5	
Rook						1		3				
Hooded crow	4		3	3		8	2	1	4	4	2	
Raven							1	2				

Starling	10	18	24	7		27	11	13	11	5	11	
House sparrow												
Chaffinch	31	25	45	27		27	20	24	24	43	41	
Greenfinch									4			
Goldfinch			1			2	1			1		
Linnet												
Redpoll	2					1						
Bullfinch		5		6		6	4	3			3	
Reedbunting	11	3	9	7		8	5	7	3	7	3	
<b>TOTAL</b>	<b>351</b>	<b>377</b>	<b>391</b>	<b>331</b>	<b>-</b>	<b>406</b>	<b>266</b>	<b>333</b>	<b>317</b>	<b>387</b>	<b>342</b>	
Number of Species	33	35	34	33	-	43	35	42	36	38	35	
	22-Apr	25-Apr	24-Apr	20-22-Apr	no count	27-Apr	26-Apr	23-Apr	23-Apr	22-Apr	28-Apr	no count
	31-May	15-May	22-26 May	28-May	no count	1-Jun	24-May	23-May	28-May	27-May	26-May	no count

### Breeding Bird Census Totals

Species	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
Little grebe						4		7	4	4	1	
Great-crested grebe	9	6	11	12		25	17	22	20	15	8	
Cormorant	1	1					3	1	3	2	2	
Grey heron	1	1	1			2			1	1		
Mute swan	4		4	2		8	1	1	3	2	6	
Barnacle goose			1									
Wigeon												
Gadwall	5			1		1	2	5		4		
Teal								2	1	2		
Mallard	22	27	19	24		61	53	67	46	66	37	
Shoveler									2			
Tufted duck	21	12	21	27		73	57	70	72	72	51	
Red-breasted merganser	9									2	2	
Sparrowhawk		1				1		1				
Kestrel						1	1					
Peregrine		1										
Pheasant		1	1			3	2	3	5	1	1	
Water rail	1	1	1				1	3	1	1	1	
Moorhen		1	3	2		8	4	7	6	5	1	
Coot	7	1	11	3		8	4	13	10	12	12	
Oystercatcher			1									
Ringed plover	11	11	7	3		4		2	2		1	
Golden plover	87	33										
Lapwing	23	11	7	4		4	2	7	6	1	5	
Dunlin			2									
Snipe	9	5	5	6		3	4	8	2	7	7	
Black-tailed godwit			6								24	
Whimbrel			17			5	7	1				
Curlew						7					1	
Redshank	11	4	5	2		7	2	3	4	2	6	
Common sandpiper	4	3	4	5		4	7	7	1	2	4	
Common tern				5		2	4	14	8	2	6	
Woodpigeon	57	38	30	29		40	36	39	48	43	47	
Collared dove		1	1									
Cuckoo	3		1				2				1	

Swift						1						
Kingfisher												
Skylark	3	3				1	1	2		1	1	
Sand martin	3	5				3		1		1	1	
Swallow	7	11	6	5		17	14	24	36	17	17	
House martin												
Meadow pipit	6	3	4	11		9	6	6	2	2	4	
Grey wagtail		1		1								
Pied wagtail		4				5	2			1	4	
Wren	54	62	64	61		66	36	21	25	53	59	
Dunnock	7	4	3	6						2		
Robin	56	58	57	65		46	54	23	11	26	44	
Stonechat												
Wheatear												
Blackbird	64	64	68	53		70	56	49	34	48	42	
Song thrush	29	52	36	28		42	24	16	4	8	10	
Mistle thrush	2	5	8	16		6	1	6	4	4	4	
Grasshopper warbler	1	1				1				1		
Sedge warbler	3	6	3	6		13	5	9	4	2	6	
Whitethroat	1			1		2	1		1		1	
Blackcap	18	18	9	15		25	19	26	32	46	30	
Chiffchaff	7	11	5	7		6	4	10	10	13	7	
Willow warbler	76	69	70	68		46	65	63	71	59	77	
Wood warbler									1	1		
Goldcrest	10	22	20	21		21	12	12	19	39	29	
Spotted flycatcher						7		1	1	2		
Long-tailed tit	2	7	6			2		4	27	17	15	
Coal tit	14	15	11	5		5	5	13	16	22	12	
Blue tit	17	20	38	37		29	19	25	20	35	17	
Great tit	15	11	21	14		11	12	9	12	36	18	
Treecreeper	4		5	2		4		1	2	4	3	
Jay		1	1	4			1	2	3	2	5	
Magpie	3	1	2			1	3	3	3	1		
Jackdaw	20	1		8		5	2	9	5	3	5	
Rook	4	1				3		3		2	5	
Hooded crow	6	8	6	8		13	3	3	26	10	4	
Raven	2						1	2			1	
Starling	10	18	24	7		37	11	14	11	5	11	
House sparrow												
Chaffinch	64	48	70	50		55	45	51	45	67	67	

Greenfinch		2		1		1			5			
Goldfinch			1			2	4	1		1		
Linnet	2	10	9			4		2		2	3	
Redpoll	2			2		1						
Bullfinch	2	10	8	10		10	9	11	7	2	7	
Reedbunting	33	33	35	43		37	26	24	15	23	26	
<b>TOTALS</b>	<b>832</b>	<b>744</b>	<b>749</b>	<b>680</b>	<b>*</b>	<b>878</b>	<b>650</b>	<b>729</b>	<b>697</b>	<b>804</b>	<b>758</b>	<b>*</b>
Number of Species	51	52	49	42	*	57	47	53	49	55	52	*

\* 2007 and 2014 Totals unavailable - census incomplete