

**Knepp Castle Estate**

**Breeding Bird Survey**

**2014**

**By**

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## **1.0 INTRODUCTION**

A repeat survey of the breeding bird communities present within two areas of the Knepp Castle Estate were carried out in spring/summer 2014 following similar surveys in 2005 and 2007 – 13. The surveys were again designed to:

- Identify the bird species breeding on site and to estimate the number of territories.
- Highlight the conservation status of the bird species utilising the site.

## **2.0 METHODOLOGY**

### **2.1 Surveyor**

The surveys were carried out by Paul James who also carried out the previous surveys detailed above.

### **2.2 Field methods**

The same two transects were surveyed as in previous years: the first north of the A272 and east of Shipley Road (transect A) and the second south of Countryman Lane and west of New Barn Farm (transect B). Once again, ten visits were made to each transect between March and July. The dates on which visits were made were as follows: 5<sup>th</sup> April, 9<sup>th</sup> April, 19<sup>th</sup> April, 3<sup>rd</sup> May, 17<sup>th</sup> May, 27<sup>th</sup> May, 6<sup>th</sup> June, 11<sup>th</sup> June, 18<sup>th</sup> June and 1<sup>st</sup> July. Each visit was made in good weather, details of which were recorded on the field maps. The surveys were conducted by following the pre-established transects and recording the species encountered (by sight or sound) on large scale maps using the standard Common Birds Census species and activity codes (Marchant 1983). On completion of the surveys, the registrations were copied across onto species maps which are then used to estimate the number of territories for each species (Bibby *et al* 2000, Marchant 1983). For the purpose of this survey, a territory was defined by the presence of a singing male on two or more dates, a bird (or pair) behaving territorially on two or more dates, alarm calls from adults or food/nesting material being carried by adults.

The species order used in this report follows the 8<sup>th</sup> edition of the British List <http://www.bou.org.uk/british-list/> while the species names are the vernacular names used by British birders.

### **3.0 SURVEY RESULTS**

#### **3.1 Weather summary**

Following an exceptionally wet and stormy winter season, the weather of spring 2014 was much more benign and unexceptional. Temperatures remained broadly above average, and it was minimum temperatures that were most above average, particularly in April and May. The season brought a mix of settled spells of weather, most notably during mid-March and mid-April, but also some wetter spells. April was a wet month in the Hampshire area, while May was wetter than average for most areas, particularly north-east England.

Mean temperatures over the UK were above the long-term average in each of the spring months; May was the sixth consecutive month with above average temperatures. The overall mean temperature for spring was 9.0 °C, which is 1.3 °C above the average, and a remarkable 3.0 °C warmer than spring 2013. It was provisionally the UK's third warmest spring in a series from 1910 (with only the springs of 2007 and 2011 warmer). For Scotland it was narrowly the warmest spring in the series. Nights were often very mild and the UK had its mildest spring for minimum temperatures in a series from 1910. The number of air frosts was also among the lowest on record.

The UK overall received 105% of average spring rainfall. The rainfall pattern was variable with Hampshire the wettest area and north-east Scotland the driest, relative to average. Rainfall totals in March were rather below normal for most parts of the UK, especially East Anglia. April was also rather dry in many areas, but very wet locally in some southern counties of England. May was wetter than average for many, particularly Lincolnshire and Yorkshire and it was the wettest May in north-east England since 1979. The UK overall recorded 85% of average rainfall in March, 96% in April and 143% in May.

For spring overall, Northern Ireland, southern Scotland, and the north-west of both England and Wales were rather duller than normal, whereas the south-east of England and East Anglia were sunnier than average. For the UK overall there was 99% of average sunshine hours. March was a particularly sunny month, April was near average while May dull across the northern half of the UK.

<http://www.metoffice.gov.uk/climate/uk/summaries/2014/spring>

#### **3.2 Species recorded**

A total of 58 species was recorded in 2014 (see Appendices 1 - 4). Four 'new' species were noted (tufted duck, little grebe, coot and house martin) bringing the total for the two transects since 2005 to 87 (see Appendix 5).

#### **3.3 Species of Conservation Concern**

Of the 58 species recorded in the 2014 survey, nine were Red List Species of High Conservation Concern and 16 Amber List Species of Medium Conservation Concern as identified by the latest assessment of the status of all of the UK's 246 regularly occurring birds (Eaton *et al* 2009).

## 4.0 DISCUSSION

A comparison of the results for transect A with those for previous years shows little change in most species except for chaffinch where numbers fell to their lowest since the surveys began. This decline was also reflected in the results for transect B and is probably due to the relatively poor breeding season for this species in 2013. Numbers of robin and wren also remained at a low ebb perhaps attributable to the absence of ground cover for nesting, especially in Coate's Furzefield.

The results for transect B show the addition of four new species (tufted duck, little grebe, coot and house martin) in 2014. These were all recorded at the newly constructed pond in Brookhouse 8, a demonstration of the value of habitat creation within the re-wilding project. The number of territories for each species shows some interesting trends compared with previous years. The red listed song thrush continued its recent upward trend and numbers of chiffchaff were at their highest since the surveys began. Whitethroat numbers however continued their decline from 19 territories in 2009 to just four in 2014.

It was again pleasing to record a number of notable species of conservation concern, some of which are dealt with below:

### **Red kite** (BoCC amber list)

The only red kite sighting during this survey was of a single bird circling over Brookhouse 5 (transect B) on 19<sup>th</sup> April though a number of casual sightings from the Estate (Appendix 6) suggest that colonisation of the southern block is imminent.

### **Hobby** (Schedule 1)

Alarm calls and territorial behaviour by a pair over Bar Furzefield (transect A) on 27<sup>th</sup> May were strongly suggestive of nesting. A pair of hobbies was also noted at this site in 2011 and 2013. There were no sightings during this survey from transect B though see Appendix 6 for two casual records.

### **Peregrine** (Schedule 1)

None was recorded during the survey though see Appendix 6 for a casual record for transect B.

### **Lapwing** (BoCC red list)

A pair was present throughout the survey period in Brookhouse 8 and probably bred.

### **Turtle dove** (BoCC red list)

2014 was an exceptional year for turtle dove with a minimum of four territories along transect B, though casual records some of which are detailed in Appendix 6 suggest the presence of up to nine territories in the southern block. Knepp is probably now the main site in Sussex for this increasingly rare species though the reasons for the apparent increase in 2014 remain unclear.

### **Cuckoo** (BoCC red list)

This is a difficult bird to survey as singing birds may be encountered almost anywhere in the southern block. Nevertheless it would appear that there were three territories in the vicinity of transect B in 2014 given that up to three males were heard singing on a number of dates.

**Nightingale** (BoCC amber list)

The number of territories along transect B continues to fall with several traditional sites seemingly unoccupied and just one singing male in 2014. This is in contrast to the southern block as a whole where numbers have increased dramatically in recent years. This might suggest that some birds have re-located to new areas with the encroachment of scrub into once arable fields.

## 5.0 REFERENCES

Bibby, C.J., Burgess, N.D., Hill, D.A. & Mustoe, S. H. (2000). *Bird Census Techniques* (2nd. ed.). Academic Press, London.

Eaton MA *et al* (2009). Birds of Conservation Concern 3. The population status of birds in the United Kingdom, Channel Islands and Isle of Man. *British Birds* 102: 296 - 341.

Marchant J 1983. *BTO Common Birds Census Instructions*. Maund & Irvine, Tring.

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## Appendix 1 – List of species recorded, spring 2014

Species	BTO species code	BoCC status
Canada goose	CG	Not assessed
Mandarin duck	MN	Not assessed
Mallard	MA	Amber
Tufted duck	TU	Amber
Pheasant	PH	Not assessed
Grey heron	H	Green
Little grebe	LG	Amber
Red kite	KT	Amber
Sparrowhawk	SH	Green
Buzzard	BZ	Green
Kestrel	K	Amber
Hobby	HY	Green
Moorhen	MH	Green
Coot	CO	Green
Lapwing	L	Red
Herring gull	HG	Red
Stock dove	SD	Amber
Woodpigeon	WP	Green
Turtle dove	TD	Red
Cuckoo	CU	Red
Swift	SI	Amber
Green woodpecker	G	Amber
Great spotted woodpecker	GS	Green
Magpie	MG	Green
Jay	J	Green
Jackdaw	JD	Green
Rook	RO	Green
Carrion crow	C	Green
Raven	RN	Green
Goldcrest	GC	Green
Great tit	GT	Green
Blue tit	BT	Green
Coal tit	CT	Green
Skylark	S	Red
Swallow	SL	Amber
House martin	HM	Amber
Long-tailed tit	LT	Green
Chiffchaff	CC	Green
Willow warbler	WW	Amber
Blackcap	BC	Green
Garden warbler	GW	Green
Lesser whitethroat	LW	Green
Whitethroat	WH	Amber
Reed warbler	RW	Green
Nuthatch	NH	Green
Treecreeper	TC	Green
Wren	WR	Green



Blackbird	B	Green
Song thrush	ST	Red
Mistle thrush	M	Amber
Robin	R	Green
Nightingale	N	Amber
Dunnock	D	Amber
House sparrow	HS	Red
Chaffinch	CH	Green
Linnet	LI	Red
Bullfinch	BF	Amber
Yellowhammer	Y	Red

### **Birds of Conservation Concern (BoCC)**

- Red list species are those that are globally threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; or those that have declined historically and not shown a substantial recent recovery.
- Amber list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a significant recent recovery; rare breeders; or those with internationally important or localised populations.
- Species that fulfil none of the criteria are green listed while non-native species are not assessed (Eaton *et al* 2009).

## Appendix 2: Number of territories: Transect A

Species	Species code	2007	2008	2009	2010	2011	2012	2013	2014
Canada goose	CG	-	-	-	1	1	-	-	-
Mandarin	MN	-	-	1	-	1	-	-	-
Mallard	MA	-	-	1	1	-	-	1	-
Pheasant	PH	-	-	-	1	-	1	-	-
Buzzard	BZ	1	-	1	1	1	-	-	-
Kestrel	K	1	-	-	-	-	-	-	-
Hobby	HY	-	-	1	-	1	-	1	1
Stock dove	SD	1	2	1	1	-	-	1	-
Woodpigeon	WP	3	-	2	2	-	1	-	-
Cuckoo	CU	1	-	-	-	-	-	-	-
Little owl	LO	2	2	-	-	-	-	-	-
Green woodpecker	G	1	1	1 - 2	2	-	-	-	-
Great spotted woodpecker	GS	3	3	4	1	1	1	2	1
Magpie	MG	2	-	-	-	-	-	-	-
Jay	J	2	-	-	-	-	-	-	-
Jackdaw	JD	-	-	1	2	-	4	2	2
Carrion crow	C	-	1	-	-	-	-	1	1
Goldcrest	GC	1	4	4	1	3	2	2	3
Blue tit	BT	2	8	7	7	4	5	4	3
Great tit	GT	3	8	10	4	5	6	6	5
Coal tit	CT	1	3	1	2	1	3	1	2
Marsh tit	MT	1	2	-	2	-	-	-	-
Skylark	S	1	2	1	1	1	1	1	1
Long-tailed tit	LT	2	2	4	1	2	-	-	1
Chiffchaff	CC	4	7	8	7	7	6	4	5
Willow warbler	WW	1	1	2	1	-	-	-	-
Blackcap	BC	5	3	5	6	6	6	5	5
Garden warbler	GW	1	1	1	-	-	1	1	1
Whitethroat	WH	-	1	1	-	-	-	1	-
Nuthatch	NH	1	3	3	3	2	1	2	3
Treecreeper	TC	1	2	3	1	3	1	2	3
Wren	WR	12	21	17	10	11	10	7	8
Blackbird	B	5	2	4	1	-	2	1	3
Song thrush	ST	3	2	3	1	-	3	1	1
Mistle thrush	M	-	1	1	-	-	-	-	-
Robin	R	8	23	20	15	13	10	16	11
Dunnock	D	3	2	4	4	1	2	2	1
Chaffinch	CH	9	13	15	9	9	10	7	1
Goldfinch	GO	1	1		2	1	1	1	-
Bullfinch	BF	-	-	1	-	-	-	-	1
Yellowhammer	Y	-	1	1	-	-	1	-	-

### Appendix 3: Number of territories: Transect B

Species	Species code	2007	2008	2009	2010	2011	2012	2013	2014
Canada goose	CG	1	-	-	-	-	-	-	-
Mallard	MA	2	1	-	-	2	1	1	5
Grey partridge	P	-	-	1	-	-	-	-	-
Little grebe	LG	-	-	-	-	-	-	-	1
Common buzzard	BZ	1	1	-	1	-	-	-	-
Moorhen	MH	2	2	4	3	2	2	1	3
Stock dove	SD	1	3	-	2	2	3	1	2
Woodpigeon	WP	2	4	-	1	3	2	1	1
Collared dove	CD	-	-	1	-	-	-	-	-
Turtle dove	TD	2	2	2	2	2	1	-	4
Cuckoo	CU	2	2	3	1	1	2	1	3
Barn owl	BO	-	-	1	-	-	-	1	
Tawny owl	TO	-	-	-	-	-	1	-	-
Green woodpecker	G	4	2	1	1	-	1	-	1
Great Spotted Woodpecker	GS	2	1	1	1	1	1	1	2
Jay	J	-	2	1	-	-	1	-	-
Magpie	MG	1	2	1	1	1	-	-	-
Jackdaw	JD	1	1	1	1	2	3	7	4
Rook	RO	-	-	8	10	12	9	4	6
Carrion crow	C	-	2	-	-	1	1	1	-
Great tit	GT	3	10	8	7	9	6	6	2
Blue tit	BT	5	9	8	6	7	5	5	7
Woodlark	WL	-	2	-	-	-	1	-	-
Skylark	S	4	9	11	9	4	3	-	-
Swallow	SL	1	-	-	-	-	-	-	-
Pied wagtail	PW	-	1	-	-	-	-	-	-
Long-tailed tit	LT	1	3	1	1	3	1	1	-
Chiffchaff	CC	8	14	13	13	12	10	6	16
Willow warbler	WW	-	-	-	-	-	-	1	-
Blackcap	BC	7	9	8	9	11	7	7	8
Garden warbler	GW	5	6	6	3	7	4	4	3
Lesser whitethroat	LW	-	4	3	2	1	1	1	1
Whitethroat	WH	5	7	19	16	16	7	5	4
Reed warbler	RW	-	1	-	-	-	-	-	1
Nuthatch	NH	2	1	2	1	2	3	1	1
Treecreeper	TC		1	2			1	1	2
Wren	WR	13	16	16	12	14	11	12	20
Blackbird	B	4	6	7	7	2	5	6	6
Song thrush	ST	4	4	3	4	6	5	6	7
Mistle thrush	MT	-	1	-	1	1	-	-	1
Robin	R	5	21	16	14	18	19	17	20
Nightingale	N	5	4	5	4	4	4	3	1
Dunnock	D	6	12	13	5	7	7	9	6
House sparrow	HS	1	1	1	-	-	1	1	-
Chaffinch	CH	12	18	14	21	13	9	8	6

Goldfinch	GO	-	1	1	1	1	-	1	-
Linnet	LI	-	1	2	1	-	-	-	-
Bullfinch	BF	1	5	3	2	1	-	-	2
Yellowhammer	Y	3	8	6	4	2	3	1	1
Reed bunting	RB	-	2	1	1	-	-	-	-

#### Appendix 4: Additional species recorded

Species	
Canada goose	Transect B: A pair on the pond in Brookhouse 8 on 19 <sup>th</sup> April.
Tufted duck	Transect B: A pair on the pond in Brookhouse 8 on 27 <sup>th</sup> May.
Pheasant	Transect A: Recorded on six visits, max count 6 on 5 <sup>th</sup> April. Transect B: Recorded on four visits, max count 3 on 9 <sup>th</sup> April.
Grey heron	Transect A: One flew from pond in Coate's Furze field and another flying N on 5 <sup>th</sup> April. Transect B: Two singles in flight on 6 <sup>th</sup> May and another on 18 <sup>th</sup> June.
Red kite	Transect B: One circling over Brookhouse 5 on 19 <sup>th</sup> April.
Sparrowhawk	Transect B: One carrying food on 1 <sup>st</sup> July.
Buzzard	Transect A: Recorded on six visits. Max count 4 together on 9 <sup>th</sup> April. Transect B: Recorded on five visits, max count 3 on 5 <sup>th</sup> & 9 <sup>th</sup> April.
Kestrel	Transect B: One on 18 <sup>th</sup> June.
Herring gull	Transect A: Fifteen flew N on 27 <sup>th</sup> May, 1N on 6 <sup>th</sup> June. Transect B: Six flew N on 27 <sup>th</sup> May, 2 NW on 11 <sup>th</sup> June.
Swift	Transect B: Singles on 11 <sup>th</sup> & 18 <sup>th</sup> June.
Magpie	Transect A: Singles on 9 <sup>th</sup> April and 27 <sup>th</sup> May. Six together on 19 <sup>th</sup> April. Transect B: Singles on 19 <sup>th</sup> April and 6 <sup>th</sup> June.
Jay	Transect A: Singles on 5 <sup>th</sup> April and 1 <sup>st</sup> July. Transect B: Seen on seven dates with a max of three on 15 <sup>th</sup> April.
Raven	Transect B: A pair over Brookhouse 8 on 19 <sup>th</sup> April. One flew over high on 1 <sup>st</sup> July.
Marsh tit	Transect A: A pair on 5 <sup>th</sup> April but not subsequently. Last recorded in 2010.
Swallow	Transect B: Singles on 17 <sup>th</sup> & 27 <sup>th</sup> May. Eight foraging over the pond in Brookhouse 8 with house martins on 18 <sup>th</sup> June.
House martin	Transect B: Four foraging over the pond in Brookhouse 8 in 11 <sup>th</sup> June and 3 on the 18 <sup>th</sup> .
Willow warbler	Transect B: A singing male along the edge of the Wild Flower Meadow on 9 <sup>th</sup> April only was most likely a migrant.
Starling	Transect B: Two in flight on 17 <sup>th</sup> May, one in flight on 6 <sup>th</sup> June and 30 foraging in Brookhouse 6 on 11 <sup>th</sup> June.
House sparrow	Transect B: Two males near Blonks on 17 <sup>th</sup> May, one on 6 <sup>th</sup> June.
Linnet	Transect B: Singing male in Brookhouse 4 on 19 <sup>th</sup> April. Single pairs in Brookhouse 7 and 8 on 17 <sup>th</sup> May.

**Appendix 5: List of species recorded on the Knepp Castle Estate, 2005- 14**

<b>Species</b>	<b>BoCC status</b>	<b>Species</b>	<b>BoCC status</b>
Greylag goose	No status	Raven	Green
Canada goose	No status	Goldcrest	Green
Mandarin duck	No status	Firecrest	Amber
Teal	Amber	Great tit	Green
Mallard	Amber	Blue tit	Green
Tufted duck	Amber	Coal tit	Green
Pheasant	No status	Marsh tit	Red
Red-legged partridge	No status	Woodlark	Red
Grey partridge	Red	Skylark	Red
Grey heron	Green	Swallow	Amber
Little grebe	Amber	House martin	Amber
Red kite	Amber	Meadow pipit	Amber
Sparrowhawk	Green	Pied wagtail	Green
Buzzard	Green	Long-tailed tit	Green
Kestrel	Amber	Chiffchaff	Green
Hobby	Green	Willow warbler	Amber
Peregrine	Green	Blackcap	Green
Moorhen	Green	Garden warbler	Green
Coot	Green	Lesser whitethroat	Green
Lapwing	Red	Whitethroat	Amber
Green sandpiper	Amber	Reed warbler	Green
Woodcock	Amber	Nuthatch	Green
Snipe	Amber	Treecreeper	Green
Lesser black-backed gull	Amber	Wren	Green
Herring gull	Red	Starling	Red
Great black-backed gull	Amber	Blackbird	Green
Stock dove	Amber	Fieldfare	Red
Woodpigeon	Green	Song thrush	Red
Collared dove	Green	Redwing	Red
Turtle dove	Red	Mistle thrush	Amber
Cuckoo	Red	Robin	Green
Barn owl	Amber	Nightingale	Amber
Little owl	No status	Dunnoek	Amber
Tawny owl	Green	House sparrow	Red
Swift	Amber	Chaffinch	Green
Kingfisher	Amber	Brambling	Green
Green woodpecker	Amber	Greenfinch	Green
Great spotted woodpecker	Green	Goldfinch	Green
Lesser spotted woodpecker	Red	Linnet	Red
Magpie	Green	Lesser redpoll	Red
Jay	Green	Bullfinch	Amber
Jackdaw	Green	Yellowhammer	Red
Rook	Green	Reed bunting	Amber
Carrion crow	Green		

## **Appendix 6 – Casual records**

### **Red kite** (BoCC amber list)

Four together over Hammer Pond on 12<sup>th</sup> May including a pair calling and performing their courtship display (PJ, SOS).

One over the southern block on 29<sup>th</sup> June (BDJ, PJ).

### **Peregrine** ( Schedule 1)

One in flight over Wild Flower Meadow (transect B) on 27<sup>th</sup> June (SJCC, PJ).

### **Hobby** (Schedule 1)

One in flight over Woggs Bottom (transect B) on 29<sup>th</sup> June (SJCC, PJ).

One hunting high over the southern block on 30<sup>th</sup> June (CHH, JH).

### **Green sandpiper** (BoCC amber list)

A returning migrant at the pond in Brookhouse 8 on 27<sup>th</sup> June (SJCC, PJ).

### **Turtle dove**(BoCC red list)

One ‘purring’ about half-way down Wild Flower Meadow in Lower Barn field on 8<sup>th</sup> June (CHH, JH)

One ‘purring’ about half-way down Brookhouse 7 in wet area on 8<sup>th</sup> June (CHH, JH).

One ‘purring’ about a third of the way down Brookhouse 6 in wet area on 8<sup>th</sup> June (CHH, JH).

One ‘purring’ and seen perched about two-thirds of the way down Brookhouse 6 where wet area finishes on 8<sup>th</sup> June (CHH, JH).

One seen in flight over bridleway near Bentons Farm whilst walking along concrete track between Brookhouse 11 and 12 on 8<sup>th</sup> June (CHH, JH).

One ‘purring’ south of the Hammer Pond on 8<sup>th</sup> June (CHH, JH).

One ‘purring’ along the southern edge of Hammer Pond on 27<sup>th</sup> June (PJ).

At least two ‘purring’ in Brookhouse 7 vicinity on 30<sup>th</sup> June (CHH, JH).

Two birds together in flight together between Brookhouse 8 and 9 whilst we were near the pond on 30<sup>th</sup> June (CHH, JH).

### **Spotted flycatcher** (BoCC red list)

One along the western edge of Brookhouse 13 on 29<sup>th</sup> June (BDJ, PJ).

### Observers:

SJCC Simon Carter

CHH Chris Hamilton

JH John Hamilton

BDJ Bridget James

PJ Paul James