

# GREAT SPOTTED WOODPECKER

*(Dendrocopos major)*



A WELCOME ELEMENT TO OUR  
WOODLAND FAUNA





A photograph of a forest scene. In the foreground, there is a patch of green grass and some fallen branches. Behind it, a dense stand of tall, thin trees, likely beech, with light-colored bark and sparse, bare branches. The sky is clear and blue.

June 2007





September 2008













May 2009





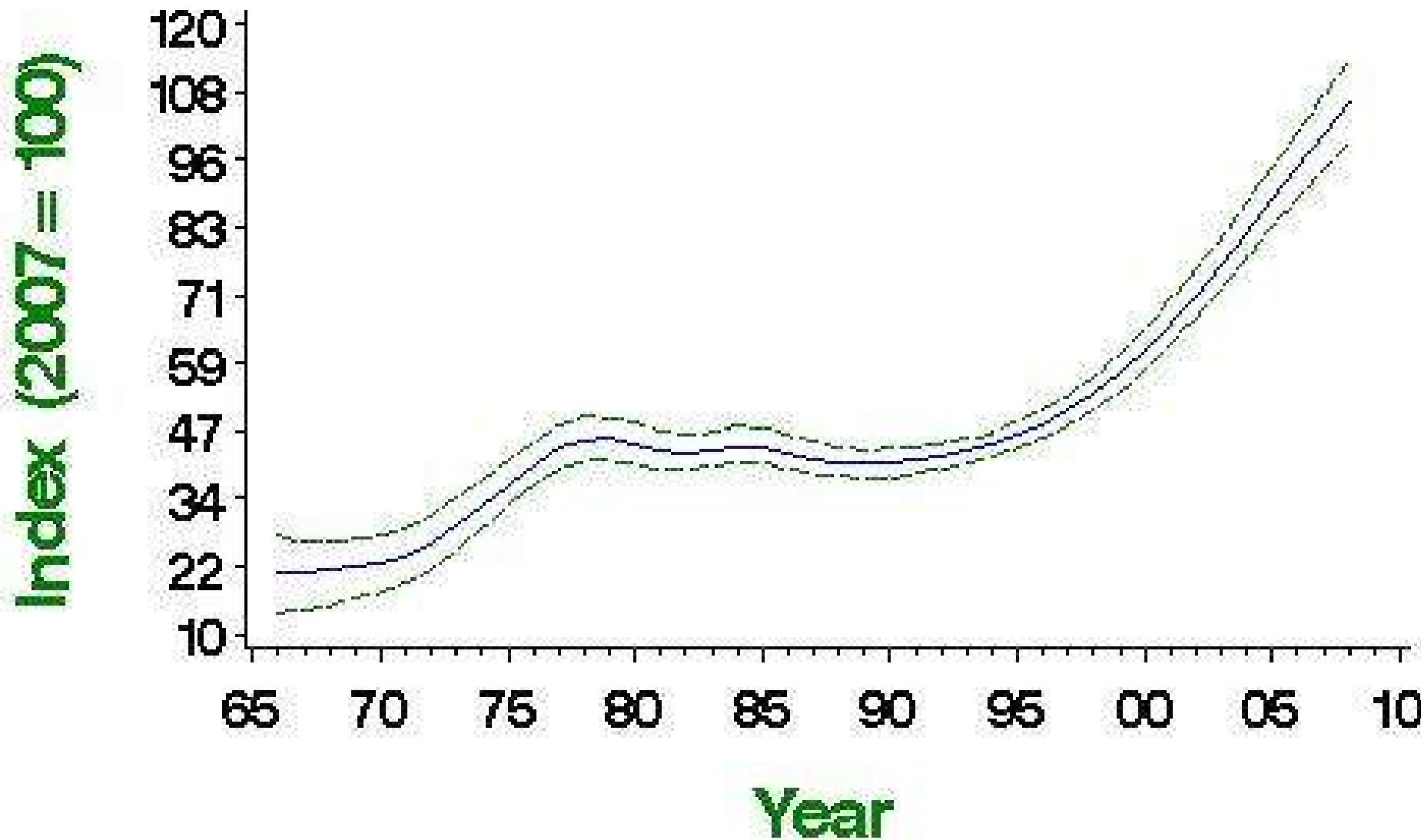






# CBC/BBS UK 1966–2008

## Great Spotted Woodpecker





2009

CSI  
Wicklow



*"I knew the woodpeckers were a mistake."*















2010

An Chomhairle Oidhreachta  
The Heritage Council





















MONSIEUR ET MADAME PHILIPPE SCHEPENS

Dear Faith.

I hope there is enough blood. Otherwise no pollen

Hope this answers  
greet  
Philip

OUARDYE  
CERVANTESLAAN 10

DENDROCOPIUS  
MAJOR JUVENILE  
RINGSITE "BRUSSELS"  
22Z03392

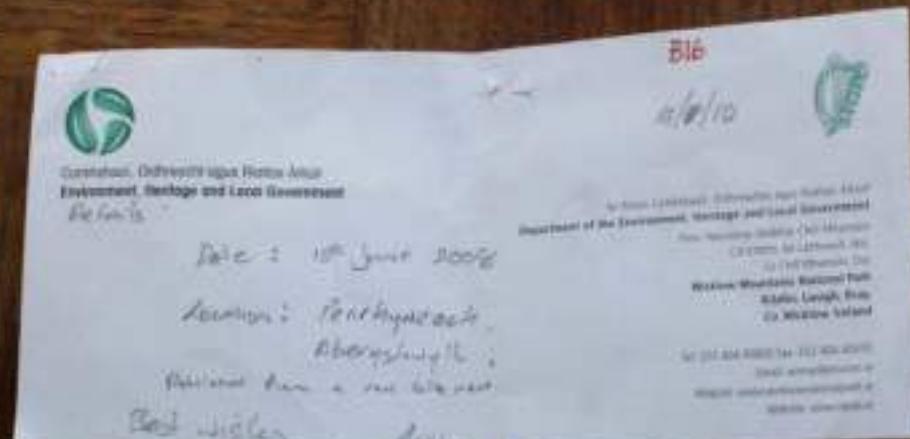
WING length 131 mm  
TAIL " 108 mm  
SCARF " 23.5 mm  
Tarsus " 23 mm

RINGSITE "OUARDYE"  
21st JUNE 2010





♂ great spotted woodpecker  
*Dendrocopos major*  
03-04-2010  
Germany





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Lynwood, Hopton Road, Garboldisham  
Diss, Norfolk, IP22 2QN

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Faith Wilson  
Ireland

8 July 2010

*Dear Faith*

**Great Spotted Woodpeckers**

Enclosed are two small fluffy breast feathers, courtesy of the dead bird bag, from the GSWO I caught today at Croxton Park, Norfolk.

Details are :-

BTO ring LB22087 on right leg

Colour combi Orange over Violet on left

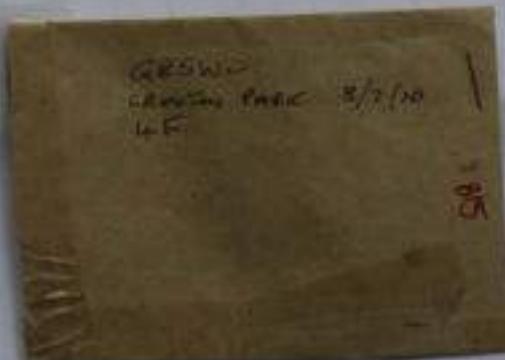
Ring Age 4

Sex F

Wing 116mm but moulting. (moult score = 5542000000)

I will try to remember BIE measurements from now on.

*Yours  
David*



Irish Great Spotted Woodpecker

Handle with CARE!

Breast and Underail covert features  
of juvenile Great Spotted Woodpecker  
that flew into window and died in care  
3 June 2010. From Finnegrague, Co. Down

Specimen held by Chris Murphy.



CHRIS MURPHY  
810  
THE OCEAN DRIVE  
BOSTON MA  
02139 USA  
T 617 451 2200  
F 617 451 2201

CHRIS MURPHY

810



*P. minor*  
111 - 74,0 gr. - Geschlecht  
2010 unbekannt

Flügel Wmax: 251,0 mm  
Teilfedes P8 107,0 mm  
Schnabel BSK 17,6 mm  
Tarsus 23,2 mm

Fundatum 01.08.2006

Fundort: Marbach



108 - 72,0 gr. - Geschlecht  
2010 unbekannt

Flügel Wmax: 129,0 mm  
Teilfedes P8: 106,0 mm  
Schnabel BSK: 22,1 mm  
Tarsus: 24,3 mm  
Schwanz: 78,0 mm

Fundatum 25.09.2007

Fundort: Benningen Neckar



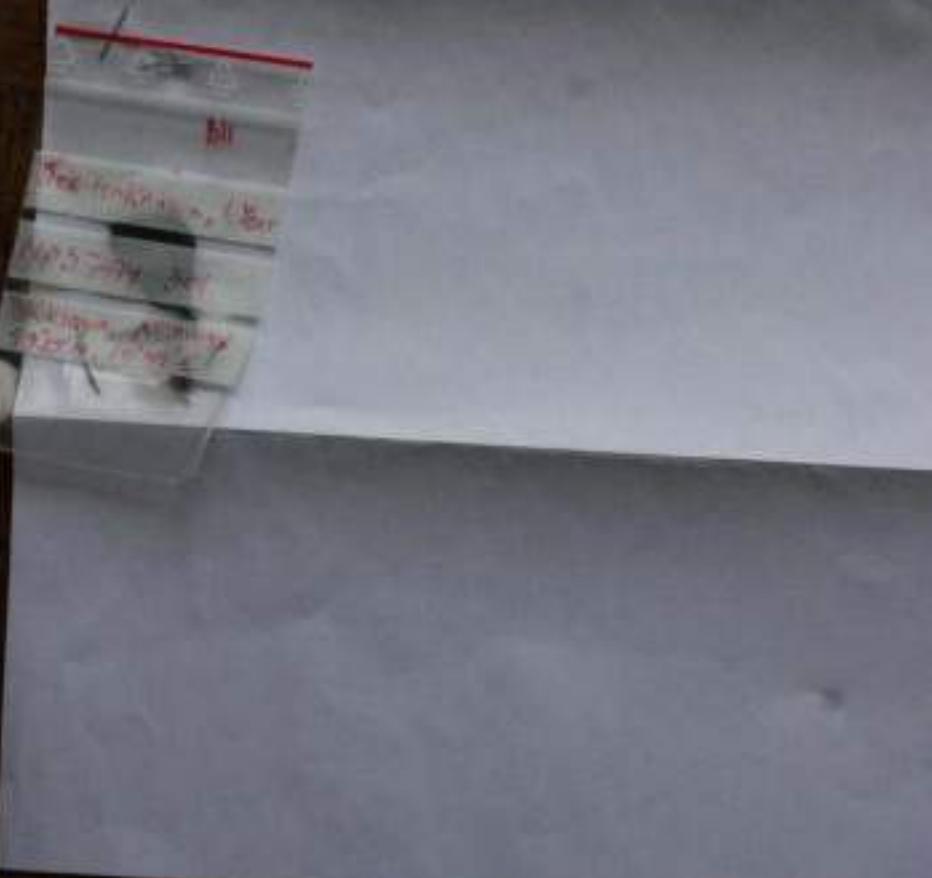
Paul Wilson

Most 16 Aug 2010

Sending you some feathers from a Great Spotted Woodpecker caught today at  
Bjørnøya Ringing Station (http://www.bjornoya.no/rua.php) located near Alnes, Ofoten, Norway. Lat 67.6, Long 14.5.  
The bird was ringed with ringing code: NOS 7474303.  
It was a young bird, 1 Year.

Yours to Ranker  
Gunnaridgata 14  
1312-Moss  
Norway

Available in English  
look at the bottom  
of the page



## SHORT REPORT

## The origins of Great Spotted Woodpeckers *Dendrocopos major* colonizing Ireland revealed by mitochondrial DNA

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**Capsule** Although necessarily based on a small number of samples, comparisons of molecular data from the newly established Great Spotted Woodpecker populations in Ireland with those in Britain and continental Europe revealed that Britain was the more likely source area of the Irish populations.

Great Spotted Woodpeckers *Dendrocopos major* were, until recently, absent as a breeding species on the island of Ireland (Winkler et al. 1995). The species is known from (unconfirmed) archaeological records from two bones in the Edenvale Cave complex in County (Co.) Clare (Scharff et al. 1926), with woodland loss thought to be responsible for the disappearance of several bird species (including *D. major*) in Ireland (Yalden & McCarthy 2004). Occasional, solitary birds have been seen/heard in Ireland (Standall 1936) but these typically occur during the winter months outside of the breeding season and specimen cases in the museum collections in the National Museum of Ireland, Natural History Division (NMNH) in Dublin. Sightings of birds during the breeding season have increased in recent years in Ireland and territorial drumming behaviour has been increasingly observed. Breeding was confirmed in Northern Ireland in 2007 (McComb et al. 2010). Consequently, sightings and observations of territorial behaviour and courtship increased in a separate area in Co. Wicklow in the east of the Republic of Ireland with breeding first confirmed in the county in May 2009 (McComb et al. 2010). A total of 18 nesting

attempts have been documented in Co. Wicklow in the last 2 years, potentially producing up to 52+ nestlings in the county (F. Wilson et al. unpubl. data).

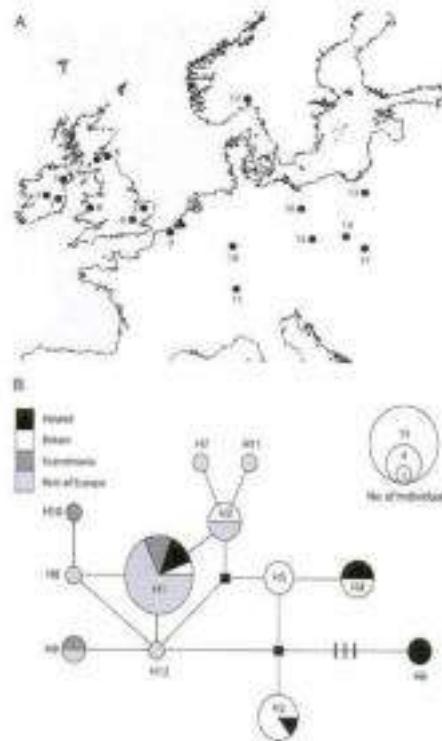
Two schools of thought currently exist on the origins of these two newly breeding populations in Ireland. One is that the species arrived from Ireland's nearest landmass, Britain, as the result of recent and rapid increases in the normally sedentary population there (Risely et al. 2008, McComb et al. 2010). Alternatively, the species could have arrived from Scandinavia because the Scandinavian birds are known to cross the North Sea when irruptive migrations occur (triggered by poor crops or pine/spruce seed and density (Lindén et al. 2011)), with individuals straying up to 3000 km (Winkler et al. 1995, Coulson & Odin 2007). To investigate this, we compared control region sequences (mitochondrial DNA (mtDNA)) from modern and museum specimens in Ireland to those from Britain and continental Europe in a phylogeographic analysis to decipher the origins of the newly established populations and past solitary vagrants in Ireland. We used control region sequences instead of previously utilized mitochondrial markers because cytochrome b and NADH dehydrogenase genes (Zink, Drovetski et al. 2002, Gutiérrez-del-Rey et al. 2007) were previously shown to be relatively uninformative in the European range of *D. major*.

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A total of 41 modern Irish, British and continental European individuals (Table 1; Fig. 1a) were collected and subjected to molecular analysis. Shed feathers were collected non-invasively from fledged nests in Ireland, and blood and feather samples were also collected from captured individuals (under license) in Ireland, Britain and continental Europe. Tissue samples were also taken from individuals found dead or from individuals recently deposited in museum collections. All modern material was collected during the breeding season, thereby reducing potential sampling of birds on migration. Furthermore, DNA extraction was attempted on tissue and feather samples taken from two isolated individuals found in Ireland in an undisclosed location in 1880 (tissue; NMNH: 1880.785.1) and in Co. Offaly (Fig. 1a) in 1950 (primary feather; NMNH: 1950.22.1). These were taken from individuals kept in the NMNH in Dublin. Details of the molecular methods and analyses are given in the supplementary material to this paper, which are available via the

**Table 1.** Map number (see Fig. 1a), locality name and country of origin for individuals (*n*) used in this study. Haplotypes (with the number of individuals in parentheses) in each locality are indicated (see Fig. 1b for haplotypes)

Map no.	Locality	Country	<i>n</i>	Haplotypes
1	Co. Wicklow	Rep. of Ireland	5	H2, H4(2), H6(2)
2	Co. Offaly (1950)	Rep. of Ireland	1	H1
-	Unknown (1880)	Rep. of Ireland	1	-
3	Co. Down	Northern Ireland	1	H1
4	Myth Bridge	Scotland	1	H3
5	North Berwick	Scotland	1	H4
-	Unknown	Scotland	1	H4
6	Herefordshire (three sites)	England	6	H2(5), H5
7	Norfolk	England	4	H1, H2, H5(2)
8	Aberystwyth	Wales	1	H3
9	Oordye Ringing Station	Belgium	2	H7, H8
10	Frankfurt	Germany	1	H1
11	Tibgenleerwald (two sites)	Switzerland	9	H1(7), H3(2)
12	Ostfold (three sites)	Norway	4	H1(2), H9, H10
13	Mazury District	Poland	1	H9
14	Krakow	Poland	1	H11
15	Sudeten Mountains	Poland	1	H1
16	Silesia	Poland	1	H1
17	Carpathian Mountains	Poland	1	H12



**Figure 1.** (a) Sampling localities of *Dendrocopos major* in Europe. See Table 1 for corresponding numbers and names of localities; (b) Median-joining network of *D. major* haplotypes in Europe. Shading corresponds to region of sampling and size to number of individuals belonging to each haplotype; vertical bars represent mutational steps when greater than one and black squares represent missing haplotypes.

Supplementary Content tab of the article's online page at <http://dx.doi.org/10.1080/00063657.2011.582619>.

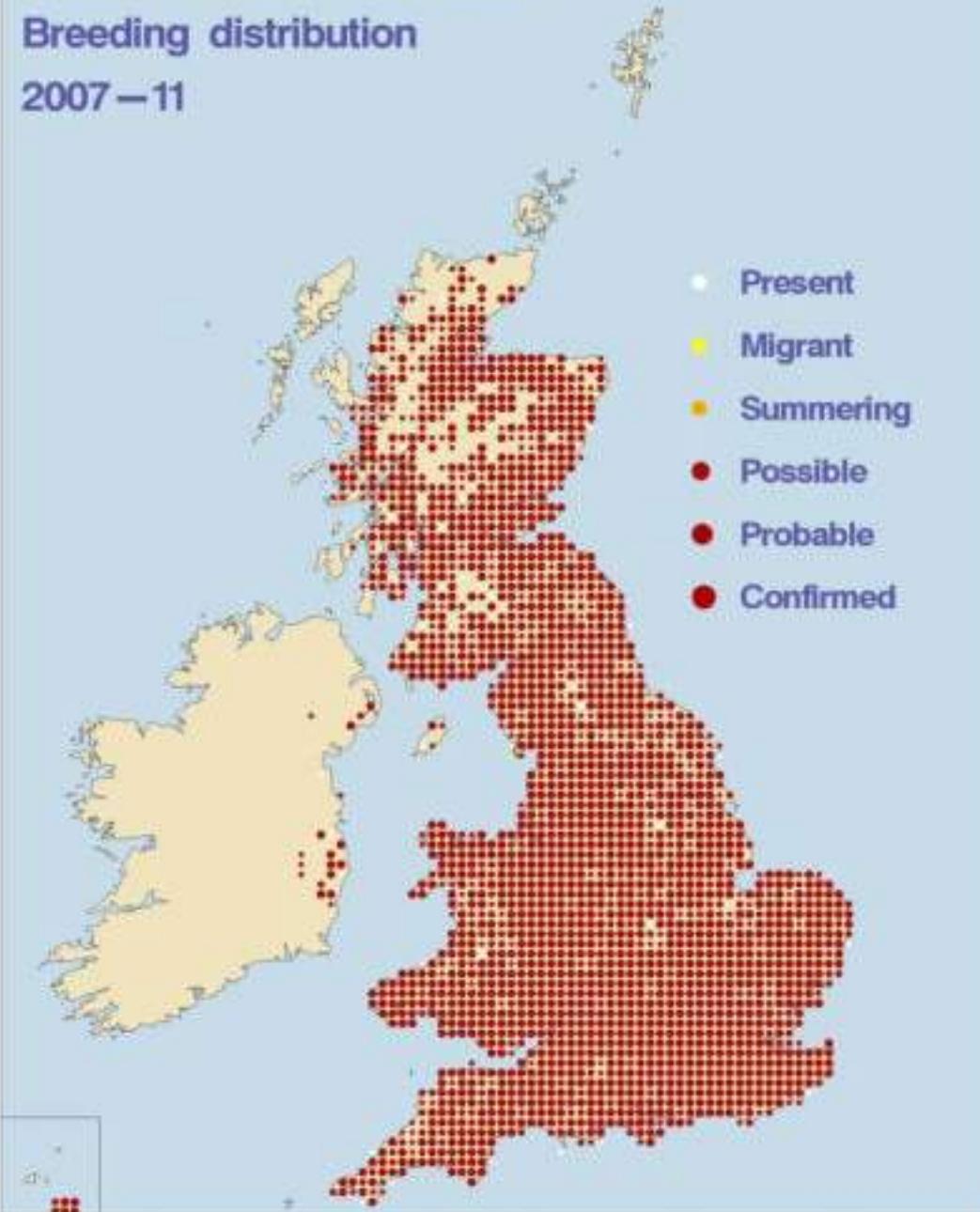
The control-region fragment was successfully amplified in 42 out of the 43 individuals. Unfortunately, the museum specimen from an undisclosed location in Ireland dated to 1880 failed to generate a fragment. Thirteen polymorphic nucleotide sites were identified from the 802 base pair (bp) fragment, which resulted in a total of 12 unique haplotypes (Genbank Accession Nos.: JF758647–JF758658) among the 43 individuals. Overall, nucleotide diversity was  $0.003 \pm 0.00029$  s.d. and haplotype diversity was  $0.834 \pm 0.043$  s.d. Overall control region diversity was low and this low level of differentiation was found on a continental scale in

- suspected
- identified

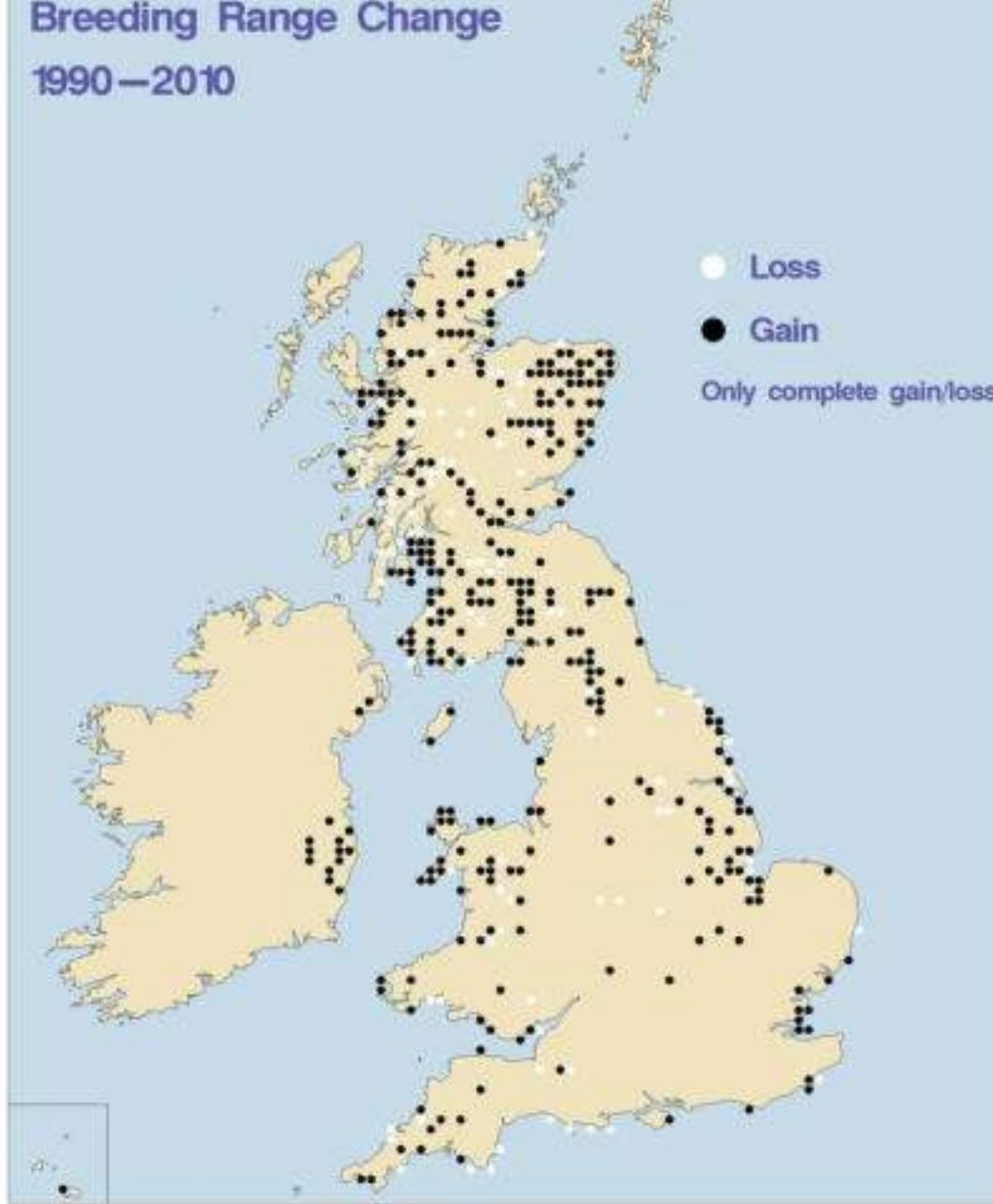


Distribution of reported great spotted woodpecker sightings in Ireland, 2005-2009.

Great Spotted Woodpecker  
Breeding distribution  
2007–11



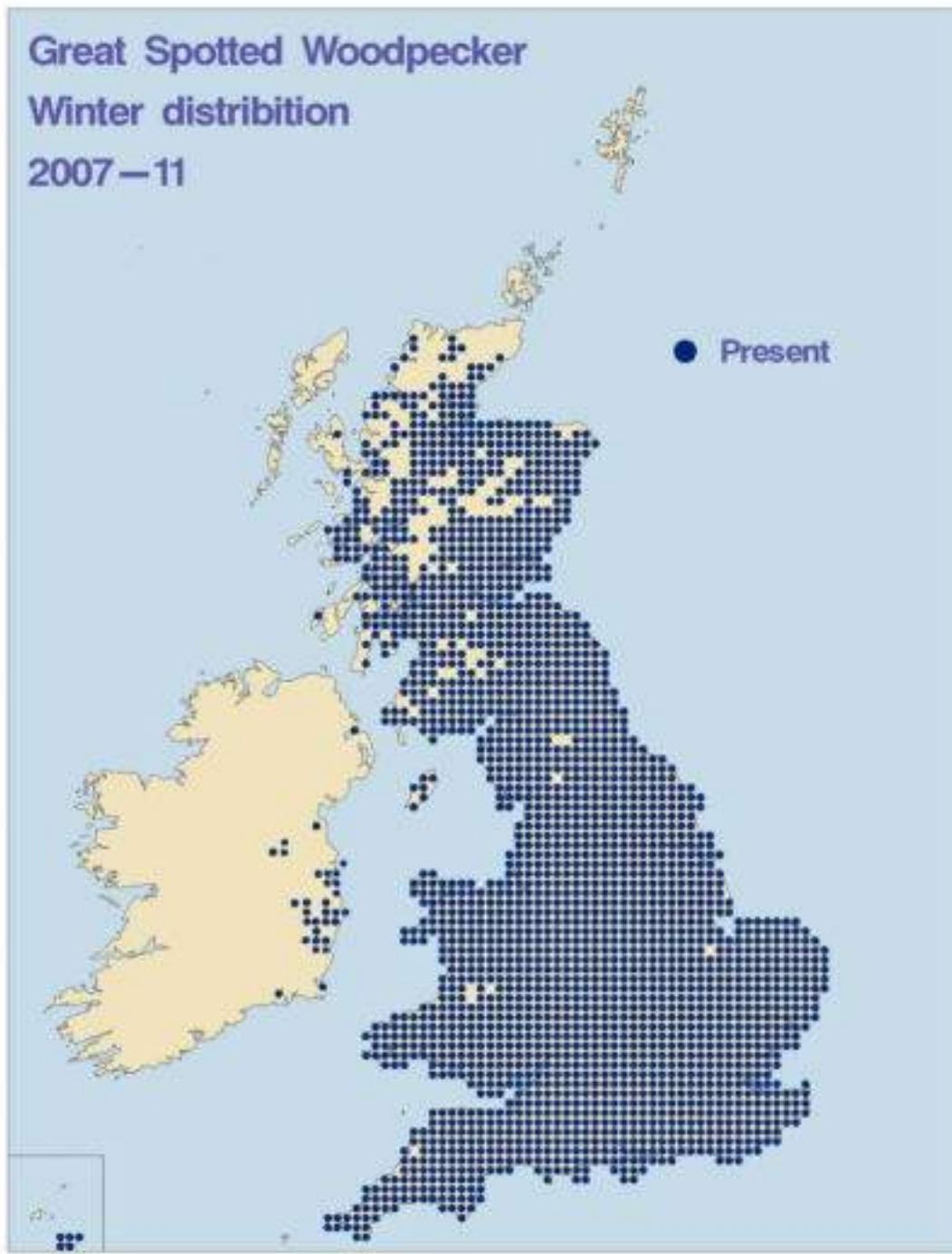
Great Spotted Woodpecker  
Breeding Range Change  
1990–2010



# Great Spotted Woodpecker

## Winter distribution

2007–11















# Colonisation and breeding status of the Great Spotted Woodpecker *Dendrocopos major* in the Republic of Ireland

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**Keywords:** breeding sites and habits; colonisation; *Dendrocopos*  
*major*; Great Spotted Woodpecker; habitat; nest site; range expansion

The Great Spotted Woodpecker *Dendrocopos major* has been absent historically as a breeding species from Ireland. Although there is no conclusive scientific evidence that it ever bred, the species supposedly went functionally extinct in Ireland following deforestation in the 17th and 18th centuries, and bones attributed to the species have been reported from County Clare. It has been a vagrant to Ireland since the early 19th century with small influxes noted in some winters, many of which have been attributed to the northern population (*D. m. major*), although with few proved to be so. The first breeding record for the island of Ireland was in 2006 when a juvenile was seen in a garden in County Down. Proof of breeding in the Republic of Ireland was first obtained in 2008 when a juvenile was observed at a nut feeder in County Dublin, and the first occupied nests (seven in Wicklow) were discovered in 2009. The number of occupied nests has continued to increase each year to 2015, when 35 were recorded. However, range expansion to date outside the core breeding area of County Wicklow appears to be slow. A total of 148 occupied nests were recorded during the seven years 2009–2015, 141 in County Wicklow, although breeding has also been recorded in seven other eastern counties. Most nests have been found in mature oak woodland (77% of nests) and most nests holes have been excavated in oak trees. Nest holes are frequently used in subsequent years. Predators include Sparrowhawk *Accipiter nisus* and the Pine Marten *Martes martes* has been suspected as a nest predator. Studies of the genetics of Irish birds strongly indicate that the founding population originated in Britain, rather than continental Europe.

## Introduction

The Great Spotted Woodpecker *Dendrocopos major* is the most widespread species of woodpecker in the world (Gorenflo 2013). Its global distribution extends from Russia, Asia and the Canary Islands eastwards across Europe and Asia as far as Japan and Kamchatka. Its latitudinal limits in



Europe stretch from arctic taiga forests in northern Scandinavia to the Mediterranean Sea (Cramp 1986). Up to 21 subspecies have been described across its geographical range.

**Plate 85.** Female Great Spotted Woodpecker at nest  
(Dick Coombes).





A Great Spotted Woodpecker is perched on the left edge of the slide, facing right. It has a black cap, white cheeks with a dark stripe through its eye, and a red patch on its lower belly.

# Nest trees 2014

22 Oak

2 Scot's pine

1 Birch

1 Beech

1 Spanish chestnut

1 Alder

1 Eucalyptus

1 Telegraph pole

## Nests (tree types used)

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Oak	6	10	15	16	21	22	25	24	21
Ash	1		1						
Beech		1			1	1		3	2
Sycamore			1						1
Spanish chestnut			1	1	1	1	1	1	1
Larch				1	1				1
Alder				1		1	1	1	
Birch					1	1	1	2	1
Scots Pine					2	2	3	1	1
Electricity pylon					1	1			
Eucalyptus sp						1			
Poplar							1	1	1
Spruce sp							2	1	3
Pine sp							1	4	1
Wild Cherry								1	1
Nest box									1
Total nests	7	11	18	19	28	30	35	39	35

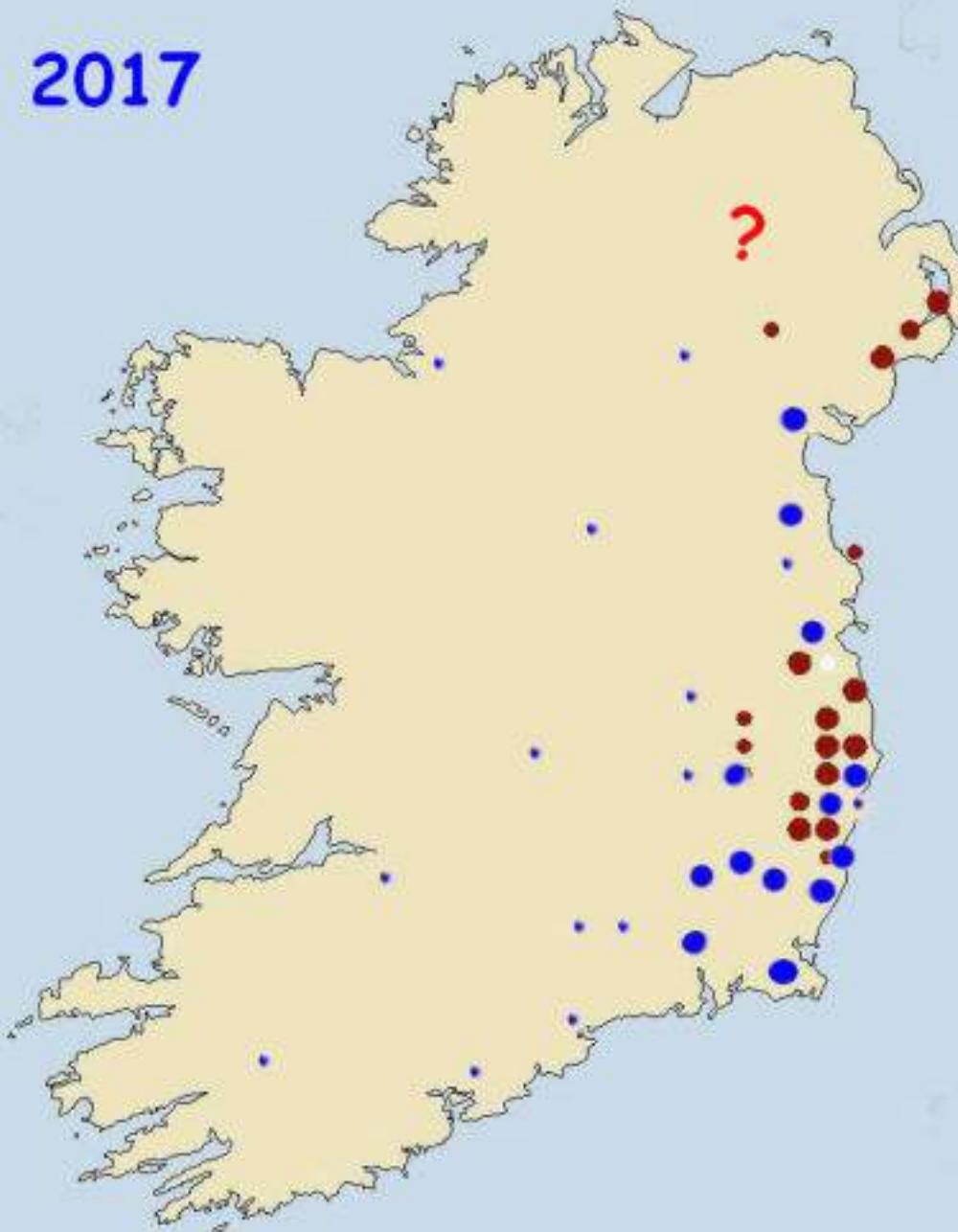
## Nests found

2008	0
2009	7
2010	11
2011	18
2012	19
2013	28
2014	30
2015	35
2016	39
2017	35

## Counties where nests found

County	2009	2010	2011	2012	2013	2014	2015	2016	2017
Wicklow	7	11	17	17	27	28	34	35	30
Dublin			1						
Wexford				1	1	2		2	3
Kilkenny					1				
Monaghan							1		
Carlow								2	1
Louth									1
<b>Total nests</b>	<b>7</b>	<b>11</b>	<b>18</b>	<b>19</b>	<b>28</b>	<b>30</b>	<b>35</b>	<b>39</b>	<b>35</b>

**2017**



































A Great Spotted Woodpecker is perched on a dark, textured tree trunk. The bird's head is turned to the left, showing its white forehead, black cap, and red patch on the nape. Its white breast and black and white barred flanks are visible. A small green sprout grows from the base of the trunk at the bottom left.

Thanks to:

The woodpeckers

The pecker team –  
especially Dick Coombes,  
Christian Osthoff, Declan  
Murphy, Chris Murphy and  
everyone else who has  
been involved



Thanks to:

Wesley Atkinson, Jez Blackburn, Andrew Butler, Magorzata Bujoczek, Ruth Carden, Glauco Camenisch, Sarah Carty, Jerry Cassidy, Robert Christian, Przemek Chylarecki, Ilaria Coscia, Shay Fagan, Shane Farrell, Ann Fitzpatrick, David Fuller, Joe Hobbs, Łukasz Kajtoch, Michael Kane, Tom Kealy, Rolf Keidel, Aidan G Kelly, Cóilín MacLochlainn, Tomasz D. Mazgajski, Steve Millar, Jason Monaghan, Jimmy Murphy, Allan Mc Devitt, Declan Murphy, Chris Murphy, Eanna O'Flynn, Dermot O'Shea, Christian Osthoff, Oran O'Sullivan, Gerry O'Neill, Gilberto Pasinelli, Jo Ranke, Phillippe Schepens, Joe Shannon, Chris Sharpe, Ken Smith, Steve Newton, Robert Vaughan and Alyn Walsh.

