

## ***Garrulus glandarius* (Eurasian Jay)**

### **European Red List of Birds**

### **Supplementary Material**

The European Union (EU27) Red List assessments were based principally on the official data reported by EU Member States to the European Commission under Article 12 of the Birds Directive in 2013-14. For the European Red List assessments, similar data were sourced from BirdLife Partners and other collaborating experts in other European countries and territories. For more information, see BirdLife International (2015).

#### **Contents**

Reported national population sizes and trends	p. 2
Trend maps of reported national population data	p. 4
Sources of reported national population data	p. 6
Species factsheet bibliography	p. 11

#### **Recommended citation**

BirdLife International (2015) European Red List of Birds. Luxembourg: Office for Official Publications of the European Communities.

#### **Further information**

<http://www.birdlife.org/datazone/info/euroredlist>

<http://www.birdlife.org/europe-and-central-asia/european-red-list-birds-0>

<http://www.iucnredlist.org/initiatives/europe>

<http://ec.europa.eu/environment/nature/conservation/species/redlist/>

#### **Data requests and feedback**

To request access to these data in electronic format, provide new information, correct any errors or provide feedback, please email [science@birdlife.org](mailto:science@birdlife.org).

*Garrulus glandarius* (Eurasian Jay)

**Table 1.** Reported national breeding population size and trends in Europe<sup>1</sup>.

Country (or territory) <sup>2</sup>	Population estimate				Short-term population trend <sup>4</sup>				Long-term population trend <sup>4</sup>				Subspecific population (where relevant)
	Size (pairs) <sup>3</sup>	Europe (%)	Year(s)	Quality	Direction <sup>5</sup>	Magnitude (%) <sup>6</sup>	Year(s)	Quality	Direction <sup>5</sup>	Magnitude (%) <sup>6</sup>	Year(s)	Quality	
Albania	6,000-12,000	<1	2002-2012	medium	+	10-20	2002-2012	medium	0	0	1980-2012	medium	
Andorra	300-400	<1	1999-2001	poor	?				?				
Armenia	5,000-15,000	<1	2002-2012	medium	?				?				
Austria	30,000-50,000	<1	2001-2012	medium	F	0	2000-2011	medium	?				
Azerbaijan	10,000-50,000	<1	1996-2000	poor	?				?				
Belarus	220,000-250,000	2	2001-2012	medium	0	0	2001-2012	medium	0	0	1980-2012	medium	
Belgium	40,000-80,000	1	2008-2012	poor	+	1-18	2000-2012	medium	+	82-264	1973-2012	medium	
Bosnia & HG	100,000-150,000	1	2010-2014	poor	?				?				
Bulgaria	100,000-200,000	1	2005-2012	medium	0	0	2000-2012	medium	0	0	1980-2012	medium	
Croatia	100,000-500,000	2	2014	poor	?				?				
Cyprus	3,000-8,000	<1	2006-2013	medium	+	25-75	2001-2013	medium	?				
Czech Rep.	170,000-340,000	2	2012	medium	0	0	2000-2012	good	+	58-93	1982-2012	good	
Denmark	32,000	<1	2011	medium	0	0	1999-2011	good	0	0	1980-2011	good	
Estonia	30,000-50,000	<1	2008-2012	medium	0	0-10	2001-2012	medium	+	20-50	1980-2012	medium	
Finland	93,000-140,000	1	2006-2012	good	-	21-57	2001-2012	good	0	0	1983-2012	good	
France	400,000-1,000,000	6	2008-2012	medium	+	22	2001-2012	medium	+	66	1989-2012	medium	
Georgia	Present	<1			?				?				
Germany	540,000-870,000	7	2005-2009	medium	F	0	1998-2009	good	0	0	1990-2009	good	
Greece	250,000-330,000	3	2007-2013	medium	?				?				
Hungary	29,000-72,000	<1	2000-2012	medium	0	0	1999-2012	medium	?				
Rep. Ireland	5,000-14,999	<1	2008-2011	poor	?				?				
Italy	300,000-600,000	4	2011	poor	+	20-30	2000-2012	poor	+	25-45	1990-2012	poor	
Kosovo	20,000-40,000	<1	2009-2014	medium	?				?				
Latvia	175,648-269,070	2	2011	good	+	0-50	2005-2012	good	+	290-1469	1994-2010	medium	
Liechtenstein	200-250	<1	2009-2014	medium	0	0	2003-2014	medium	0	0	1980-2014	medium	
Lithuania	50,000-80,000	1	2008-2012	medium	+	5-10	2001-2012	medium	+	5-10	1980-2012	medium	
Luxembourg	3,000-4,000	<1	2008-2012	medium	?				?				
FYRO Macedonia	40,000-80,000	1	2001-2012	poor	?				?				
Moldova	10,000-15,000	<1	2000-2010	medium	F	0	2000-2010	medium	0	0	1980-2010	medium	
Montenegro	40,000-60,000	<1	2002-2012	poor	?				?				
Netherlands	45,123-67,685	1	2008-2011	medium	0	0	2002-2011	medium	+	22-73	1984-2011	medium	
Norway	45,000-170,000	1	2013	poor	F	0	2008-2013	good	?				

*Garrulus glandarius* (Eurasian Jay)

**Table 1.** Reported national breeding population size and trends in Europe<sup>1</sup>.

Country (or territory) <sup>2</sup>	Population estimate				Short-term population trend <sup>4</sup>				Long-term population trend <sup>4</sup>				Subspecific population (where relevant)
	Size (pairs) <sup>3</sup>	Europe (%)	Year(s)	Quality	Direction <sup>5</sup>	Magnitude (%) <sup>6</sup>	Year(s)	Quality	Direction <sup>5</sup>	Magnitude (%) <sup>6</sup>	Year(s)	Quality	
Poland	470,000-520,000	5	2008-2012	good	0	0	2000-2012	good	?				
Portugal	100,000-500,000	2	2008-2012	medium	?				?				
Romania	250,000-500,000	3	2010-2013	medium	F	0-20	2001-2013	medium	?				
Russia	1,300,000-2,700,000	18	2000-2008	medium	0	0	2000-2012	medium	+	5-30	1980-2012	medium	
Serbia	140,000-190,000	2	2008-2012	medium	0	0	2000-2012	medium	0	0	1980-2012	medium	
Slovakia	15,000-30,000	<1	2002	medium	-	5-15	2000-2012	medium	0	0	1980-2012	medium	
Slovenia	20,000-30,000	<1	2002-2012	good	?				?				
Spain	1,070,000-1,650,000	13	2004-2006	good	+	56	1998-2012	good	+		1980-2012	poor	
Sweden	178,000-407,000	3	2008-2012	medium	0	0	2001-2012	good	0	0	1980-2012	good	
Switzerland	50,000-80,000	1	2008-2012	medium	0	0	2001-2012	good	+	26-71	1990-2012	medium	
Turkey	600,000-2,000,000	11	2013	medium	0	0	2000-2012	medium	?				
Ukraine	225,000-320,000	3	2000	medium	F	5-10	1998-2010	medium	F	5-10	1980-2010	medium	
United Kingdom	170,000	2	2009	medium	+	19	1998-2010	good	+	7	1980-2010	good	
<b>EU27</b>	<b>4,570,000-8,010,000</b>	<b>58</b>			<b>Increasing</b>								
<b>Europe</b>	<b>7,480,000-14,600,000</b>	<b>100</b>			<b>Increasing</b>								

<sup>1</sup> See 'Sources' at end of factsheet, and for more details on individual EU Member State reports, see the Article 12 reporting portal at <http://bd.eionet.europa.eu/article12/report>.

<sup>2</sup> The designation of geographical entities and the presentation of the material do not imply the expression of any opinion whatsoever on the part of IUCN or BirdLife International concerning the legal status of any country, territory or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

<sup>3</sup> In the few cases where population size estimates were reported in units other than those specified, they were converted to the correct units using standard correction factors.

<sup>4</sup> The robustness of regional trends to the effects of any missing or incomplete data was tested using plausible scenarios, based on other sources of information, including any other reported information, recent national Red Lists, scientific literature, other publications and consultation with relevant experts.

<sup>5</sup> Trend directions are reported as: increasing (+); decreasing (-); stable (0); fluctuating (F); or unknown (?).

<sup>6</sup> Trend magnitudes are rounded to the nearest integer.

## Trend maps

A symbol appears in each country where the species occurs: the shape and colour of the symbol represent the population trend in that country, and the size of the symbol corresponds to the proportion of the European population occurring in that country.

### KEY

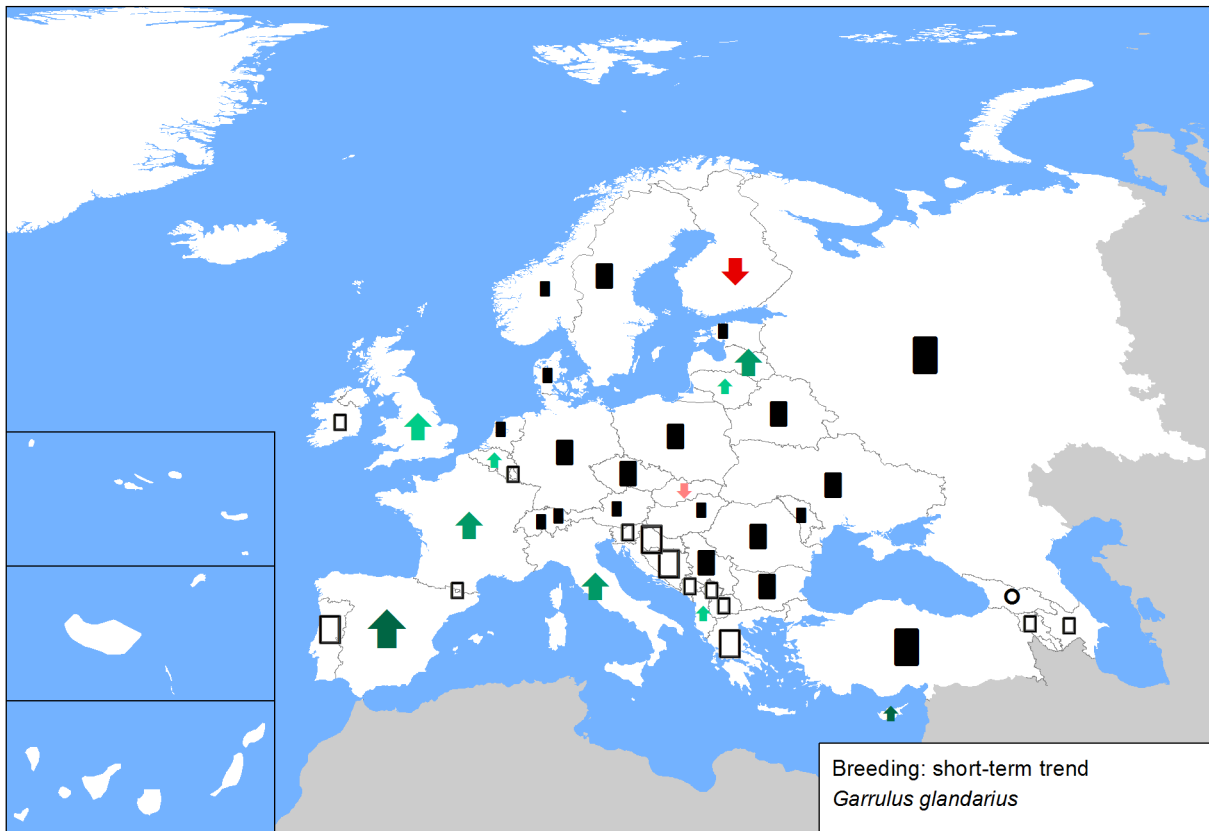
- |   |                                  |
|---|----------------------------------|
| ↑ Large increase ( $\geq 50\%$ )        | ↓ Large decrease ( $\geq 50\%$ ) |
| ↑ Moderate increase (20–49%)            | ↓ Moderate decrease (20–49%)     |
| ↑ Small increase ( $< 20\%$ )           | ↓ Small decrease ( $< 20\%$ )    |
| ↑ Increase of unknown magnitude         | ↓ Decrease of unknown magnitude  |
| ■ Stable or fluctuating                 |                                  |
| □ Unknown                               |                                  |
| ○ Present (no population or trend data) |                                  |
| × Extinct since 1980                    |                                  |

Each symbol, with the exception of Present and Extinct, may occur in up to three different size classes, corresponding to the proportion of the European population occurring in that country.

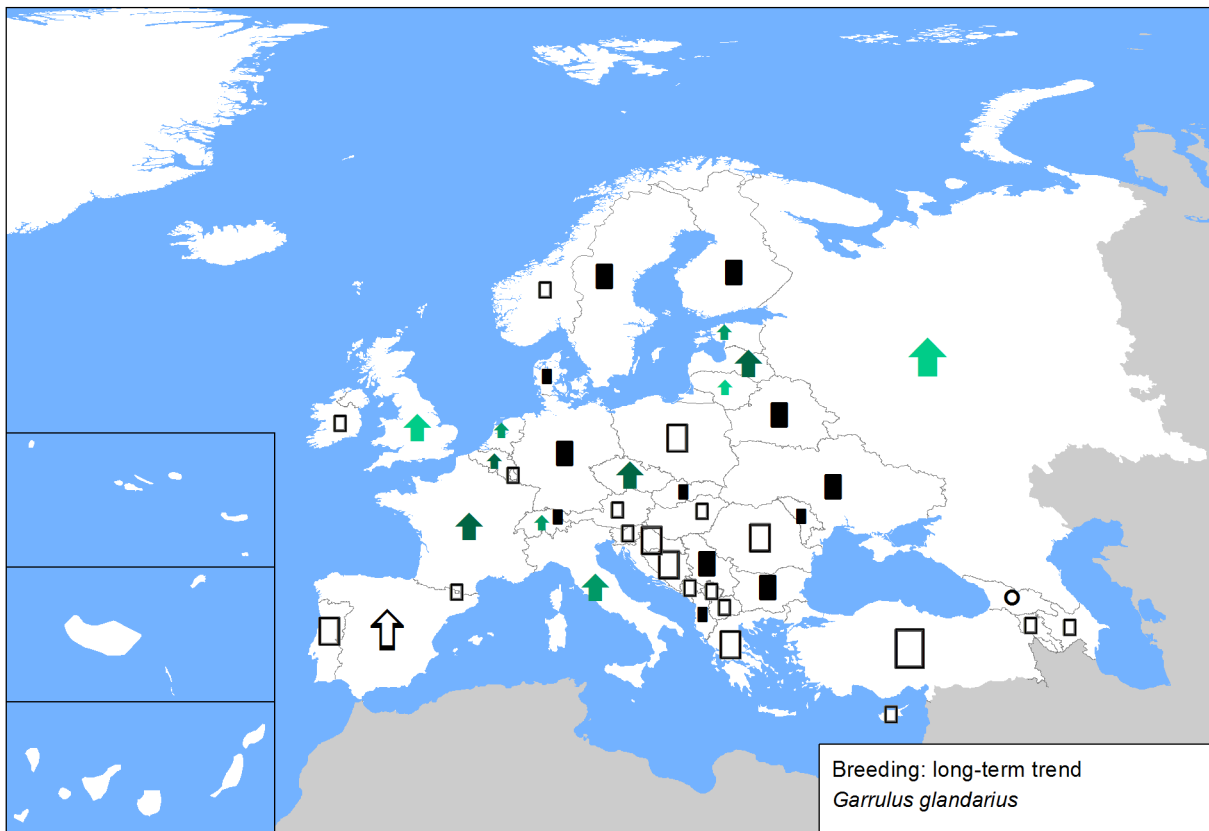
- ↑ Large:  $\geq 10\%$  of the European population
- ↑ Medium: 1–9% of the European population
- ↑ Small:  $< 1\%$  of the European population

The designation of geographical entities and the presentation of the material do not imply the expression of any opinion whatsoever on the part of IUCN or BirdLife International concerning the legal status of any country, territory or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

**Figure 1.** Breeding population sizes and short-term trends across Europe.



**Figure 2.** Breeding population sizes and long-term trends across Europe.



## Sources

### Albania

<b>Breeding population size:</b> Bino pers. obs.
<b>Breeding short-term trend:</b> Bino pers. obs.
<b>Breeding long-term trend:</b> Bino pers. obs.

### Andorra

<b>Breeding population size:</b> BirdLife International 2004
--

### Armenia

<b>Breeding population size:</b> ASPB data
--

### Austria

<b>Breeding population size:</b> BirdLife Austria, extrapolation on the basis of available unpublished and published population and density data
<b>Breeding short-term trend:</b> N. Teufelbauer based on data from the Austrian Common Breeding Bird Monitoring

### Azerbaijan

<b>Breeding population size:</b> BirdLife International 2004
--

### Belarus

<b>Breeding population size:</b> Koloskov M.N. - personal communication
<b>Breeding short-term trend:</b> BirdLife International (2004) Birds in Europe: population estimates, trends and conservation status. Cambridge, UK: BirdLife International. (BirdLife Conservation Series, No 12).
<b>Breeding long-term trend:</b> Nikiforov M.E., Kozulin A.V., eds. Belarussian birds at the beginning of XXI century: status, numbers, distribution. - 1997. - Minsk. - 187 p.

### Belgium

<b>Breeding population size:</b> Data Breeding Bird atlas Wallonia (Jacob et al 2010), Brussels (Weiserbs 2012) and Flanders (Vermeersch et al 2004) in combination with trend data.
<b>Breeding short-term trend:</b> Common bird monitoring schemes
<b>Breeding long-term trend:</b> Comparison between 2008-2012 estimate and Devillers, 1989 (Atlas of the Belgian Breeding Bird) population estimate

### Bosnia and Herzegovina

<b>Breeding population size:</b> unpublsh data
--

### Bulgaria

<b>Breeding population size:</b> Iankov, P. (ed.) 2007 Atlas of Breeding Birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10, Sofia, BSPB, 679 p. Common birds monitoring scheme in Bulgaria ( <a href="http://bspb.org/monitoring/bg/index.html">http://bspb.org/monitoring/bg/index.html</a> ) BSPB Bird Database
<b>Breeding short-term trend:</b> Iankov, P. (ed.) 2007 Atlas of Breeding Birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10, Sofia, BSPB, 679 p. Common birds monitoring scheme in Bulgaria ( <a href="http://bspb.org/monitoring/bg/index.html">http://bspb.org/monitoring/bg/index.html</a> )
<b>Breeding long-term trend:</b> Iankov, P. (ed.) 2007 Atlas of Breeding Birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10, Sofia, BSPB, 679 p. Common birds monitoring scheme in Bulgaria ( <a href="http://bspb.org/monitoring/bg/index.html">http://bspb.org/monitoring/bg/index.html</a> )

### Croatia

<b>Breeding population size:</b> BiE III Work group, Croatia
<b>Breeding short-term trend:</b> BiE III Work group, Croatia
<b>Breeding long-term trend:</b> BiE III Work group, Croatia

### Cyprus

<b>Breeding population size:</b> Unpublished analysis of monitoring data for the W of Cyprus by proff Derek Pomeroy; Also similar analysis of field data from surveys carried out in some SPAs by Game & Fauna Service; Bird sightings records as published in BirdLife Cyprus annual reports.
<b>Breeding short-term trend:</b> Analysis of records from line transect survey data for the period 2006-2013 using TRIM software. The data was from line transect surveys carried out under three different but compatible common birds survey programmes (one a 2006-12 pilot programme set up by BirdLife Cyprus and the other a 2006-11 W Cyprus programme operated by Proff Derek Pomeroy). These programmes were merged and expanded in 2013 under a Common Birds Monitoring programme managed by BirdLife Cyprus. This analysis has been detailed in a September 2013 report by BirdLife Cyprus to the Cyprus government, under a contract to produce the Farmland Birds Index for Cyprus.
<b>Breeding long-term trend:</b> Recent data as above, but no systematic data is available for before 2006.

### Czech Republic

<b>Breeding population size:</b> STASTNY K., BEJCEK V. & HUDEC K. 2006: Atlas hnízdního rozšíření ptaku v České republice. Aventinum Praha. JPSP: <a href="http://jpsp.birds.cz/vysledky.php?taxon=832">http://jpsp.birds.cz/vysledky.php?taxon=832</a>
<b>Breeding short-term trend:</b> JPSP: <a href="http://jpsp.birds.cz/vysledky.php?taxon=832">http://jpsp.birds.cz/vysledky.php?taxon=832</a>
<b>Breeding long-term trend:</b> JPSP: <a href="http://jpsp.birds.cz/vysledky.php?taxon=832">http://jpsp.birds.cz/vysledky.php?taxon=832</a>

## *Garrulus glandarius* (Eurasian Jay)

### Denmark

**Breeding population size:** BIRDLIFE INTERNATIONAL (2004) Birds in Europe: population estimates, trends and conservation status. Wageningen, The Netherlands: BirdLife International. (BirdLife Conservation Series No. 12) Heldbjerg, H. & Lerche-Jørgensen, M. (2012): Overvågning af de danske almindlige fuglearter i Danmark 1975-2011. Årsrapport for Punkttællingsprojektet. Dansk Ornitologisk Forening. (The Danish Point Count Census for breeding birds during the period 1999-2011)

**Breeding short-term trend:** Heldbjerg, H. & Lerche-Jørgensen, M. (2012): Overvågning af de danske almindlige fuglearter i Danmark 1975-2011. Årsrapport for Punkttællingsprojektet. Dansk Ornitologisk Forening. (The Danish Point Count Census for breeding birds during the period 1999-2011)

**Breeding long-term trend:** Heldbjerg, H. & Lerche-Jørgensen, M. (2012): Overvågning af de danske almindlige fuglearter i Danmark 1975-2011. Årsrapport for Punkttællingsprojektet. Dansk Ornitologisk Forening. (The Danish Point Count Census for breeding birds during the period 1980-2011)

### Estonia

**Breeding population size:** Elts, J., Leito, A., Leivits, A., Luigujõe, L., Mägi, E., Nellis, Rein, Nellis, Renno, Ots, M., Pehlak, H. 2013. Status and numbers of Estonian birds, 2008–2012. *Hirundo* 26(2): 80-112. URL: [http://www.eoy.ee/hirundo/file\\_download/149/Elts\\_et\\_al\\_2013\\_2.pdf](http://www.eoy.ee/hirundo/file_download/149/Elts_et_al_2013_2.pdf)

**Breeding short-term trend:** Elts, J., Leito, A., Leivits, A., Luigujõe, L., Mägi, E., Nellis, Rein, Nellis, Renno, Ots, M., Pehlak, H. 2013. Status and numbers of Estonian birds, 2008–2012. *Hirundo* 26(2): 80-112. URL: [http://www.eoy.ee/hirundo/file\\_download/149/Elts\\_et\\_al\\_2013\\_2.pdf](http://www.eoy.ee/hirundo/file_download/149/Elts_et_al_2013_2.pdf)

**Breeding long-term trend:** Elts, J., Leito, A., Leivits, A., Luigujõe, L., Mägi, E., Nellis, Rein, Nellis, Renno, Ots, M., Pehlak, H. 2013. Status and numbers of Estonian birds, 2008–2012. *Hirundo* 26(2): 80-112. URL: [http://www.eoy.ee/hirundo/file\\_download/149/Elts\\_et\\_al\\_2013\\_2.pdf](http://www.eoy.ee/hirundo/file_download/149/Elts_et_al_2013_2.pdf)

### Finland

**Breeding population size:** Bird monitoring schemes of the Finnish Museum of Natural History, University of Helsinki.

**Breeding short-term trend:** Bird monitoring schemes of the Finnish Museum of Natural History, University of Helsinki.

**Breeding long-term trend:** Bird monitoring schemes of the Finnish Museum of Natural History, University of Helsinki.

### France

**Breeding population size:** <http://www.atlas-ornitho.fr/>

**Breeding short-term trend:** <http://vigienature.mnhn.fr/page/geai-des-chenes>

**Breeding long-term trend:** <http://vigienature.mnhn.fr/page/geai-des-chenes>

### Georgia

**Breeding population size:** BirdLife International 2004

### Germany

**Breeding population size:** Gedeon, K., C. Grüneberg, A. Mitschke & C. Sudfeldt (in Vorb.): Atlas Deutscher Brutvogelarten. SVD & DDA, Münster.

**Breeding short-term trend:** Monitoring häufiger Brutvögel

**Breeding long-term trend:** Monitoring häufiger Brutvögel

### Greece

**Breeding population size:** Hellenic Common Birds Monitoring Scheme database, Hellenic Ornithological Society

**Breeding short-term trend:** Hellenic Common Birds Monitoring Scheme database, Hellenic Ornithological Society

### Hungary

**Breeding population size:** National common bird monitoring scheme (MMM) database. Szép, T., Nagy, K., Nagy, Zs. & Halmos, G. (2012): Population trends of common breeding and wintering birds in Hungary, decline of long-distance migrant and farmland birds during 1999-2012. *Ornis Hungarica* 2012. 20(2): 13-63.

**Breeding short-term trend:** National common bird monitoring scheme (MMM) database. Szép, T., Nagy, K., Nagy, Zs. & Halmos, G. (2012): Population trends of common breeding and wintering birds in Hungary, decline of long-distance migrant and farmland birds during 1999-2012. *Ornis Hungarica* 2012. 20(2): 13-63.

### Republic of Ireland

**Breeding population size:** Tucker, G.M. & Heath, M.F. (1994) Birds in Europe: their conservation status. Cambridge, U.K. : BirdLife International (BirdLife Conservation Series No. 3). BirdLife International (2004) Birds in Europe: population estimates, trends and conservation status. Cambridge, UK: BirdLife International. (BirdLife Conservation Series No. 12). Balmer, D., Gillings, S., Caffrey, B., Swan, B., Downie, I. & Fuller, R. (2013) Bird Atlas 2007-11 The breeding and wintering birds of Britain and Ireland. British Trust for Ornithology.

**Breeding short-term trend:** Tucker, G.M. & Heath, M.F. (1994) Birds in Europe: their conservation status. Cambridge, U.K. : BirdLife International (BirdLife Conservation Series No. 3). BirdLife International (2004) Birds in Europe: population estimates, trends and conservation status. Cambridge, UK: BirdLife International. (BirdLife Conservation Series No. 12). Balmer, D., Gillings, S., Caffrey, B., Swan, B., Downie, I. & Fuller, R. (2013) Bird Atlas 2007-11 The breeding and wintering birds of Britain and Ireland. British Trust for Ornithology. Gibbons D.W., Reid J.B. & Chapman R.A. (1993) The New Atlas of Breeding Birds in Britain and Ireland 1988-1991. Poyser, London.

**Breeding long-term trend:** Balmer, D., Gillings, S., Caffrey, B., Swan, B., Downie, I. & Fuller, R. (2013) Bird Atlas 2007-11 The breeding and wintering birds of Britain and Ireland. British Trust for Ornithology. Sharrock, J.T.R. (1976) The Atlas of Breeding Birds in Britain and Ireland. T. & AD Poyser.

### Italy

**Breeding population size:** Brichetti P & Fracasso G. 2011. *Ornitologia italiana*. Vol.7 (Paridae-Corvidae). Alberto Perdisa Editore, Bologna

**Breeding short-term trend:** Rete Rurale Nazionale & LIPU 2013. Uccelli comuni in Italia. Gli andamenti di popolazione dal 2000 al 2012

**Breeding long-term trend:** BirdLife International 2004. Birds in Europe: population estimates, trends and conservation status Cambridge, UK: BirdLife International. BirdLife Conservation Series No. 12 Rete Rurale Nazionale & LIPU 2013. Uccelli comuni in Italia. Gli andamenti di popolazione dal 2000 al 2012

### Kosovo

**Breeding population size:** NGO "Finch" (2014)



## *Garrulus glandarius* (Eurasian Jay)

### Latvia

<b>Breeding population size:</b> Calculation based on data collected in Latvian Breeding bird monitoring scheme: Aunins A., Keišs O. 2012. [Monitoring for the Farmland Bird Population Index. Final report for the year 2012. ] (in Latvian) Latvian Ornithological society, 47 pp
<b>Breeding short-term trend:</b> Aunins A. 2012. [Changes in the Abundance of Common Birds in Latvia during the Previous Seven Years]. Putni Dabā 2013/1, 10 - 13. Aunins A., Keišs O. 2012. [Monitoring for the Farmland Bird Population Index. Final report for the year 2012. ]. Latvian Ornithological society, 47 pp.
<b>Breeding long-term trend:</b> Kerus V. 2011. Latvijas ligzdojoso putnu stavokla parmainas laika no 1980. līdz 2010. gadam. Promocijas darbs. Rīga: Latvijas Universitāte Strazds M., Priednieks J., Vaverins G. 1994. Latvijas putnu skaits. – Putni daba, 4: 3–18.

### Liechtenstein

<b>Breeding population size:</b> Willi, G. (2014) Unpublished collection data
<b>Breeding short-term trend:</b> Willi, G. (2006) Die Vögel des Fürstentums Liechtenstein. Amtlicher Lehrmittelverlag, Vaduz (Naturkundliche Forschung im Fürstentum Liechtenstein, Bd. 22.
<b>Breeding long-term trend:</b> Willi, G. & M.F. Broggi (1986) Die Vogelwelt des Fürstentums Liechtenstein unter Berücksichtigung der benachbarten Gebiete; Teil III: Passeriformes. Ber. Bot.-Zool. Ges. Liechtenstein-Sargans-Werdenberg, Band 15, S. 37-82.; Willi, G. (2006) Die Vögel des Fürstentums Liechtenstein. Amtlicher Lehrmittelverlag, Vaduz (Naturkundliche Forschung im Fürstentum Liechtenstein, Bd. 22.

### Lithuania

<b>Breeding population size:</b> Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) Jusys, V., Karalius, S., Raudonikis, L. 2012. Lietuvos paukščių pažinimo vadovas. Kaunas: „Lututė“, 288 p.
<b>Breeding short-term trend:</b> Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) Jusys, V., Karalius, S., Raudonikis, L. 2012. Lietuvos paukščių pažinimo vadovas. Kaunas: „Lututė“, 288 p. Kurlavičius, P. (ed.) 2006. Lietuvos perinčių paukščių atlasas. Kaunas: „Lututė“, 256 p. Raudonikis L. 2004. Lithuania. In: Birds in Europe: population estimates, trends, and conservation status. BirdLife International, BirdLife Conservation Series No12, Cambridge, UK.
<b>Breeding long-term trend:</b> Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) BirdLife International/European Bird Census Council. 2000. European bird populations: estimates and trends. Cambridge, UK: BirdLife International (BirdLife Conservation Series No. 10). Kurlavičius, P. (ed.) 2006. Lietuvos perinčių paukščių atlasas. Kaunas: „Lututė“, 256 p.

### Luxembourg

<b>Breeding population size:</b> LUXOR (2013): NATUR&EMWELT - BIRD-DATABASE, LUXEMBOURG Recorder (2013): database, Musée national d'histoire naturelle, Luxembourg Lorgé P., E. Melchior (2010): Die Vögel Luxemburgs. LNVL, Luxembourg. ISBN: 978-2-919920-01-3
<b>Breeding short-term trend:</b> LUXOR (2013): NATUR&EMWELT - BIRD-DATABASE, LUXEMBOURG Recorder (2013): database, Musée national d'histoire naturelle, Luxembourg Lorgé P., E. Melchior (2010): Die Vögel Luxemburgs. LNVL, Luxembourg. ISBN: 978-2-919920-01-3
<b>Breeding long-term trend:</b> LUXOR (2013): NATUR&EMWELT - BIRD-DATABASE, LUXEMBOURG Recorder (2013): database, Musée national d'histoire naturelle, Luxembourg Lorgé P., E. Melchior (2010): Die Vögel Luxemburgs. LNVL, Luxembourg. ISBN: 978-2-919920-01-3

### The Former Yugoslav Republic of Macedonia

<b>Breeding population size:</b> M. Veleviski, unedited data
--

### Moldova

<b>Breeding population size:</b> The Atlas of the Breeding Birds of Republic of Moldova. 2010. 100p.
<b>Breeding short-term trend:</b> The Atlas of the Breeding Birds of Republic of Moldova. 2010. 100p.
<b>Breeding long-term trend:</b> The Atlas of the Breeding Birds of Republic of Moldova. 2010. 100p. Аверин Ю. В., Ганя И.М., Успенский Г. Птицы Молдавии, том 2, Кишинев, 1971, 240p Burfield I., Bommel van F., Birds in Europe. Population estimates, trends and conservation status. BirdLife International. Oxford, 2004. 374p

### Montenegro

<b>Breeding population size:</b> Puzovic, S., Simic, D., Saveljić, D., Gergelj, J., Tucakov, M., Stojnic, N., Hulo, I., Ham, I., Vizi, O., Sciban, M., Ruzic, M., Vucanovic, M., Jovanovic, T. (2004): Birds of Serbia and Montenegro – Size of nesting populations. I trends: 1990-2002. Ciconia 12, 36-120. Novi Sad
--

### Netherlands

<b>Breeding population size:</b> NEM, Sovon en CBS, SOVON (2002)
<b>Breeding short-term trend:</b> NEM, Sovon en CBS, Boele et al. (2013)
<b>Breeding long-term trend:</b> NEM, Sovon en CBS

### Norway

<b>Breeding population size:</b> Shimmings P. & Øien, I.J. 2015. Bestandsestimater og trender for norske hekkfugler. NOF-rapport 2015-2.
<b>Breeding short-term trend:</b> Kålås, J.A., Husby, M., Nilsen, E.B., & Vang, R. 2014. Bestandsvariasjoner for terrestriske fugler i Norge 1996-2013. Norsk Ornitologisk Forening Rapport 4 / 2014.
<b>Breeding long-term trend:</b> Kålås, J.A., Husby, M., Nilsen, E.B., & Vang, R. 2014. Bestandsvariasjoner for terrestriske fugler i Norge 1996-2013. Norsk Ornitologisk Forening Rapport 4 / 2014.

### Poland

<b>Breeding population size:</b> Chodkiewicz T., Kuczyński L., Sikora A., Ławicki Ł., Chylarecki P., Neubauer G., Meissner W., Rohde Z. 2013. Opracowanie raportu dla Komisji Europejskiej z wdrażania Dyrektywy Ptasięj w Polsce w zakresie Monitoringu Ptaków Polski w Państwowym Monitoringu Środowiska. Sprawozdanie dla Głównego Inspektoratu Ochrony Środowiska. OTOP, Marki.
<b>Breeding short-term trend:</b> MPPL: Chylarecki P. 2013. Czynniki kształtujące zmiany liczebności pospolitych ptaków Polski w latach 2000-2012. MiZ PAN Warszawa. Bogucki. Wyd. Nauk. 1-126; Chodkiewicz T., Woźniak B., Chylarecki P. 2012. Monitoring Pospolitych Gatunków Ptaków. In: Podsumowanie sezonu lęgowego Monitoringu Ptaków Polski w 2012 r. OTOP, MiZ, KOO, SOS: 29-45 (source: <a href="http://monitoringptakow.gios.gov.pl/raporty?file=files/pliki/raporty_faza4/RaportMPP4_etap1_zad2%264_wiosna2012.pdf">http://monitoringptakow.gios.gov.pl/raporty?file=files/pliki/raporty_faza4/RaportMPP4_etap1_zad2%264_wiosna2012.pdf</a> )



## *Garrulus glandarius* (Eurasian Jay)

### Portugal

**Breeding population size:** Programa Censos de Aves Comuns (CAC); Equipa Atlas (2008). Atlas das Aves Nidificantes em Portugal (1999-2005). Instituto da Conservação da Natureza e da Biodiversidade, Sociedade Portuguesa para o Estudo das Aves, Parque Natural da Madeira e Secretaria Regional do Ambiente e do Mar. Assírio e Alvim. Lisboa.

### Romania

**Breeding population size:** Romanian Commonbird Monitoring Programme, 2007-2012 SOR database, Milvus database

**Breeding short-term trend:** Romanian Commonbird Monitoring Programme, 2007-2012 SOR database, Milvus database

**Breeding long-term trend:** Romanian Commonbird Monitoring Programme, 2007-2012 SOR database, Milvus database

### Russia

**Breeding population size:** Ravkin E.S., Ravkin Yu.S. 2005. Birds of Northern Eurasian plains: numbers, distribution, spatial organization of communities. Novosibirsk, Nauka: 304 p. (in Russian). Numerov A.D. 1996. Class Birds Aves. – Natural resources of Voronezh Region. Vertebrate Animals. Cadaster. Voronezh, Biomik: 48-159 (in Russian). Sarychev V.S. (ed.) 2009. Vertebrates of Lipetsk Region. Voronezh: 494 p. Sarychev V.S., unpublished. vssar@yandex.ru Belik V.P. 2005. Cadastre of breeding avifauna of South Russia. Strepet 3, no. 1-2: 5-37 (in Russian).

**Breeding short-term trend:** Preobrazhenskaya E.S. 2007. Population dynamics of forest wintering birds in the East European Plain and the Ural. - Dynamics of the birds density in terrestrial landscapes. Proc. of the Russian scientific conference. Moscow: 39-59 (in Russian). Preobrazhenskaya E.S., Stopalova O.A. (compilers). 2012. Results of winter counts of birds in Russia and adjacent regions, 26. Moscow: 55 p. Preobrazhenskaya E.S., Stopalova O.A. (compilers). 2013. Results of winter counts of birds in Russia and adjacent regions, 27. Moscow: 60 p.

**Breeding long-term trend:** Preobrazhenskaya E.S. 2007. Population dynamics of forest wintering birds in the East European Plain and the Ural. - Dynamics of the birds density in terrestrial landscapes. Proc. of the Russian scientific conference. Moscow: 39-59 (in Russian). Preobrazhenskaya E.S., Stopalova O.A. (compilers). 2012. Results of winter counts of birds in Russia and adjacent regions, 26. Moscow: 55 p. Preobrazhenskaya E.S., Stopalova O.A. (compilers). 2013. Results of winter counts of birds in Russia and adjacent regions, 27. Moscow: 60 p. Sarychev V.S. (ed.) 2009. Vertebrates of Lipetsk Region. Voronezh: 494 p. Sarychev V.S., unpublished. vssar@yandex.ru

### Serbia

**Breeding population size:** BPSSS (2014) Unpublished data

**Breeding short-term trend:** BPSSS (2014) Unpublished data

**Breeding long-term trend:** BPSSS (2014) Unpublished data

### Slovakia

**Breeding population size:** Danko Štefan, Darolová Alžbeta, Krištin Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002.

**Breeding short-term trend:** SOS/BS 2013; www.vtaky.sk

**Breeding long-term trend:** Danko Štefan, Darolová Alžbeta, Krištin Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002.

### Slovenia

**Breeding population size:** Mihelič, T. (2013): Novi ornitološki atlas gnezdičk Slovenije 2002-2010. Internetna baza podatkov. Spletna stran: <http://www.ptice.si/atlas>. Društvo za opazovanje in proučevanje ptic Slovenije, DOPPS - BirdLife Slovenija. Ljubljana.

**Breeding short-term trend:** Mihelič, T. (2013): Novi ornitološki atlas gnezdičk Slovenije 2002-2010. Internetna baza podatkov. Spletna stran: <http://www.ptice.si/atlas>. Društvo za opazovanje in proučevanje ptic Slovenije, DOPPS - BirdLife Slovenija. Ljubljana.

**Breeding long-term trend:** Mihelič, T. (2013): Novi ornitološki atlas gnezdičk Slovenije 2002-2010. Internetna baza podatkov. Spletna stran: <http://www.ptice.si/atlas>. Društvo za opazovanje in proučevanje ptic Slovenije, DOPPS - BirdLife Slovenija. Ljubljana.

### Spain

**Breeding population size:** Carrascal, L.M. & D. Palomino (2008). Las aves comunes reproductoras en España. Población en 2004-2006. (Seguimiento de Aves, 19). SEO/BirdLife. Madrid. 202 pp. [http://www.magrama.gob.es/es/biodiversidad/temas/inventarios-nacionales/19\\_paseriformes\\_2004\\_2006\\_tcm7-218232.pdf](http://www.magrama.gob.es/es/biodiversidad/temas/inventarios-nacionales/19_paseriformes_2004_2006_tcm7-218232.pdf)

**Breeding short-term trend:** SEO/BirdLife (2013). Resultados del programa Sacre de SEO/BirdLife en 2012. SEO/BirdLife. Madrid. Información obtenida a partir de la Base de Datos del Inventario de especies terrestres. Seguimiento de Aves SACRE. (Ministerio de Agricultura, Alimentación y Medio Ambiente). [http://www.magrama.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/tendencia\\_aves\\_comunes\\_espania.aspx](http://www.magrama.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/tendencia_aves_comunes_espania.aspx) Gráfica de la tendencia poblacional: [http://www.magrama.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/ieet\\_aves\\_sist\\_seg\\_tendencia\\_comunes\\_esp.aspx](http://www.magrama.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/ieet_aves_sist_seg_tendencia_comunes_esp.aspx) <http://www.seo.org/RESULTADOS-SEGUIMIENTO-DE-AVES/>

**Breeding long-term trend:** Martí, R. & del Moral, J.C. (Eds.) (2003). Atlas de las Aves Reproductoras de España. Dirección General de Conservación de la Naturaleza-Sociedad Española de Ornitología. Madrid, 733 pp. [http://www.magrama.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/inventario-nacional-de-biodiversidad/ieet\\_aves\\_atlas.aspx](http://www.magrama.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/inventario-nacional-de-biodiversidad/ieet_aves_atlas.aspx)

### Sweden

**Breeding population size:** Ottosson, U., Ottvall, R., Elmberg, J., Green, M., Gustafsson, R., Haas, F., Holmqvist, N., Lindström, Å., Nilsson, L., Svensson, M., Svensson, S. & Tjernberg, M. 2012. Fåglarna i Sverige - antal och förekomst. Sveriges Ornitologiska Förening, Halmstad.

**Breeding short-term trend:** Swedish Bird Survey (Svensk Fågeltaxering), Lund University.

**Breeding long-term trend:** Swedish Bird Survey (Svensk Fågeltaxering), Lund University.

### Switzerland

**Breeding population size:** Original estimate: Schmid, H., R. Luder, B. Naef-Daenzer, R. Graf & N. Zbinden (1998): Schweizer Brutvogelatlas. Verbreitung der Brutvögel in der Schweiz und im Fürstentum Liechtenstein 1993-1996/Atlas des oiseaux nicheurs de Suisse. Distribution des oiseaux nicheurs en Suisse et au Liechtenstein en 1993-1996. Schweizerische Vogelwarte/Station ornithologique suisse, Sempach. Swiss Ornithological Institute: Updated based on population trend.

**Breeding short-term trend:** Swiss Ornithological Institute. <http://www.vogelwarte.ch/monitoring-common-breeding-birds.html>. 95% Confidence interval see point 3.3.

**Breeding long-term trend:** Swiss Ornithological Institute. <http://www.vogelwarte.ch/monitoring-common-breeding-birds.html>. Data before 1999 from less standardised survey. Min Max refer to 95% Confidence interval.

## *Garrulus glandarius* (Eurasian Jay)

### Turkey

**Breeding population size:** Zeynel Arslangündođdu personal communication. Arslangündođdu Z.2005. İstanbul Belgrad Ormanının Ornitofaunası Üzerinde Arařtırmalar (Studies on the Ornithofauna of İstanbul Belgrade Forests). İ.Ü Fenbilimleri Enstitüsü. Phd Thesis. Birdlife International (2004) Birds in Europe: population estimates, trends and conservation status, Cambridge UK: Birdlife International (Birdlife Conservation series no: 12)

**Breeding short-term trend:** Dođa Derneđi, Eken G., Bozdođan M., İsfendiyarođlu S., Kılıç D.T., Lise Y. (2006) Key Biodiversity Areas of Turkey (Türkiye'nin Önemli Dođa Alanları) Dođa Derneđi, Ankara, KILIÇ, T., EKEN, G. 2004, Türkiye'nin Önemli Kuř Alanları Güncellemesi, Dođa Derneđi. Ankara.

**Breeding long-term trend:** Birdlife International (2004) Birds in Europe: population estimates, trends and conservation status, Cambridge UK: Birdlife International (Birdlife Conservation series no: 12)

### Ukraine

**Breeding population size:** 1. Hagemajjer W.J.M., Blair M.J. The EBCC Atlas of European Breeding Birds: Their Distribution and Abundance. Poyser. - London. 1997. 903 p. 2. Heath M.F., Evans M.I. Important birds areas in Europe. Priority sites for conservation. // Southern Europe. BirdLife International. - Cambridge. Vol.2., 2000. P. 691-724. 3. European birds populations; Estimates and trends Compiled by M. Heath, C. Borggreve, N. Peet, W. Hagemajjer/ BirdLife International/EBCC. 2000. Cambridge, UK: BirdLife Conservation Series N10, 160 p. 4. Горбань І. Оцінка чисельності гніздових птахів України. Вісник Львівського університету. Серія біологічна. Випуск 34. 2003. с. 147 – 158.

**Breeding short-term trend:** 1. Бокотей А.А., Дзюбенко Н.В., Горбань І.М. та інші. Гніздова орнітофауна басейну Верхнього Дністра. – Львів: ЛНУ, 2010. – 400 с. 2. Dombrowski A., Piotrowska M., Gorban I., Nikiforov M. Status and threats to avifauna. (Eds. Dombrowski A., & Z. Glowacki, та інші). Bug river valleys as the ecological corridor: state-threats-protection. IUCN European Programme. Warsaw. 2002. S. 87-102. 3. Горбань І.М. Рідкісні види птахів Шацького національного парку. // Вісник Львівського університету. Серія біологічна. Вип. 29. 2002. С.188-199.

**Breeding long-term trend:** 1. Tucker G.M., Heath M.F. Birds in Europe: their conservation status. - Cambridge. U.K. Bird Life Conservation Series № 3. 1994. 600 p. 2. Hagemajjer W.J.M., Blair M.J. The EBCC Atlas of European Breeding Birds: Their Distribution and Abundance. Poyser. - London. 1997. 903 p. 3. Heath M.F., Evans M.I. Important birds areas in Europe. Priority sites for conservation. // Southern Europe. BirdLife International. - Cambridge. Vol.2., 2000. P. 691-724. 4. European birds populations; Estimates and trends Compiled by M. Heath, C. Borggreve, N. Peet, W. Hagemajjer/ BirdLife International/EBCC. 2000. Cambridge, UK: BirdLife Conservation Series N10, 160 p. 5. Горбань І.М., Бокотей А.А. Вплив трансформаційних процесів на фауну та населення птахів басейну Верхнього Дністра. Дослідження басейнової екосистеми Верхнього Дністра. Збірник наукових праць. 2000. С.145 – 155. 6. Горбань І. Оцінка чисельності гніздових птахів України. Вісник Львівського університету. Серія біологічна. Випуск 34. 2003. с. 147 – 158. 7. Birds in Europe: Population Estimates, Trends and Conservation Status. BirdLife Conservation Series 12; 2004. 374 p. 8. Бокотей А.А., Дзюбенко Н.В., Горбань І.М. та інші. Гніздова орнітофауна басейну Верхнього Дністра. – Львів: ЛНУ, 2010. – 400 с.

### United Kingdom

**Breeding population size:** Gibbons, D.W., Reid, J.B. & Chapman, R.A. 1993. The New Atlas of Breeding Birds in Britain and Ireland: 1988–1991. Poyser, London. Musgrove, A.J., Aebischer, N.J., Eaton, M.A., Hearn, R.D., Newson, S.E., Noble, D.G., Parsons, M., Risely, K. & Stroud, D.A. 2013. Population estimates of birds in Great Britain and the United Kingdom. British Birds 106: 64-100.

**Breeding short-term trend:** BTO/JNCC/RSPB Breeding Bird Survey data: Risely, K., Massimino, D., Johnston, A., Newson, S.E., Eaton, M.A., Musgrove, A.J., Noble, D.G., Procter, D. & Baillie, S.R. 2012. The Breeding Bird Survey 2011. BTO Research Report 624. British Trust for Ornithology, Thetford. <http://www.bto.org/sites/default/files/u16/downloads/reports/bbsreport11.pdf>

**Breeding long-term trend:** Baillie, S.R., Marchant, J.H., Leech, D.I., Massimino, D., Eglinton, S.M., Johnston, A., Noble, D.G., Barimore, C., Kew, A.J., Downie, I.S., Risely, K. & Robinson, R.A. (2013). BirdTrends 2012: trends in numbers, breeding success and survival for UK breeding birds. Research Report 644. BTO, Thetford. <http://www.bto.org/birdtrends>

## **Bibliography**

Hagemeijer, W.J.M. and Blair, M.J. 1997. *The EBCC Atlas of European Breeding Birds: Their Distribution and Abundance*. T & A D Poyser, London.

Madge, S. 2009. Eurasian Jay (*Garrulus glandarius*). In: del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. and de Juana, E. (eds.). 2014. *Handbook of the Birds of the World Alive*. Lynx Edicions, Barcelona. (retrieved from <http://www.hbw.com/node/60727> on 9 March 2015).