

***Asio otus* (Northern Long-eared Owl)**

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).

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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.

Asio otus (Northern Long-eared Owl)

Table 1. Reported national breeding population size and trends in Europe¹.

Country (or territory) ²	Population estimate				Short-term population trend ⁴				Long-term population trend ⁴				Subspecific population (where relevant)
	Size (pairs) ³	Europe (%)	Year(s)	Quality	Direction ⁵	Magnitude (%) ⁶	Year(s)	Quality	Direction ⁵	Magnitude (%) ⁶	Year(s)	Quality	
Albania	400-900	<1	2002-2012	poor	-	10-20	2002-2012	poor	-	10-20	1980-2012	poor	
Andorra	3-10	<1	1999-2001	medium	?				?				
Armenia	200-400	<1	2002-2012	medium	?				?				
Austria	3,000-4,500	1	2001-2012	medium	0	0	2001-2012	medium	?				
Azerbaijan	1,000-10,000	1	1996-2000	poor	?				?				
Belarus	12,000-20,000	3	2000-2012	medium	0	0	2000-2012	medium	0	0	1980-2012	medium	
Belgium	3,000-5,000	1	2008-2012	poor	?				?				
Bosnia & HG	5,000-10,000	1	2010-2014	poor	?				?				
Bulgaria	1,100-4,900	<1	2005-2012	medium	0	5-10	2000-2012	medium	0	5-10	1980-2012	medium	
Croatia	10,000-15,000	3	2010	poor	?				?				
Cyprus	50-200	<1	2001-2013	poor	0	0	2001-2012	poor	+	20-50	1980-2012	poor	
Czech Rep.	4,000-8,000	1	2001-2003	good	?				0	0	1985-2003	medium	
Denmark	2,000	<1	2011	medium	0	0	1999-2011	medium	+	≥50	1980-2011	medium	
Estonia	1,000-4,000	<1	2008-2012	medium	F	10-100	2001-2012	medium	F	10-100	1980-2012	medium	
Finland	500-10,000	<1	2006-2012	good	F	0	1998-2012	good	-	26-30	1986-2012	good	
France	20,000-40,000	6	2009-2012	medium	?				?				
Georgia	Present	<1			?				?				
Germany	26,000-43,000	7	2005-2009	good	F	0	1998-2009	good	F	0	1988-2009	good	
Greece	2,000-5,000	1	2008-2012	poor	?				?				
Hungary	6,500-12,000	2	1995-2002	poor	?				?				
Rep. Ireland	1,484-2,703	<1	2012	medium	?				?				
Italy	6,000-12,000	2	2006	poor	?				+		1980-2006	poor	
Kosovo	1,000-2,000	<1	2009-2014	medium	?				?				
Latvia	1,500-8,000	1	2012	poor	-	58	2007-2012	medium	+	0-167	1994-2012	poor	
Liechtenstein	4-6	<1	2009-2014	medium	-	20-40	2003-2014	medium	-	50-80	1980-2014	medium	
Lithuania	3,000-7,000	1	2008-2012	poor	0	0	2001-2012	medium	0	0	1980-2012	medium	
Luxembourg	300-500	<1	2008-2012	medium	0	0	2000-2012	poor	0	0	1980-2012	poor	
FYRO Macedonia	1,000-5,000	<1	2001-2012	poor	?				?				
Moldova	500-1,000	<1	2000-2010	medium	F	0	2000-2010	medium	F	0	1980-2010	medium	
Montenegro	1,500-2,000	<1	2002-2012	poor	?				?				
Netherlands	2,460-2,952	1	2008-2011	medium	-	31-58	2002-2011	good	-	73-86	1984-2011	good	
Norway	1,000-10,000	1	2013	poor	F	0	2001-2013	poor	F	0	1980-2013	poor	

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	Size (pairs) ³	Europe (%)	Year(s)	Quality	Direction ⁵	Magnitude (%) ⁶	Year(s)	Quality	Direction ⁵	Magnitude (%) ⁶	Year(s)	Quality	
Poland	8,000-25,000	3	1992-2004	poor	?				?				
Portugal	200-1,000	<1	2008-2012	medium	0	0	2001-2012	poor	?				
PT: Azores	Present	<1			?				?				
Romania	8,000-30,000	3	2001-2013	poor	?				?				
Russia	100,000-350,000	39	2000-2008	poor	0	0	2000-2012	medium	0	0	1980-2012	medium	
Serbia	17,700-25,200	4	2008-2012	medium	+	10-29	2000-2012	medium	+	≥30	1980-2012	medium	
Slovakia	2,500-4,000	1	2002	poor	-	10-30	2000-2012	poor	-	20-30	1980-2012	poor	
Slovenia	1,800-2,200	<1	2005-2012	poor	F	0-20	2001-2012	poor	F	0-20	1980-2012	medium	
Spain	3,321	1	1998-2001	good	0	0	2006-2011	good	-		1980-2011	medium	
ES: Canary Is	2,500-10,000	1	1997-2003	poor	?				?				
Sweden	2,600-15,000	2	2008-2012	medium	0	0	2001-2012	poor	-	10-30	1980-2012	medium	
Switzerland	2,500-3,000	1	2005-2009	medium	+	7-28	2001-2012	medium	+	2-39	1995-2012	medium	
Turkey	3,000-6,000	1	2013	medium	-	0-19	2000-2012	medium	+	0-19	1990-2013	poor	
Ukraine	33,000-47,000	8	2000	medium	F	5-10	2001-2012	medium	F	10-15	1980-2012	medium	
United Kingdom	1,800-6,000	1	2007-2011	medium	?				?				
EU27	115,000-268,000	36			Unknown								
Europe	304,000-776,000	100			Unknown								

¹ 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>.

² 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.

³ 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.

⁴ 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.

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

⁶ 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

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

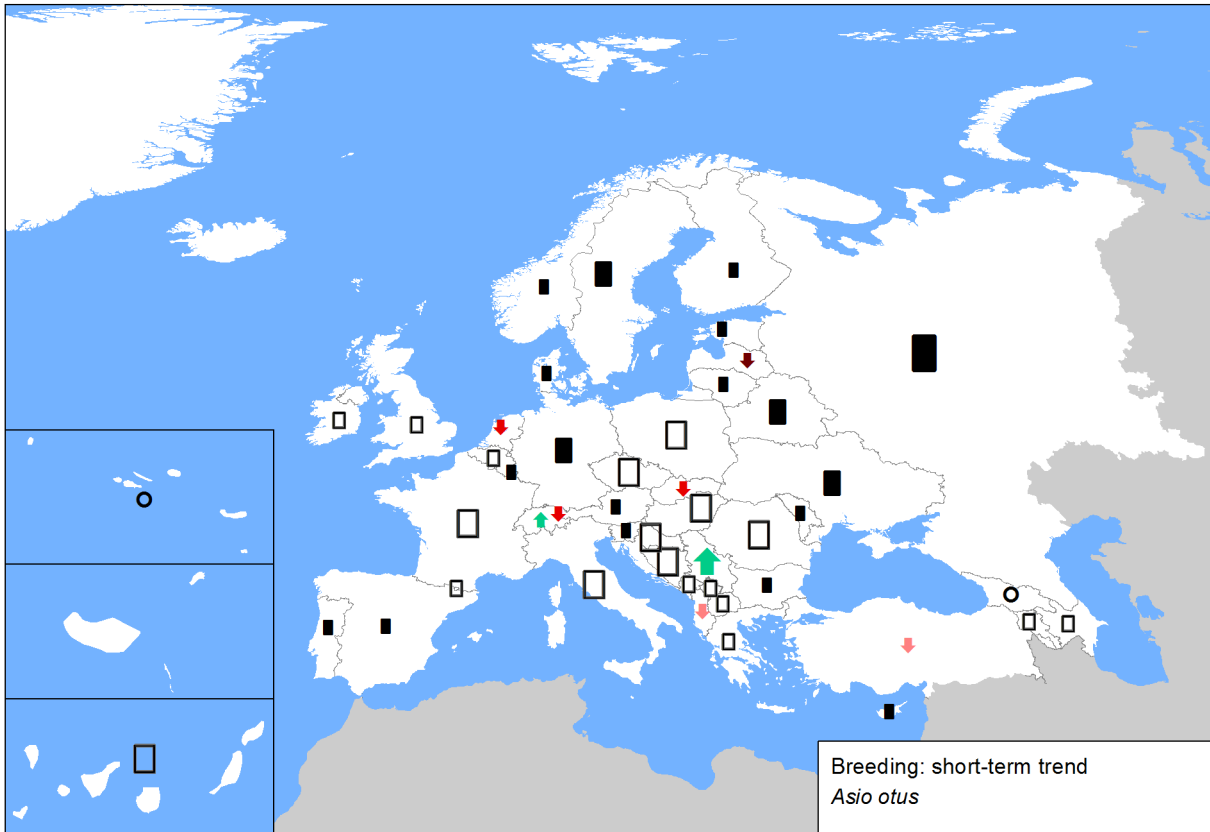
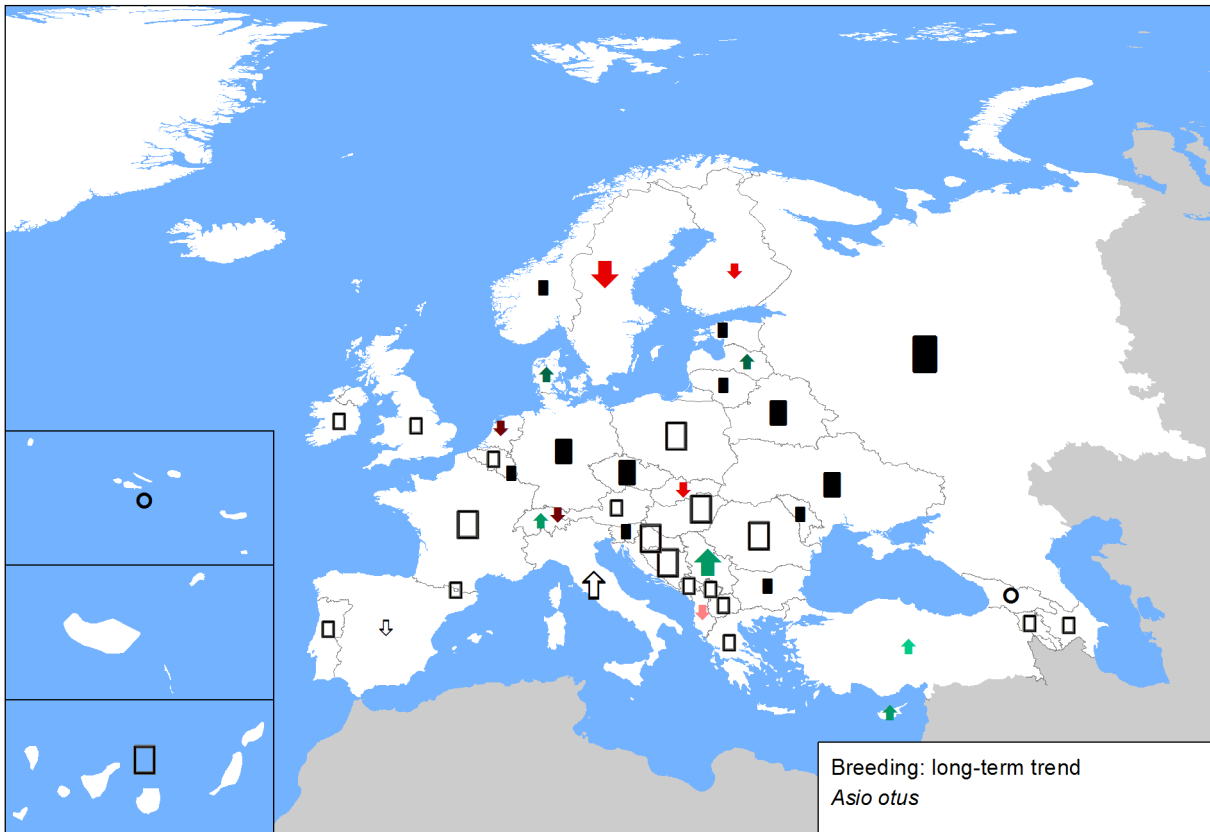


Figure 2. Breeding population sizes and long-term trends across Europe.



Sources

Albania

Breeding population size: Bino pers. obs.

Breeding short-term trend: Bino pers. obs.

Breeding long-term trend: Bino pers. obs.

Andorra

Breeding population size: BirdLife International 2004

Armenia

Breeding population size: ASPB data

Austria

Breeding population size: BirdLife Austria, extrapolation on the basis of available unpublished and published population and density data

Breeding short-term trend: BirdLife Austria, estimate on the basis of available unpublished and published trend data

Azerbaijan

Breeding population size: BirdLife International 2004

Belarus

Breeding population size: Zhuravliev D.V. - personal communication

Breeding short-term trend: BirdLife International (2004) Birds in Europe: population estimates, trends and conservation status. Cambridge, UK: BirdLife International. (BirdLife Conservation Series, No 12).

Breeding long-term trend: Nikiforov M.E., Kozulin A.V., eds. Belarussian birds at the beginning of XXI century: status, numbers, distribution. - 1997. - Minsk. - 187 p.

Belgium

Breeding population size: Data Breeding Bird atlas Wallonia (Jacob et al 2010), Brussels (Weiserbs 2012) and Flanders (Vermeersch et al 2004) in combination with trend data.

Bosnia and Herzegovina

Breeding population size: Kotrošan, D., Dročić, N., Trbojević, S., Šimić, E., Dervović, I., 2012: Program IBA, Međunarodno značajna područja za ptice, u Bosni i Hercegovini. Ornitološko društvo "Naše ptice", interno izdanje za projekat "Evaluacija IBA područja u FBiH", Sarajevo., Kotrošan, D. & Hatibović, E., 2012: Raptors in Bosnia and Herzegovina – status and perspectives for monitoring. *Acrocephalus* 33 (154/155): 173-179.

Bulgaria

Breeding population size: Iankov, P. (ed.) 2007. Atlas of breeding birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10. Sofia, BSPB. Common birds monitoring scheme in Bulgaria BSPB Bird Database SPA mapping of breeding birds 2012

Breeding short-term trend: Iankov, P. (ed.) 2007. Atlas of breeding birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10. Sofia, BSPB. Common birds monitoring scheme in Bulgaria BSPB Bird Database SPA mapping of breeding birds 2012

Breeding long-term trend: Iankov, P. (ed.) 2007. Atlas of breeding birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10. Sofia, BSPB. Simeonov, S., T. Michev, D. Nankinov. 1990. The Fauna of Bulgaria. Vol. 20. AVES. Part I. BAS Press, Sofia. 350 pp. (in Bulgarian with English Summary) BSPB Bird Database

Croatia

Breeding population size: Tutiš, V., Kralj, J., Radović, D., Čiković, D. i Barišić, S. (2013): Crvena knjiga ptica Republike Hrvatske. Ministarstvo zaštite okoliša i prirode, Državni zavod za zaštitu prirode, Zagreb (neobjavljeni podaci o procjenama populacija - arhiva Državnog zavoda za zaštitu prirode)

Breeding short-term trend: BiE III Work group, Croatia

Breeding long-term trend: BiE III Work group, Croatia

Cyprus

Breeding population size: BirdLife Cyprus 2013 pilot Atlas survey work; Analysis of recent BirdLife Cyprus bird sightings records reported in the society's annual reports; Whaley DJ & Dawes JC, 2003 Cyprus breeding Birds' Atlas

Breeding short-term trend: BirdLife Cyprus 2013 pilot Atlas survey work; Analysis of recent BirdLife Cyprus bird sightings records reported in the society's annual reports; Whaley DJ & Dawes JC, 2003 Cyprus breeding Birds' Atlas

Breeding long-term trend: BirdLife Cyprus 2013 pilot Atlas survey work; Analysis of BirdLife Cyprus bird sightings records reported in the society's annual reports; Whaley DJ & Dawes JC, 2003 Cyprus breeding Birds' Atlas; Flint & Stewart BOU Checklist no.6 (1992) The Birds of Cyprus

Czech Republic

Breeding population size: STASTNY K., BEJCEK V. & HUDEC K. 2006: Atlas hnízdního rozšíření ptaku v České republice. Aventinum Praha

Breeding long-term trend: STASTNY K., BEJCEK V. & HUDEC K. 2006: Atlas hnízdního rozšíření ptaku v České republice. Aventinum Praha

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) Knud N. Flensted from Dansk Ornitologisk Forening

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Denmark

Breeding short-term trend: BIRDLIFE INTERNATIONAL (2004) Birds in Europe: population estimates, trends and conservation status. Wageningen, The Netherlands: BirdLife International. (BirdLife Conservation Series No. 12) Knud N. Flensted from Dansk Ornitologisk Forening

Breeding long-term trend: BIRDLIFE INTERNATIONAL (2004) Birds in Europe: population estimates, trends and conservation status. Wageningen, The Netherlands: BirdLife International. (BirdLife Conservation Series No. 12) Grell, Michael Borch (1998): Fuglenes Danmark. Gads forlag i samarbejde med Dansk Ornitologisk Forening. Olsen, Klaus Malling (1992): Danmarks fugle –en oversigt. Dansk Ornitologisk Forening. Knud N. Flensted from Dansk Ornitologisk Forening

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

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

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

Finland

Breeding population size: Birds of Prey monitoring data, Finnish Museum of Natural History. Honkala, J., Saurola, P. & Valkama, J. 2013: Breeding and population trends of common raptors and owls in Finland in 2012. – Linnut-vuosikirja 2012: 50–61. (in Finnish with English summary)

Breeding short-term trend: Honkala, J., Saurola, P. & Valkama, J. 2013: Breeding and population trends of common raptors and owls in Finland in 2012. – Linnut-vuosikirja 2012: 50–61. (in Finnish with English summary)

Breeding long-term trend: Honkala, J., Saurola, P. & Valkama, J. 2013: Breeding and population trends of common raptors and owls in Finland in 2012. – Linnut-vuosikirja 2012: 50–61. (in Finnish with English summary)

France

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

Breeding short-term trend: Johannot F. et Weltz M. 2012 Cahiers d'habitats Natura 2000-Oiseaux, p. 219-222

Breeding long-term trend: Johannot F. et Weltz M. 2012 Cahiers d'habitats Natura 2000-Oiseaux, p. 219-222

Georgia

Breeding population size: Galvez, R.A., Gavashelishvili, L., Javakhishvili, Z. 2005. Raptors and Owls of Georgia (Field guide). Tbilisi, GCCW & Buneba Print Publishing. Tbilisi: 128 pp. (in English & in Georgian).

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 Greifvögel und Eulen

Breeding long-term trend: Monitoring Greifvögel und Eulen

Greece

Breeding population size: BirdLife International 2004. Birds in Europe - Population estimates, trends and conservation status. Cambridge, UK, BirdLife International (BirdLife Conservation Series No 12).

Hungary

Breeding population size: MME Nomenclator Bizottság (2008): Magyarország madarainak névjegyzéke. Nomenclator avium Hungariae. Magyar Madártani és Természetvédelmi Egyesület, Budapest. p. 278.

Republic of Ireland

Breeding population size: 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. Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. And Thompson, D. (2009) Raptors, A Field Guide for Surveys and Monitoring. Scottish National Heritage. Lusby, J. Cregg, P. & O'Clery, M. (2012) The West Offaly Raptor Conservation Project; Final Report 2012. Unpublished report by BirdWatch Ireland. O'Clery, M., McDonnell, B. & Lusby, J. (2012) The Duhallow Raptor Conservation Project; Interim Report 2012. Unpublished report by BirdWatch Ireland. Expert opinion: J. Lusby, BirdWatch Ireland; <http://www.birdwatchireland.ie>.

Breeding short-term trend: Expert opinion: J. Lusby, BirdWatch Ireland; <http://www.birdwatchireland.ie>. Gibbons D.W., Reid J.B. & Chapman R.A. (1993) The New Atlas of Breeding Birds in Britain and Ireland 1988-1991. Poyser.

Breeding long-term trend: Expert opinion: J. Lusby, BirdWatch Ireland; <http://www.birdwatchireland.ie>. 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. 2006. Ornitologia italiana. Vol.3 (Stercorariidae-Caprimulgidae). Alberto Perdisa Editore, Bologna

Breeding short-term trend: BirdLife International 2004. Birds in Europe: population estimates, trends and conservation status Cambridge, UK: BirdLife International. BirdLife Conservation Series No. 12 Brichetti P & Fracasso G. 2006. Ornitologia italiana. Vol.3 (Stercorariidae-Caprimulgidae). Alberto Perdisa Editore, Bologna Gustin M, Brambilla M & Celada C. 2010. Valutazione dello stato di Conservazione dell'avifauna italiana. Volume I, Non-Passeriformes. Ministero dell'Ambiente e della Tutela del Territorio e del Mare, Lega Italiana Protezione Uccelli (LIPU)

Breeding long-term trend: Brichetti P & Fracasso G. 2006. Ornitologia italiana. Vol.3 (Stercorariidae-Caprimulgidae). Alberto Perdisa Editore, Bologna Gustin M, Brambilla M & Celada C. 2010. Valutazione dello stato di Conservazione dell'avifauna italiana. Volume I, Non-Passeriformes. Ministero dell'Ambiente e della Tutela del Territorio e del Mare, Lega Italiana Protezione Uccelli (LIPU)

Kosovo

Breeding population size: NGO "Finch" (2014)

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Latvia

Breeding population size: Andris Avotins: andris.puces@gmail.com, Gaidis Grandans: gaidis_g@inbox.lv
Breeding short-term trend: Avotins A. Monitoring of nocturnal forest birds (reports on 2007, 2008, 2009) Avotins A. Unpublished data of owl monitoring in 2010-2012
Breeding long-term trend: Strazds M., Priednieks J., Vaverins G. 1994. Latvijas putnu skaits. – Putni daba, 4: 3–18. Andris Avotins: andris.puces@gmail.com, Gaidis Grandans: gaidis_g@inbox.lv

Liechtenstein

Breeding population size: Willi, G. (2014) Unpublished collection data
Breeding short-term trend: Willi, G. (2006) Die Vögel des Fürstentums Liechtenstein. Amtlicher Lehrmittelverlag, Vaduz (Naturkundliche Forschung im Fürstentum Liechtenstein, Bd. 22.
Breeding long-term trend: Willi, G. & M.F. Broggi (1985) Die Vogelwelt des Fürstentums Liechtenstein unter Berücksichtigung der benachbarten Gebiete; Teil II: Galliformes (Hühnervögel) – Piciformes (Spechtvögel). Ber. Bot.-Zool. Ges. Liechtenstein-Sargans-Werdenberg, Band 14, S. 103-143.; Willi, G. (2006) Die Vögel des Fürstentums Liechtenstein. Amtlicher Lehrmittelverlag, Vaduz (Naturkundliche Forschung im Fürstentum Liechtenstein, Bd. 22.

Lithuania

Breeding population size: 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.
Breeding short-term trend: 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.
Breeding long-term trend: 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

Breeding population size: LUXOR (2013): NATUR&EMWELT - BIRD-DATABASE, LUXEMBOURG Recorder (2013): database, Musée national d'histoire naturelle, Luxembourg Weiss J. (2008): Hohe Siedlungsdichte von Waldohreulen Asio otus in einer Ortschaft. Regulus Wissenschaftliche Berichte, 23: 66-69 (http://www.luxnatur.lu/publi/wb23001072.pdf) Lorgé P., E. Melchior (2010): Die Vögel Luxemburgs. LNVL, Luxembourg. ISBN: 978-2-919920-01-3
Breeding short-term trend: LUXOR (2013): NATUR&EMWELT - BIRD-DATABASE, LUXEMBOURG Recorder (2013): database, Musée national d'histoire naturelle, Luxembourg Weiss J. (2008): Hohe Siedlungsdichte von Waldohreulen Asio otus in einer Ortschaft. Regulus Wissenschaftliche Berichte, 23: 66-69 (http://www.luxnatur.lu/publi/wb23001072.pdf) Lorgé P., E. Melchior (2010): Die Vögel Luxemburgs. LNVL, Luxembourg. ISBN: 978-2-919920-01-3
Breeding long-term trend: LUXOR (2013): NATUR&EMWELT - BIRD-DATABASE, LUXEMBOURG Recorder (2013): database, Musée national d'histoire naturelle, Luxembourg Weiss J. (2008): Hohe Siedlungsdichte von Waldohreulen Asio otus in einer Ortschaft. Regulus Wissenschaftliche Berichte, 23: 66-69 (http://www.luxnatur.lu/publi/wb23001072.pdf) Lorgé P., E. Melchior (2010): Die Vögel Luxemburgs. LNVL, Luxembourg. ISBN: 978-2-919920-01-3 Melchior E., E. Mentgen, R. Peltzer, R. Schmitt, J. Weiss (1987): Atlas der Brutvögel Luxemburgs. Lëtzebuurger Natur- a Vulleschutzliga. Kremer-Muller & Cie, Foetz, Luxembourg

The Former Yugoslav Republic of Macedonia

Breeding population size: M. Veleviski, unedited data
--

Moldova

Breeding population size: The Atlas of the Breeding Birds of Republic of Moldova. 2010. 100p.
Breeding short-term trend: The Atlas of the Breeding Birds of Republic of Moldova. 2010. 100p.
Breeding long-term trend: 1.Аверин Ю. В., Ганя И.М., Успенский Г. Птицы Молдавии, том 2, Кишинев,1971, 242p 2.Burfield I., Bommel van F., Birds in Europe. Population estimates, trends and conservation status. BirdLife International. Oxford, 2004. 374p. 3 .The Atlas of the Breeding Birds of Republic of Moldova. 2010. 100p.

Montenegro

Breeding population size: 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,

Netherlands

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

Norway

Breeding population size: Heggøy, O. & Øien, I.J. 2014. Conservation status of birds of prey in Norway. Norsk Ornitologisk Forening rapport 1/2014. 129 sider.
Breeding short-term trend: Heggøy, O. & Øien, I.J. 2014. Conservation status of birds of prey in Norway. Norsk Ornitologisk Forening rapport 1/2014. 129 sider.
Breeding long-term trend: Heggøy, O. & Øien, I.J. 2014. Conservation status of birds of prey in Norway. Norsk Ornitologisk Forening rapport 1/2014. 129 sider.

Poland

Breeding population size: Chylarecki P., Sikora A. 2007. Ocena liczebności gatunków lęgowych w Polsce. W: Sikora A., Rohde Z., Gromadzki M., Neubauer G., Chylarecki P. (red.). Atlas rozmieszczenia ptaków lęgowych Polski 1985–2004. Bogucki Wyd. Nauk., Poznań, s. 34–41; BirdLife International 2004. Birds in Europe: population estimates, trends and conservation status. Cambridge, UK: BirdLife International. BirdLife International Series No. 12.
Breeding short-term trend: MSL: Rubacha S. 2012. Monitoring Lęgowych Sów Leśnych. In: Podsumowanie sezonu lęgowego Monitoringu Ptaków Polski w 2012 r. OTOP, MiIZ, KOO, SOS: 89-99 (source: http://monitoringptakow.gios.gov.pl/raporty?file=files/pliki/raporty_faza4/RaportMPP4_etap1_zad2%264_wiosna2012.pdf)

Asio otus (Northern Long-eared Owl)

Portugal

Breeding population size: Aguiar A, Lopes AL, Pimenta M, Luís A (2010) Owls (Strigiformes) in Parque Nacional Peneda-Gerês (PNPG) – Portugal. Nova Acta Científica Compostelana (Biología) 19:83-92; Grilo C, Sousa J, Ascensão F, Matos H, Leitão I, Pinheiro P, Costa M, Bernardo J, Reto D, Lourenço R, Santos-Reis M, Revilla E 2012 Individual spatial responses towards roads: implications for mortality risk. PLoS ONE 7(9): e43811. DOI:10.1371/journal.pone.0043811; Lourenço RF, MP Basto, R Cangarato, S Coelho, MC Álvaro, V Oliveira, MC Pais 2002. The owl (Order Strigiformes) assemblage in the North-eastern Algarve. Airo 12: 25-33; Silva CC, Lourenço R, Godinho S, Gomes E, Sabino-Marques H, Medinas D, Neves V, Silva C, Rabaça JE, Mira A 2012 Major roads negatively affect Tawny Owl abundance and Little Owl presence. Acta Ornithologica 47:47–54. DOI 10.3161/000164512X653917; Tomé R, Catry P (coords.) 2008. Atlas da fauna do Vale do Côa. Município de Pinhel. Pinhel. 180 pp.; Tomé R., Catry P, Bloise C, Korpimäki E 2008 Breeding density and success, and diet composition of Little Owls *Athene noctua* in steppe-like habitats in Portugal. Ornis Fennica 85:22-32; 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

Breeding short-term trend: Programa NOCTUA

PT: Azores

Romania

Breeding population size: "Milvus Group" Bird and Nature Protection Association database, unpublished data Romanian Ornithological Society database, unpublished data Romanian Common Bird Monitoring Database

Russia

Breeding population size: Volkov S.V., Morozov V.V., Sharikov A.V. (eds.). 2005. Owls of the Northern Eurasia. Moscow: 472 p. (in Russian). Volkov S.V., Sharikov A.V., Morozov V.V. (eds.). 2009. Owls of the Northern Eurasia: ecology, spatial and habitat distribution. Moscow: 304 p. (in Russian). Sharikov A.V., Konstantinov V.M., Klimov S.M., Lysenkov E.V., Malovichko L.V. 2002. Distribution and numbers of Long-eared Owl *Asio otus* in anthropogenic landscapes of European Russia. - Russian Ornithological Magazine, express-issue 176: 135-142 (in Russian).

Breeding short-term trend: Volkov S.V., Morozov V.V., Sharikov A.V. (eds.). 2005. Owls of the Northern Eurasia. Moscow: 472 p. (in Russian). Volkov S.V., Sharikov A.V., Morozov V.V. (eds.). 2009. Owls of the Northern Eurasia: ecology, spatial and habitat distribution. Moscow: 304 p. (in Russian). Sharikov A.V., Konstantinov V.M., Klimov S.M., Lysenkov E.V., Malovichko L.V. 2002. Distribution and numbers of Long-eared Owl *Asio otus* in anthropogenic landscapes of European Russia. - Russian Ornithological Magazine, express-issue 176: 135-142 (in Russian). Borodin O.V., Smirnova S.L., unpublished. spinus73@mail.ru

Breeding long-term trend: Volkov S.V., Morozov V.V., Sharikov A.V. (eds.). 2005. Owls of the Northern Eurasia. Moscow: 472 p. (in Russian). Volkov S.V., Sharikov A.V., Morozov V.V. (eds.). 2009. Owls of the Northern Eurasia: ecology, spatial and habitat distribution. Moscow: 304 p. (in Russian). Sharikov A.V., Konstantinov V.M., Klimov S.M., Lysenkov E.V., Malovichko L.V. 2002. Distribution and numbers of Long-eared Owl *Asio otus* in anthropogenic landscapes of European Russia. - Russian Ornithological Magazine, express-issue 176: 135-142 (in Russian). Borodin O.V., Smirnova S.L., unpublished. spinus73@mail.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: Chavko, J.

Breeding long-term trend: Chavko, J.

Slovenia

Breeding population size: Mihelič, T. (2013): Novi ornitološki atlas gnezdilk 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 gnezdilk 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 gnezdilk 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: 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

Breeding short-term trend: SEO/BirdLife (2012). Programa de seguimiento de Avifauna de SEO/BirdLife 2011. SEO/BirdLife. Madrid. 35 pp. 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 Gráfica de la tendencia poblacional de la especie (2006-2011): http://www.magrama.gob.es/es/biodiversidad/temas/inventarios-nacionales/buho_chico_tcm7-219730.pdf

Breeding long-term trend: Purroy, F.J. (Coord.) (1997). Atlas de las aves de España (1975-1995). SEO/BidLife. Lynx Edicions. Barcelona. 583 pp. 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) SEO/BirdLife (2013). Resultados del programa Sacre de SEO/BirdLife en 2012. SEO/BirdLife. Madrid.

ES: Canary Is

Breeding population size: Martín, A. & J. A. Lorenzo. 2001. Aves del Archipiélago Canario. Francisco Lemus Editor. La Laguna. 787 pp. Lorenzo, J.A. 2007 (ed). Atlas de las Aves Nidificantes en el Archipiélago Canario (1997-2003). Dirección General de Conservación de la Naturaleza-Sociedad Española de Ornitología. Madrid. 520 pp.

Breeding short-term trend: Martín, A. & J. A. Lorenzo. 2001. Aves del Archipiélago Canario. Francisco Lemus Editor. La Laguna. 787 pp. Lorenzo, J.A. 2007 (ed). Atlas de las Aves Nidificantes en el Archipiélago Canario (1997-2003). Dirección General de Conservación de la Naturaleza-Sociedad Española de Ornitología. Madrid. 520 pp.

Asio otus (Northern Long-eared Owl)

ES: Canary Is

Breeding long-term trend: Martín, A. & J. A. Lorenzo. 2001. Aves del Archipiélago Canario. Francisco Lemus Editor. La Laguna. 787 pp. Lorenzo, J.A. 2007 (ed). Atlas de las Aves Nidificantes en el Archipiélago Canario (1997-2003). Dirección General de Conservación de la Naturaleza-Sociedad Española de Ornitología. Madrid. 520 pp.

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: update on occasion of the following publication: Schmid, H. (2009): Greifvögel und Eulen. Schweizerische Vogelwarte, Sempach.

Breeding short-term trend: Site-occupancy modelling based on „semi-standardised“ chance observations. Percentage change based on linear regression. Min Max refer to 95% Confidence interval.

Breeding long-term trend: Site-occupancy modelling based on „semi-standardised“ chance observations. Percentage change based on linear regression. Min Max refer to 95% Confidence interval.

Turkey

Breeding population size: Zeynel Arslangündođdu personal communication. Birdlife International (2004) Birds in Europe: population estimates, trends and conservation status, Cambridge UK: Birdlife International (Birdlife Conservation series no:12 www.kusbank.org Kirwan G.M., Boyla K. A., Castell P., Demirci B., Özen M., Welch H., Marlow T., 2008, Birds of Turkey. Londra, Christopher Helm, 978-1-4081-0475-

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 Kuş 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. Tucker G.M., Heath M.F. Birds in Europe: their conservation status. - Cambridge. U.K. Bird Life Conservation Series № 3. 1994. 600 p. 2. Hagemajier 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. Горбань І. Оцінка чисельності гніздових птахів України. Вісник Львівського університету. Серія біологічна. Випуск 34. 2003. с. 147 – 158. 5. Birds in Europe: Population Estimates, Trends and Conservation Status. BirdLife Conservation Series 12; 2004. 374 p.

Breeding short-term trend: 1. Численность и размещение гнездящихся околотовных птиц в водно-болотных угодьях Азово-Черноморского побережья Украины. Под ред. В.Д. Слюхин / Wetland International Киев. 2000. 476 с. 2. Горбань І. Оцінка чисельності гніздових птахів України. Вісник Львівського університету. Серія біологічна. Випуск 34. 2003. с. 147 – 158. 3. Birds in Europe: Population Estimates, Trends and Conservation Status. BirdLife Conservation Series 12; 2004. 374 p.

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. Hagemajier 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. Hagemajier/ BirdLife International/EBCC. 2000. Cambridge, UK: BirdLife Conservation Series N10, 160 p. 5. Горбань І. Оцінка чисельності гніздових птахів України. Вісник Львівського університету. Серія біологічна. Випуск 34. 2003. с. 147 – 158. 6. Birds in Europe: Population Estimates, Trends and Conservation Status. BirdLife Conservation Series 12; 2004. 374 p.

United Kingdom

Breeding population size: Sharrock, J.T.R. 1976. The Atlas of Breeding Birds in Britain and Ireland. 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.

Bibliography

- Aschwanden, J., Birrer, S. and Jenni, L. 2005. Are ecological compensation areas attractive hunting sites for common kestrels (*Falco tinnunculus*) and long-eared owls (*Asio otus*)?. *Journal of Ornithology* 146(3): 279-286.
- Baudvin, H. 1997. Barn Owl (*Tyto alba*) and Long-Eared Owl (*Asio otus*) mortality along motorways in Bourgogne-Champagne: report and suggestions. In: Duncan, J.R., Johnson, D.H. and Nicholls, T.H. eds. *Biology and conservation of owls of the Northern Hemisphere: 2nd International symposium*. Gen. Tech. Rep. NC-190. St. Paul, MN: U.S. Dept. of Agriculture, Forest Service, North Central Forest Experiment Station. 58-61.
- 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.
- König, C. & Weick, F. 2008. *Owls of the world*. A&C Black.
- Marks, J.S., Evans, D.L. and Holt, D.W. 1994. Long-eared Owl (*Asio otus*), *The Birds of North America Online* (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/133>
- Olsen, P.D. 1999. Northern Long-eared Owl (*Asio otus*). In: del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. & de Juana, E. (eds.) 2014. *Handbook of the Birds of the World Alive*. Lynx Edicions, Barcelona. (retrieved from <http://www.hbw.com/node/55125> on 1 April 2015).