



THE IUCN RED LIST
OF THREATENED SPECIES™



***Parus major* (Great Tit)**

European Red List of Birds

Supplementary Material

The European Union (EU28) 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 2019-20. 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 (2021).

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Recommended citation

BirdLife International (2021) European Red List of Birds. Luxembourg: Publications Office of the European Union.

Further information

<http://datazone.birdlife.org/info/euroredlist>
<http://www.birdlife.org/europe-and-central-asia/european-red-list-birds-0>
<http://www.iucnredlist.org/regions/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.

Parus major (Great Tit)

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

Country (or territory) ²	Population estimate				Short-term population trend ⁵				Long-term population trend ⁵				Subspecific population (where relevant)
	Size (pairs) ³	Europe (%)	Year(s)	Method ⁴	Direction ⁶	Magnitude (%) ⁷	Year(s)	Method ⁴	Direction ⁶	Magnitude (%) ⁷	Year(s)	Method ⁴	
Albania	12700–25600	<1	2007-2018	partial	-	-58 to -49	2007-2018	partial	-	-58 to -49	1980-2018	expert	
Andorra	2100–14800	<1	2014-2017	partial	?		2011-2018	complete	?				
Armenia	19400–25900	<1	2013-2018	complete	+	3 to 5	2007-2018	complete	0		2003-2018	partial	
Austria	700000–1000000	1	2013-2018	partial	0		2007-2018	complete	?		1981-2018	deficient	
Azerbaijan	200000–400000	<1	1996-2019	expert	0		2013-2019	expert	?		1980-2019	expert	
Belarus	1500000–1700000	2	2010-2018	partial	0	-10 to 10	2012-2019	expert	0	0	1980-2019	expert	
Belgium	305000–546000	<1	2013-2018	expert	-	-25 to -13	2008-2018	complete	?	-10 to 61	1973-2018	partial	
Bosnia & HG	200000–500000	<1	2015-2018	complete	?	-10 to 10	2007-2018	complete	?		1980-2018	deficient	
Bulgaria	800000–1300000	1	2005-2018	partial	0	0	2000-2018	partial	0	0	1980-2018	partial	
Croatia	1000000–1500000	2	2013-2018	expert	?		2007-2018	deficient	?		1980-2018	deficient	
Cyprus	110000–150000	<1	2013-2018	partial	+	0 to 120	2007-2018	partial	?		1980-2018	deficient	
Czechia	3200000–6400000	6	2014-2017	complete	+		2007-2018	complete	+		1982-2018	complete	
Denmark	642000–643000	<1	2017	partial	-	-29 to -10	2006-2017	complete	-	-34 to -20	1980-2017	complete	
Estonia	300000–400000	<1	2013-2017	expert	0	21 to 34	2007-2018	expert	0	-3 to 1	1983-2018	expert	
Finland	1810000–2290000	3	2013-2018	complete	+	4 to 17	2007-2018	complete	+	80 to 138	1980-2018	complete	
France	4000000–7000000	7	2013-2018	partial	-		2007-2018	complete	0		2001-2018	partial	
Georgia	93400–934000	<1	2013-2017	partial	?			deficient	?				
Germany	5650000–7000000	8	2016-2016	complete	+	7 to 16	2004-2016	complete	0		1980-2016	expert	
Gibraltar	1–5	<1	2004-2018	partial	F	-1 to 5	2001-2018	partial	0	0	1980-2018	partial	
Greece	870000–1080000	1	2013-2018	partial	0		2007-2018	partial	+		1980-2018	partial	
Hungary	1130000–1160000	1	2014-2018	complete	?		2007-2018	expert	+	132 to 277	1980-2018	partial	
Rep. Ireland	687000–1590000	1	2011-2016	complete	+	26 to 40	2006-2016	complete	?		1980-2016		
Italy	1000000–2000000	2	2013-2018	expert	+	5 to 10	2000-2014	partial	0		1993-2018	expert	
Kosovo	180000–250000	<1	2007-2019	partial	-		2007-2018	partial	?		1990-2018	partial	
Latvia	902000–1070000	1	2016-2016	complete	+	13 to 53	2005-2018	complete	+		1991-2016	partial	
Lithuania	350000–600000	<1	2013-2018	partial	0	0	2013-2018	partial	0	0	1980-2018	partial	
Luxembourg	40000–50000	<1	2013-2018	partial	0	0	2007-2018	partial	?		1980-2018	expert	
North Macedonia	100000–500000	<1	2014-2019	expert	0		2007-2018	expert	?		1980-2019		
Moldova	80000–120000	<1	2014-2017	partial	0		2007-2018	partial	0		1990-2018	expert	
Montenegro	200000–400000	<1	2002-2012	expert	0		2007-2018	expert	?				
Netherlands	375000–625000	<1	2013-2015	complete	-	-7 to -1	2006-2017	complete	+	7 to 26	1984-2017	complete	
Norway	1000000–2400000	2	2013-2018	expert	0		2013-2018	partial	0		1980-2018	partial	

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Country (or territory) ²	Population estimate				Short-term population trend ⁵				Long-term population trend ⁵				Subspecific population (where relevant)
	Size (pairs) ³	Europe (%)	Year(s)	Method ⁴	Direction ⁶	Magnitude (%) ⁷	Year(s)	Method ⁴	Direction ⁶	Magnitude (%) ⁷	Year(s)	Method ⁴	
Poland	4480000–5120000	6	2013-2018	complete	+	15 to 28	2007-2018	complete	?		1980-2018	deficient	
Portugal	1000000–5000000	3	2013-2018	partial	-		2004-2018	partial	?		1980-2018	deficient	
Romania	4810000–5700000	7	2013-2015	complete	?	0 to 5	2008-2018	complete	?		1980-2018	deficient	
Russia	6400000–13200000	12	2006-2018	partial	0		2007-2018	partial	+	20 to 40	1986-2018	partial	
Serbia	755000–1210000	1	2013-2018	partial	0	0	2007-2018	complete	0	0	1980-2018	complete	
Slovakia	1500000–3000000	3	2013-2018	partial	0		2007-2018	partial	0		1980-2018	partial	
Slovenia	500000–700000	<1	2013-2018	complete	0		2008-2018	complete	?		1980-2018	deficient	
Spain	5780000–7570000	8	2004-2006	partial	0		2007-2018	complete	+		1980-2018	complete	
Sweden	2700000–2970000	4	2013-2018	partial	+	5 to 15	2007-2018	partial	0	-10 to 50	1980-2018	partial	
Switzerland	400000–550000	<1	2013–2016	partial	0	-12 to 12	2007-2018	complete	+	18 to 44	1990-2018	complete	
Turkey	2000000–7000000	5	2002-2012	expert	?		2008-2019	deficient	?		1980-2013	deficient	
Ukraine	3500000–4500000	5	2015-2017	partial	0		2007-2019	expert	0		1980-2019	expert	
United Kingdom	2330000–2340000	3	2016	partial	0		2004-2016	complete	+		1980-2016	complete	
EU28	47000000–68800000	71											
Europe	63600000–103000000	100											

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 'method used' (replacing the data 'quality' assessment in the 2015 European Red List) is reported as: a) Complete: complete survey or a statistically robust estimate; b) Partial: based mainly on extrapolation from a limited amount of data; c) Expert: based mainly on expert opinion with very limited data; d) Defficient: insufficient or no data available.

⁵ 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.

⁶ Trend directions are reported as: increasing (+); decreasing (-); stable (0); fluctuating (F); or unknown (?).

⁷ 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 (≥50%) | ↓ Large decrease (≥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: ≥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.

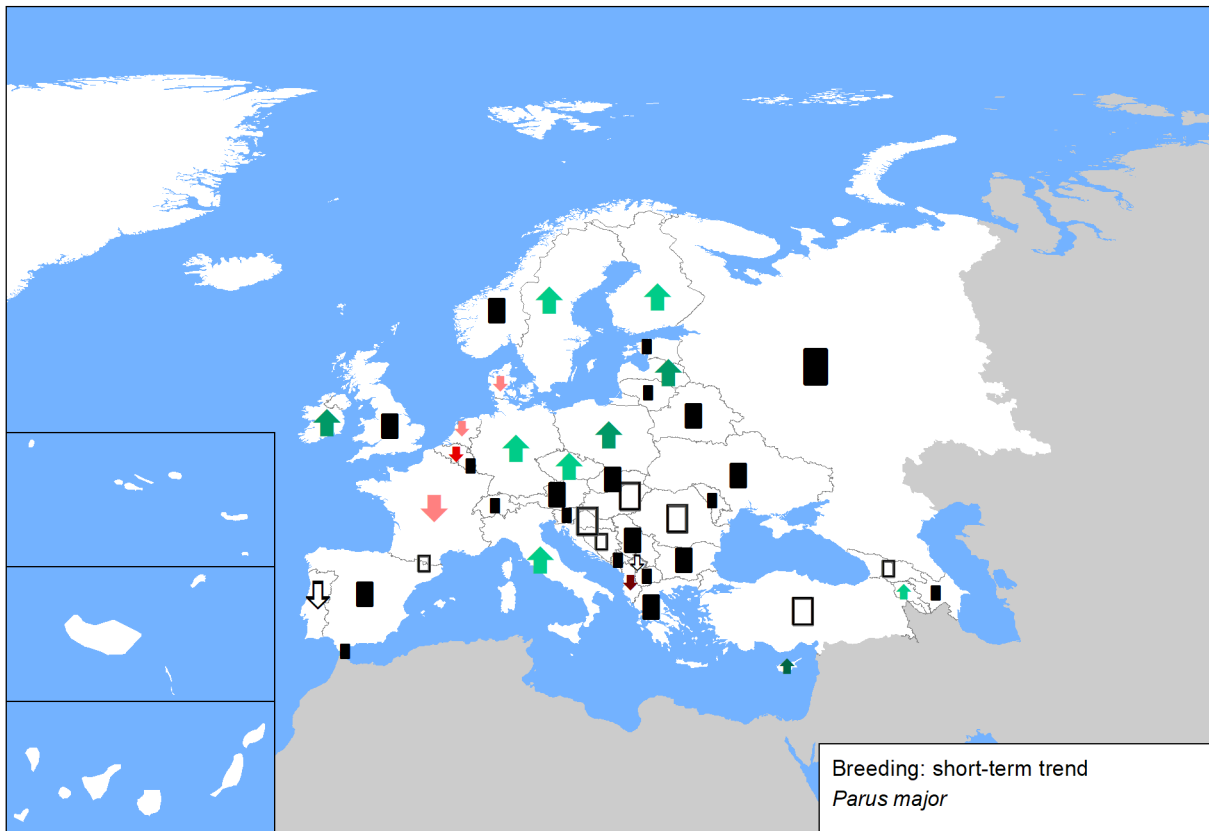
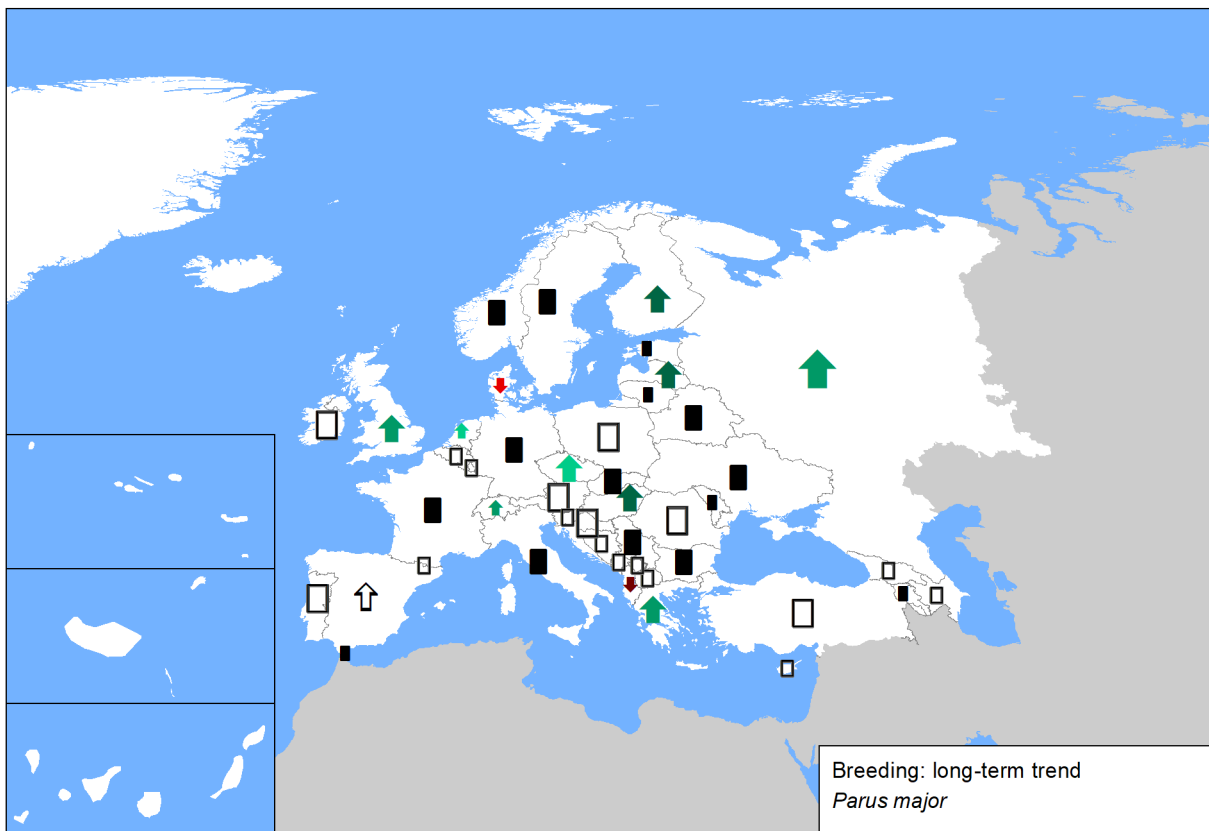


Figure 2. Breeding population sizes and long-term trends across Europe.



Sources

Albania

Breeding population size: Bino & Xeka 2020 in EBBA 2
Breeding short-term trend: Bino & Xeka pers. obs.
Breeding long-term trend: Bino pers. obs.

Andorra

Breeding population size: Fieldwork EBBA2, published at "Guia dels ocells d'Andorra. J. Nicolau & C. Pladevall, 2018"
Breeding short-term trend: Common Bird Monitoring Scheme of Andorra (SOCA)

Armenia

Breeding population size: TSE NGO National Bird Monitoring data.
Breeding short-term trend: TSE (2020) The Atlas of the Breeding Birds in Armenia. In preparation.
Breeding long-term trend: TSE (2020) The Atlas of the Breeding Birds in Armenia. In preparation.

Austria

Breeding population size: BirdLife Austria, estimate based on a sample of breeding densities from different sites and habitats and corrected by the results of the Austrian breeding bird monitoring ("Brutvogelmonitoring") for 1998- 2018
Breeding short-term trend: BirdLife Austria, results of the Austrian Breeding bird monitoring ("Brutvogelmonitoring")
Breeding long-term trend: BirdLife Austria, unpublished

Azerbaijan

Breeding population size: BirdLife International 2004
Breeding short-term trend: AOS data base
Breeding long-term trend: AOS Data Base

Belarus

Breeding population size: Research work of the National Academy of Sciences of the Republic of Belarus "Dynamics and predictive assessment of changes in the state of populations of the main resource and biocenotically most important bird species in Belarus"
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: Vermeersch G. et al. (2018, in press). Broedvogels in Vlaanderen in de periode 2013-2018. Rapporten van het Instituut voor Natuur- en Bosonderzoek (INBO), Brussel. / Paquet, J-Y., Anselin, A., Vermeersch, G., Derouaux, A., Devos, K. (2019, in prep.). Contribution of Belgium to EBCC European Breeding Bird Atlas 2. Internal Report.
Breeding short-term trend: Vermeersch G. et al. (2018, in press). Broedvogels in Vlaanderen in de periode 2013-2018. Rapporten van het Instituut voor Natuur- en Bosonderzoek (INBO), Brussel. / Paquet, J-Y., Anselin, A., Vermeersch, G., Derouaux, A., Devos, K. (2019, in prep.). Contribution of Belgium to EBCC European Breeding Bird Atlas 2. Internal Report.
Breeding long-term trend: Vermeersch G. et al. (2018, in press). Broedvogels in Vlaanderen in de periode 2013-2018. Rapporten van het Instituut voor Natuur- en Bosonderzoek (INBO), Brussel. / Paquet, J-Y., Anselin, A., Vermeersch, G., Derouaux, A., Devos, K. (2019, in prep.). Contribution of Belgium to EBCC European Breeding Bird Atlas 2. Internal Report.

Bosnia and Herzegovina

Breeding population size: Based on data for EBBA2
Breeding short-term trend: more individual articles e.g published in magazine Bilten mreže posmatrača ptica u Bosni i Hercegovini-see https://ptice.ba/bs/category/bilteni_/ , individual reports (e.g. for EBBA2, projects etc)

Bulgaria

Breeding population size: BSPB Bird Database; 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.; Nankinov, D. 2009. Studies on Fauna of Bulgaria, Birds - Aves, Passeriformes, Sofia, ETO, 407 p. (in Bulgarian); National Art. 12 reporting database 2013-2018;
Breeding short-term trend: BSPB Bird Database; 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.; Nankinov, D. 2009. Studies on Fauna of Bulgaria, Birds - Aves, Passeriformes, Sofia, ETO, 407 p. (in Bulgarian); Nankinov, D., A. Dutsov, B. Nikolov, B. Borisov, G. Stoyanov, G. Gradev, D. Georgiev, D. Popov, D. Domuschiev, D. Kirov, E. Tilova, I. Nikolov, I. Ivanov, K. Dichev, K. Popov, N. Karaivanov, N. Todorov, P. Shurulinkov, R. Stanchev, R. Aleksov, R. Tsonev, S. Dalakchieva, S. Ivanov, S. Marin, S. Staikov, S. Nikolov & H. Nikolov. 2004. Breeding totals of the ornithofauna in Bulgaria, 2004. Green Balkans, Plovdiv. 32 pp.; National Art. 12 reporting database 2013-2018;
Breeding long-term trend: BSPB Bird Database; 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.; Nankinov, D. 2009. Studies on Fauna of Bulgaria, Birds - Aves, Passeriformes, Sofia, ETO, 407 p. (in Bulgarian)

Croatia

Breeding population size: Dumbović Mazal V., Pintar V., Zadavec M. (2019): Prvo izvješće o brojnosti i rasprostranjenosti ptica u Hrvatskoj sukladno odredbama Direktive o pticama.
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Croatia

Breeding short-term trend: Dumbović Mazal V., Pintar V., Zadravec M. (2019): Prvo izvješće o brojnosti i rasprostranjenosti ptica u Hrvatskoj sukladno odredbama Direktive o pticama.
Breeding long-term trend: Dumbović Mazal V., Pintar V., Zadravec M. (2019): Prvo izvješće o brojnosti i rasprostranjenosti ptica u Hrvatskoj sukladno odredbama Direktive o pticama.

Cyprus

Breeding population size: Survey data analysed using DISTANCE programme; Study on FBI and CBI Indicators, Birdlife Cyprus, 2017; BirdLife Cyprus Common Birds monitoring scheme data; Bird sightings records as published in BirdLife Cyprus annual reports;
Breeding short-term trend: Study on FBI and CBI Indicators, Birdlife Cyprus, 2017
Breeding long-term trend: Bird sightings records as published in BirdLife Cyprus annual reports; No systematic data is available for before 2006

Czechia

Breeding population size: Šťastný et Bejček in prep. - Atlas hnízdního rozšíření ptáků ČR 2014-2017
Breeding short-term trend: ČSO (unpubl.): Common Bird Monitoring Programme
Breeding long-term trend: ČSO (unpubl.): Common Bird Monitoring Programme

Denmark

Breeding population size: Charlotte M. Moshøj, Daniel Palm Eskildsen, Michael Fink Jørgensen & Thomas Vikstrøm, (2018): Overvågning af de almindelige fuglearter i Danmark 1975-2017 & Mandrup, E. 1997, Hvor mange fugle yngler i Danmark, Dansk Ornitologisk Tidsskrift, nr 3, 1997
Breeding short-term trend: Charlotte M. Moshøj, Daniel Palm Eskildsen, Michael Fink Jørgensen & Thomas Vikstrøm, (2018): Overvågning af de almindelige fuglearter i Danmark 1975-2017
Breeding long-term trend: Charlotte M. Moshøj, Daniel Palm Eskildsen, Michael Fink Jørgensen & Thomas Vikstrøm, (2018): Overvågning af de almindelige fuglearter i Danmark 1975-2017

Estonia

Breeding population size: Estonian Working Group on Bird Status and Numbers
Breeding short-term trend: [1] Estonian Working Group on Bird Status and Numbers [2] Point counts of breeding birds. http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=3417&Itemid=5815
Breeding long-term trend: [1] Estonian Working Group on Bird Status and Numbers [2] Point counts of breeding birds. http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=3417&Itemid=5815

Finland

Breeding population size: Lehikoinen, A., Below, A., Jukarainen, A., Laaksonen, T., Lehtiniemi, T., Mikkola-Roos, M., Pessa, J., Rajasärkkä, A., Rusanen, P., Sirkiä, P., Tiainen, J. & Valkama, J. 2019: Suomen lintujen pesimäkantojen koot. – Linnut-vuosikirja 2018: 38-45.
Breeding short-term trend: Väisänen, R. A., Lehikoinen, A. & Sirkiä, P. 2018: Suomen pesivän maalinuston kannanvaihtelut 1975-2017. Linnut-vuosikirja 2017: 16 31.
Breeding long-term trend: Väisänen, R. A., Lehikoinen, A. & Sirkiä, P. 2018: Suomen pesivän maalinuston kannanvaihtelut 1975-2017. Linnut-vuosikirja 2017: 16 31.

France

Breeding population size: Issa N. & Muller Y. 2015. Atlas des oiseaux nicheurs de France métropolitaine. , LPO/SEOF/MNHN/Delachaux et Niestlé, Paris
Breeding short-term trend: . STOC EPS / MNHN.

Georgia

Breeding population size: EBBA Georgia, prepared by Sabuko-Society for nature conservation, Iliia state university, NGO "psovi".

Germany

Breeding population size: Monitoring häufiger Brutvögel (http://www.dda-web.de/index.php?cat=monitoring&subcat=ha_neu&subsubcat=kontakt)
Breeding short-term trend: Monitoring häufiger Brutvögel (http://www.dda-web.de/index.php?cat=monitoring&subcat=ha_neu&subsubcat=kontakt)
Breeding long-term trend: Gerlach et al. (in Vorb.): Vögel in Deutschland – 2019. Dachverband Deutscher Avifaunisten, Bundesamt für Naturschutz und Länderarbeitsgemeinschaft der Vogelschutzwarten, Münster.

Gibraltar

Breeding population size: Bensusan, K.J. & Perez, C.E. (2003). A Conservation Action Plan for MOD sites in Gibraltar: Gibraltar Ornithological & Natural History Society. GONHS. Cortes, J.E. (1978). Conservation – A Future? Semi - natural Nature Reserve, Gibraltar: A Management Plan. Gibraltar Ornithological and Natural History Society. GONHS. Cortes, J.E. (1996). Windmill Hill Flats: a good view of migration across the Straits of Gibraltar. Almoraima 15:163-184. Cortes, J.E., Finlayson J.C., Garcia, E.F.J., Mosquera, M.A.J., (1980). The Birds of Gibraltar. Gibraltar Books. Gibraltar. Environmental Action & Management Plan (2012). Government of Gibraltar. Gibraltar Bird Reports (2006 - 2012). Gibraltar Ornithological & Natural History Society Gibraltar Nature News (2006 – 2012). Bi-annual Publication. Gibraltar Ornithological & Natural History Society. Nature Protection Act 1991 (2013). Perez, C.E. (2013). Report on the Conservation of Terrestrial Flora & Fauna in Gibraltar (2012). Wildlife (Gibraltar) Ltd Perez, C.E. & Bensusan, K. J. (2005). Upper Rock Nature Reserve A Management and Action. Plan. Gibraltar: The Gibraltar Ornithological & Natural History Society (GONHS). Perez, C.E. (2006). Biodiversity Action Plan, Gibraltar: Planning for Nature. Gibraltar: Gibraltar Ornithological & Natural History Society (GONHS). Southern Waters of Gibraltar Management Scheme EU Natura 2000 Site (2012).

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Gibraltar

Breeding short-term trend: Bensusan, K.J. & Perez, C.E. (2003). A Conservation Action Plan for MOD sites in Gibraltar: Gibraltar Ornithological & Natural History Society. GONHS. Cortes, J. E. (1978). Conservation – A Future? Semi - natural Nature Reserve, Gibraltar: A Management Plan. Gibraltar Ornithological and Natural History Society. GONHS. Cortes, J.E. (1996). Windmill Hill Flats: a good view of migration across the Straits of Gibraltar. Almoraima 15:163-184. Cortes, J.E., Finlayson J.C., Garcia, E.F.J., Mosquera, M.A.J., (1980). The Birds of Gibraltar. Gibraltar Books. Gibraltar. Environmental Action & Management Plan (2012). Government of Gibraltar. Gibraltar Bird Reports (2006 - 2012). Gibraltar Ornithological & Natural History Society Gibraltar Nature News (2006 – 2012). Bi-annual Publication. Gibraltar Ornithological & Natural History Society. Nature Protection Act 1991 (2013). Perez, C.E. (2013). Report on the Conservation of Terrestrial Flora & Fauna in Gibraltar (2012). Wildlife (Gibraltar) Ltd Perez, C.E. & Bensusan, K. J. (2005). Upper Rock Nature Reserve A Management and Action. Plan. Gibraltar: The Gibraltar Ornithological & Natural History Society (GONHS). Perez, C.E. (2006). Biodiversity Action Plan, Gibraltar: Planning for Nature. Gibraltar: Gibraltar Ornithological & Natural History Society (GONHS). Southern Waters of Gibraltar Management Scheme EU Natura 2000 Site (2012).

Breeding long-term trend: Bensusan, K.J. & Perez, C.E. (2003). A Conservation Action Plan for MOD sites in Gibraltar: Gibraltar Ornithological & Natural History Society. GONHS. Cortes, J. E. (1978). Conservation – A Future? Semi - natural Nature Reserve, Gibraltar: A Management Plan. Gibraltar Ornithological and Natural History Society. GONHS. Cortes, J.E. (1996). Windmill Hill Flats: a good view of migration across the Straits of Gibraltar. Almoraima 15:163-184. Cortes, J.E., Finlayson J.C., Garcia, E.F.J., Mosquera, M.A.J., (1980). The Birds of Gibraltar. Gibraltar Books. Gibraltar. Environmental Action & Management Plan (2012). Government of Gibraltar. Gibraltar Bird Reports (2006 - 2012). Gibraltar Ornithological & Natural History Society Gibraltar Nature News (2006 – 2012). Bi-annual Publication. Gibraltar Ornithological & Natural History Society. Nature Protection Act 1991 (2013). Perez, C.E. (2013). Report on the Conservation of Terrestrial Flora & Fauna in Gibraltar (2012). Wildlife (Gibraltar) Ltd Perez, C.E. & Bensusan, K. J. (2005). Upper Rock Nature Reserve A Management and Action. Plan. Gibraltar: The Gibraltar Ornithological & Natural History Society (GONHS). Perez, C.E. (2006). Biodiversity Action Plan, Gibraltar: Planning for Nature. Gibraltar: Gibraltar Ornithological & Natural History Society (GONHS). Southern Waters of Gibraltar Management Scheme EU Natura 2000 Site (2012).

Greece

Breeding population size: (1) Hellenic Common Birds Monitoring Scheme database (2007-2019), Hellenic Ornithological Society, (2) BirdLife International (2017). European birds of conservation concern: populations, trends and national responsibilities. Cambridge. UK: BirdLife International. ISBN 978-1-912086-00-9, (3) D. Portolou & V. Kati (2017). "Abundance and distribution of selected species – SEBI 01". In: Kati V (Ed) "Greece-the state of environment 2015-2016: Nature and biodiversity. National report". National Center of Environment and Sustainable Development, Athens, pp 3-20 – 3-36 [In Greek]. Available at: <http://ekpa.ypeka.gr/index.php/soer-2018>

Breeding short-term trend: (1) Hellenic Common Birds Monitoring Scheme database (2007-2019), Hellenic Ornithological Society, (2) BirdLife International (2017). European birds of conservation concern: populations, trends and national responsibilities. Cambridge. UK: BirdLife International. ISBN 978-1-912086-00-9, (3) D. Portolou & V. Kati (2017). "Abundance and distribution of selected species – SEBI 01". In: Kati V (Ed) "Greece-the state of environment 2015-2016: Nature and biodiversity. National report". National Center of Environment and Sustainable Development, Athens, pp 3-20 – 3-36 [In Greek]. Available at: <http://ekpa.ypeka.gr/index.php/soer-2018>

Breeding long-term trend: 1) Handrinos, G., & Akriotis, T., (1997) The birds of Greece. C. Helm, A & C Black, London. 2) 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: National common bird monitoring scheme (MMM) database.

Breeding short-term trend: MME Nomenclator Bizottság (2008): Magyarország madarainak névjegyzéke. Nomenclator avium Hungariae. Magyar Madártani és Természetvédelmi Egyesület, Budapest. 189-190 p. http://www.termeszetvedelem.hu/_user/browser/File/Natura2000/BD_12_jelentes_2013_anyagai/Parus_major.pdf

Breeding long-term trend: National common bird monitoring scheme (MMM) database. Haraszthy L. (szerk.) (1984): Magyarország fészkelő madarai. Natura, Budapest. 62-63 p. Haraszthy, L. (szerk.) (1998): Magyarország madarai. Mezőgazda Kiadó, Budapest. 101 p. Magyar G., Hadarics T., Waliczky Z., Schmidt A., Nagy T. & Bankovics A. (1998): Magyarország madarainak névjegyzéke. Madártani Intézet, Budapest, 110 p. BirdLife International (2004) Birds in Europe: population estimates, trends and conservation status. Cambridge, UK: BirdLife International. (BirdLife Conservation Series No.12.), 223 p. MME Nomenclator Bizottság (2008): Magyarország madarainak névjegyzéke. Nomenclator avium Hungariae. Magyar Madártani és Természetvédelmi Egyesület, Budapest. 189-190 p.

Republic of Ireland

Breeding population size: Lewis, L. J., Coombes, D., Burke, B., O'Halloran, J., Walsh, A., Tierney, T. D. & Cummins, S. (2019) Countryside Bird Survey: Status and trends of common and widespread breeding birds 1998-2016. Irish Wildlife Manuals (in prep). National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

Breeding short-term trend: Lewis, L. J., Coombes, D., Burke, B., O'Halloran, J., Walsh, A., Tierney, T. D. & Cummins, S. (2019) Countryside Bird Survey: Status and trends of common and widespread breeding birds 1998-2016. Irish Wildlife Manuals (in prep). National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

Breeding long-term trend: Lewis, L. J., Coombes, D., Burke, B., O'Halloran, J., Walsh, A., Tierney, T. D. & Cummins, S. (2019) Countryside Bird Survey: Status and trends of common and widespread breeding birds 1998-2016. Irish Wildlife Manuals (in prep). National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

Italy

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

Breeding short-term trend: Extrapolated data by the average annual trend, from: Rete Rurale Nazionale & LIPU (2015). Uccelli comuni in Italia. Aggiornamento degli andamenti di popolazione e del FBI per la Rete Rurale Nazionale dal 2000 al 2014. LIPU, 16 pp.

Breeding long-term trend: Brichetti P., Meschini E., 1993. Stima delle popolazioni di uccelli nidificanti. In Meschini E., Frugis S., 1993. Atlante degli uccelli nidificanti in Italia. Suppl. Ric. Biol. Selvaggina, 20, 1-345.

Kosovo

Breeding population size: Qenan Maxhuni

Breeding short-term trend: Qenan Maxhuni

Breeding long-term trend: Puzovic, S. et al. (2004): Birds of Serbia and Montenegro – Size of nesting populations. I trends: 1990-2002. Ciconia 12

Latvia

Breeding population size: Aunins A., Mardega I. 2018. [Countrywide monitoring of the common birds. Final report for the year 2018.] (in Latvian) Latvian Ornithological society

Breeding short-term trend: Aunins A., Mardega I. 2018. [Countrywide monitoring of the common birds. Final report for the year 2018.] (in Latvian) Latvian Ornithological society

Parus major (Great Tit)

Latvia

Breeding long-term trend: Strazds M., Priednieks J., Vaverins G. 1994. [Size of Latvian bird populations.] (in Latvian) In: Putni dabā, 4: 3–18 Aunins A., Mardega I. 2018. [Countrywide monitoring of the common birds. Final report for the year 2018.] (in Latvian) Latvian Ornithological society

Lithuania

Breeding population size: Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) 2015-2018. Lietuvos perinčių paukščių atlaso duomenų bazė (Lithuanian Breeding Birds Atlas Database). Vilnius. Ministry of Environment of the Republic of Lithuania. 2012. Status and trends of bird populations (Article 12, Birds Directive 2009/147/EC) National Summary 2008-2012 Lithuania.

Breeding short-term trend: Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) 2015-2018. Lietuvos perinčių paukščių atlaso duomenų bazė (Lithuanian Breeding Birds Atlas Database). Vilnius. Ministry of Environment of the Republic of Lithuania. 2012. Status and trends of bird populations (Article 12, Birds Directive 2009/147/EC) National Summary 2008-2012 Lithuania.

Breeding long-term trend: Logminas, V. (ed.). 1991. Lietuvos fauna: paukščiai. Vilnius: „Mokslas“. Kurlavičius, P. (ed.) 2006. Lietuvos perinčių paukščių atlasas. Kaunas: „Lututė“. 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). Raudonikis L. 2004. Important Bird Areas of the European Union Importance in Lithuania. Lithuanian Ornithological Society & Institute of Ecology of Vilnius University. Lutute, Vilnius. Jusys, V., Karalius, S., Raudonikis, L. 2012. Lietuvos paukščių pažinimo vadovas. Kaunas: „Lututė“. Ministry of Environment of the Republic of Lithuania. 2012. Status and trends of bird populations (Article 12, Birds Directive 2009/147/EC) National Summary 2008-2012 Lithuania. Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) 2015-2018. Lietuvos perinčių paukščių atlaso duomenų bazė (Lithuanian Breeding Birds Atlas Database). Vilnius.

Luxembourg

Breeding population size: Ornitho.lu (2018): online database natur&environment asbl & Dachverband Deutscher Avifaunisten (DDA) e.V.; Luxembourg Recorder (2018): database Musée national d'histoire naturelle; Luxembourg Lorgé P., E. Melchior (2016): Die Vögel Luxemburgs. Natur&environment Luxembourg. ISBN: 978-2-919920-01-3

Breeding short-term trend: Ornitho.lu (2018): online database natur&environment asbl & Dachverband Deutscher Avifaunisten (DDA) e.V.; Luxembourg Recorder (2018): database Musée national d'histoire naturelle; Luxembourg Lorgé P., E. Melchior (2016): Die Vögel Luxemburgs. Natur&environment Luxembourg. ISBN: 978-2-919920-01-3; LUXOR (2018): natur&environment – Bird-database, Luxembourg

Breeding long-term trend: Experts' estimate

North Macedonia

Breeding population size: unpublished data from the European Breeding Bird Atlas 2

Breeding short-term trend: unpublished data from the European Breeding Bird Atlas 2

Moldova

Breeding population size: Moldova's contribution for the second European Breeding Bird Atlas (EBBA2)

Breeding short-term trend: SPPN expert opinion (sppn.moldova@gmail.com)

Breeding long-term trend: SPPN expert opinion (sppn.moldova@gmail.com)

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: Sovon Bird atlas (Sovon 2018)

Breeding short-term trend: NEM (Sovon, RWS, CBS, provinces)

Breeding long-term trend: NEM (Sovon, RWS, CBS, provinces)

Norway

Breeding population size: Shimmings P. & Øien, I.J. 2015. Bestandsestimater og trender for norske hekkefugler. NOF-rapport 2015-2.

Breeding short-term trend: Terrestrial monitoring programme - extensive (TOV-e)

Breeding long-term trend: Shimmings, P. & Øien, I.J. 2015. Bestandsestimater for norske hekkefugler. NOF Rapport 2-2015. 268 pp.

Poland

Breeding population size: State Environmental Monitoring / Chief Inspectorate of Environmental Protection (survey: MPPL – Common Bird Survey)

Breeding short-term trend: State Environmental Monitoring / Chief Inspectorate of Environmental Protection (survey: MPPL)

Breeding long-term trend: Chief Inspectorate of Environmental Protection & Polish Society for the Protection of Birds (OTOP) / BirdLife Poland

Portugal

Breeding population size: eBird (2019). eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available: <http://www.ebird.org/portugal/home>. (Accessed: October 22, 2018).

Breeding short-term trend: Alonso, H., Coelho, R., Costa, J., Gouveia, C., Leitão, D., Machado, R., & Teodósio, J. 2019. Relatório do Censo de Aves Comuns 2004-2018. Sociedade Portuguesa para o Estudo das Aves, Lisboa (relatório não publicado).

Romania

Breeding population size: Romanian Common Bird Monitoring Programme, Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database

Breeding short-term trend: Romanian Common Bird Monitoring Programme, Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database

Parus major (Great Tit)

Romania

Breeding long-term trend: Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database, Rombird (Romanian Rarity Commission) Database

Russia

Breeding population size: Voltzit & Kalyakin 2013-2019; Database of the project on Atlas of breeding birds of European Russia

Breeding short-term trend: Results of winter bird surveys in Russia and adjacent regions 2007-2018

Breeding long-term trend: Results of winter bird surveys in Russia and adjacent regions 2007-2018

Serbia

Breeding population size: EBBA2 project; Puzović, S., Radišić, D., Ružić, M., Rajković, D., Radaković, M., Pantović, U., Janković, M., Stojnić, N., Šćiban, M., Tucakov, M., Gergelj, J., Sekulić, G., Agošton, A. & Raković, M. 2015. Birds of Serbia: Breeding Population Estimates and Trends for the Period 2008-2013. Bird protection and study society of Serbia, and Department of Biology and Ecology, Faculty of Sciences, University of Novi Sad, Novi Sad.

Breeding short-term trend: Puzović, S., Radišić, D., Ružić, M., Rajković, D., Radaković, M., Pantović, U., Janković, M., Stojnić, N., Šćiban, M., Tucakov, M., Gergelj, J., Sekulić, G., Agošton, A. & Raković, M. 2015. Birds of Serbia: Breeding Population Estimates and Trends for the Period 2008-2013. Bird protection and study society of Serbia, and Department of Biology and Ecology, Faculty of Sciences, University of Novi Sad, Novi Sad.

Breeding long-term trend: Puzović, S., Radišić, D., Ružić, M., Rajković, D., Radaković, M., Pantović, U., Janković, M., Stojnić, N., Šćiban, M., Tucakov, M., Gergelj, J., Sekulić, G., Agošton, A. & Raković, M. 2015. Birds of Serbia: Breeding Population Estimates and Trends for the Period 2008-2013. Bird protection and study society of Serbia, and Department of Biology and Ecology, Faculty of Sciences, University of Novi Sad, Novi Sad.

Slovakia

Breeding population size: Coordinatory group for reporting 2019. Danko Štefan, Darolová Alžbeta, Krištin Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002.

Breeding short-term trend: Coordinatory group for reporting 2019, AVES-Symfony Database 2013-2018, KIMS Database 2013-2018. Danko Štefan, Darolová Alžbeta, Krištin Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002.

Breeding long-term trend: Coordinatory group for reporting 2019, AVES-Symfony Database 2013-2018, KIMS Database 2013-2018. Danko Štefan, Darolová Alžbeta, Krištin Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002.

Slovenia

Breeding population size: MIHELICH T., KMECL P., DENAC K., KOCE U., VREZEC A., DENAC D. (eds.) (2019): Atlas ptic Slovenije. Popis gnezdičk 2002–2017. – DOPPS, Ljubljana. KMECL P. & ŠUMRADA T. (2018): Monitoring splošno razširjenih vrst ptic za določitev slovenskega indeksa ptic kmetijske krajine - končno poročilo za leto 2018. – DOPPS, Ljubljana.

Breeding short-term trend: KMECL P. & ŠUMRADA T. (2018): Monitoring splošno razširjenih vrst ptic za določitev slovenskega indeksa ptic kmetijske krajine - končno poročilo za leto 2018. – DOPPS, Ljubljana.

Breeding long-term trend: There are no sources for this information.

Spain

Breeding population size: Atiénzar, F., Álvarez, E. & Barba, E. (2016). Carbonero común - *Parus major*. En: Enciclopedia virtual de los vertebrados españoles. Salvador, A. & Morales, M.B. (Eds). Museo Nacional de Ciencias Naturales, Madrid. (<http://www.vertebradosibericos.org/aves/habitat/parmajha.html>) Carrascal, L.M. & Palomino, D. (2008). Las aves comunes reproductoras en España. Población en 2004-2006. SEO/BirdLife. Madrid. 202 pp. (https://www.miteco.gob.es/biodiversidad/temas/inventarios-nacionales/19_paseriformes_2004_2006_tcm30-208258.pdf)

Breeding short-term trend: Atiénzar, F., Álvarez, E. & Barba, E. (2016). Carbonero común - *Parus major*. En: Enciclopedia virtual de los vertebrados españoles. Salvador, A. & Morales, M.B. (Eds). Museo Nacional de Ciencias Naturales, Madrid. (<http://www.vertebradosibericos.org/aves/habitat/parmajha.html>) Información proporcionada por las Comunidades Autónomas. Ministerio de Medio Ambiente (2018). Datos de anillamiento y recuperaciones en España. Ministerio de Agricultura, Alimentación y Medio Ambiente, SEO/BirdLife, ICO, EBD-CSIC y GOB. Madrid. (<http://www.anillamientoseo.org>) SEO/BirdLife (2018). Programas de seguimiento y grupos de trabajo de SEO/BirdLife 2017. SEO/BirdLife. Madrid. 69 pp. (<https://www.seo.org/boletin/seguimiento/boletin/2017/html5forpc.html?page=0>) SEO/BirdLife (2019). Programas de seguimiento y grupos de trabajo de SEO/BirdLife 2018. SEO/BirdLife. Madrid. (<https://doi.org/10.31170/0073>)

Breeding long-term trend: Atiénzar, F., Álvarez, E. & Barba, E. (2016). Carbonero común - *Parus major*. En: Enciclopedia virtual de los vertebrados españoles. Salvador, A. & Morales, M.B. (Eds). Museo Nacional de Ciencias Naturales, Madrid. (<http://www.vertebradosibericos.org/aves/habitat/parmajha.html>) Hagemeyer, E.J. & Blair, M.J. (Eds.) (1997). The EBCC Atlas of European Breeding birds: Their distribution and abundance. T & A D Poyser, London. Información proporcionada por las Comunidades Autónomas. 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. (https://www.miteco.gob.es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/inventario-nacional-de-biodiversidad/ieet_aves_atlas.aspx) Ministerio de Medio Ambiente (2018). Datos de anillamiento y recuperaciones en España. Ministerio de Agricultura, Alimentación y Medio Ambiente, SEO/BirdLife, ICO, EBD-CSIC y GOB. Madrid. (<http://www.anillamientoseo.org>) SEO/BirdLife (2019). Programas de seguimiento y grupos de trabajo de SEO/BirdLife 2018. SEO/BirdLife. Madrid. (<https://doi.org/10.31170/0073>)

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. SOF, Halmstad. Swedish Bird Survey. BirdLife Sverige, Annual Bird reports.

Breeding short-term trend: Svensk fågeltaxering - Swedish Bird Survey

Breeding long-term trend: Svensk fågeltaxering - Swedish Bird Survey

Switzerland

Breeding population size: Knaus, P., S. Antoniazza, S. Wechsler, J. Guélat, M. Kéry, N. Strebel & T. Sattler (2018): Swiss Breeding Bird Atlas 2013–2016. Distribution and population trends of birds in Switzerland and Liechtenstein. Swiss Ornithological Institute, Sempach.

Breeding short-term trend: <https://www.vogelwarte.ch/en/projects/population-trends/breeding-population-indices/>

Breeding long-term trend: <https://www.vogelwarte.ch/en/projects/population-trends/breeding-population-indices/>

Parus major (Great Tit)

Turkey

Breeding population size: Güven Eken, Ferdi Akarsu personal communication (2019), Arslangünderođdu 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)

Ukraine

Breeding population size: Atlas work, non-published data

United Kingdom

Breeding population size: Baseline = Gibbons, D.W., Reid, J.B. & Chapman, R.A. 1993. The New Atlas of Breeding Birds in Britain and Ireland: 1988-1991. Poyser, London. Extrapolation from 1988-91 using Breeding Bird Survey monitoring trend.

Breeding short-term trend: BTO/JNCC/RSPB Breeding Bird Survey data: Harris, S.J., Massimino, D., Gillings, S., Eaton, M.A., Noble, D.G., Balmer, D.E., Procter, D., PearceHiggins, J.W. & Woodcock, P. 2018. The Breeding Bird Survey 2017. BTO Research Report 706 British Trust for Ornithology, Thetford. <https://www.bto.org/sites/default/files/bbs-report-2017.pdf>

Breeding long-term trend: Joint Common Bird Census/Breeding Bird Survey smoothed trend index. Woodward, I.D., Massimino, D., Hammond, M.J., Harris, S.J., Leech, D.I., Noble, D.G., Walker, R.H., Barimore, C., Dadam, D., Eglington, S.M., Marchant, J.H., Sullivan, M.J.P., Baillie, S.R. & Robinson, R.A. (2018) BirdTrends 2018: trends in numbers, breeding success and survival for UK breeding birds. Research Report 708. BTO, Thetford. www.bto.org/birdtrends

Bibliography

- Bird, J. P., Martin, R., Akçakaya, H. R., Gilroy, J., Burfield, I. J., Garnett, S. G., Symes, A., Taylor, J., Sekercioglu, Ç. H. and Butchart, S. H. M. 2020. Generation lengths of the world's birds and their implications for extinction risk. *Conservation Biology* 34(5): 1252-1261. DOI: 10.1111/cobi.13486.
- BirdLife International. 2004. *Birds in Europe: population estimates, trends and conservation status*. BirdLife International, Cambridge, U.K.
- Brazil, M. 2009. *Birds of East Asia: eastern China, Taiwan, Korea, Japan, eastern Russia*. Christopher Helm, London.
- Escandell, V. 2019. Programa Sacre. In: SEO/BirdLife (ed.), *Programas de seguimiento y grupos de trabajo de SEO/BirdLife 2018*, pp. 4-10. SEO/BirdLife, Madrid.
- Gosler, A., Clement, P. and Christie, D.A. 2013. Great Tit (*Parus major*). In: del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. and de Juana, E. (eds), *Handbook of the Birds of the World Alive*, Lynx Edicions, Barcelona.
- Snow, D.W. and Perrins, C.M. 1998. *The Birds of the Western Palearctic, Volume 2: Passerines*. Oxford University Press, Oxford.
- Visser M.E., L.J.M. Holleman & P. Gienapp. 2006. Shifts in caterpillar biomass phenology due to climate change and its impact on the breeding biology of an insectivorous bird. *Oecologia* 147: 164–172.
- Visser, M.E., A.J. van Noordwijk, J. M. Tinbergen & C. M. Lessells. 1998. Warmer springs lead to mistimed reproduction in Great Tits (*Parus major*). *Proc. R. Soc. Lond. B.* 265: 1867-1870.