



THE IUCN RED LIST  
OF THREATENED SPECIES™



## ***Muscicapa striata* (Spotted Flycatcher)**

### **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).

#### **Contents**

Reported national population sizes and trends  
Trend maps of reported national population data  
Sources of reported national population data  
Species factsheet bibliography

#### **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](mailto:science@birdlife.org).

*Muscicapa striata* (Spotted Flycatcher)

**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>5</sup>				Long-term population trend <sup>5</sup>				Subspecific population (where relevant)
	Size (pairs) <sup>3</sup>	Europe (%)	Year(s)	Method <sup>4</sup>	Direction <sup>6</sup>	Magnitude (%) <sup>7</sup>	Year(s)	Method <sup>4</sup>	Direction <sup>6</sup>	Magnitude (%) <sup>7</sup>	Year(s)	Method <sup>4</sup>	
Albania	4000–8600	<1	2007-2018	partial	+	33 to 43	2007-2018	partial	+	72 to 100	1980-2018	expert	
Andorra	5–27	<1	2014-2017	expert	?		2011-2018	deficient	?				
Armenia	3900–5900	<1	2013-2018	complete	0		2007-2018		?		2003-2018	deficient	
Austria	50000–75000	<1	2013-2018	partial	-		2007-2018	complete	?		1981-2018	deficient	
Azerbaijan	10000–100000	<1	1996-2019	expert	0		2013-2019	expert	?		1980-2019	expert	
Belarus	190000–400000	2	2010-2018	partial	0	-10 to 10	2012-2019	expert	0	0	1980-2019	expert	
Belgium	2700–5100	<1	2013-2018	expert	-	-91 to -83	2008-2018	partial	-	-72 to -46	1973-2018	partial	
Bosnia & HG	5000–10000	<1	2015-2018	complete	?	-10 to 10	2007-2018	complete	?		1980-2018	deficient	
Bulgaria	8000–12000	<1	2005-2018	partial	0	0 to 10	2000-2018	partial	0	0 to 10	1980-2018	expert	
Croatia	10000	<1	2014-2014	expert	?		2007-2018	deficient	?		1980-2018	deficient	
Cyprus	700–4800	<1	2013-2018	partial	?	-30 to 60	2007-2018	partial	?		1980-2018	deficient	
Czechia	35000–70000	<1	2014-2017	complete	0		2007-2018	complete	0		1982-2018	complete	
Denmark	13500–13600	<1	2017	partial	0	-2 to 62	2006-2017	complete	-	-44 to -13	1980-2017	complete	
Estonia	150000–250000	1	2013-2017	expert	0		2007-2018	expert	0		1983-2018	expert	
Finland	1190000–1710000	11	2013-2018	complete	-	-32 to -17	2007-2018	complete	0	-25 to 3	1980-2018	complete	
France	80000–140000	<1	2013-2018	partial	-		2007-2018	partial	-		2001-2018	partial	
Georgia	12700–95200	<1	2013-2017	partial	?			deficient	?				
Germany	155000–230000	1	2016-2016	complete	-	-31 to -5	2004-2016	complete	0		1980-2016	expert	
Gibraltar	1–5	<1	2006-2018	partial	+	100	2000-2018	partial	+	100	1980-2018	partial	
Greece	130000–170000	1	2013-2018	partial	-		2007-2018	partial	-		1980-2018	partial	
Hungary	41000–67000	<1	2014-2018	complete	?	-23 to 94	2007-2018	complete	-	-65 to -24	1980-2018	complete	
Rep. Ireland	20900–97500	<1	2011-2016	partial	-	-30 to -2	2006-2016	partial	?		1980-2016	deficient	
Italy	200000–400000	2	2013-2018	expert	-	-15 to -5	2000-2014	partial	+	100 to 300	1993-2018	expert	
Kosovo	1000–1500	<1	2007-2019	partial	0		2007-2018	partial	0		1990-2018	partial	
Latvia	152000–287000	2	2016-2016	complete	?	-4 to 170	2005-2018	complete	-		1991-2016	partial	
Lithuania	100000–300000	1	2013-2018	partial	-	-5 to 0	2013-2018	partial	0	0	1980-2018	partial	
Luxembourg	500–1000	<1	2013-2018	partial	-	-20 to -10	2007-2018	expert	?		1980-2018	expert	
North Macedonia	2000–5000	<1	2014-2019	expert	0		2007-2018	expert	?		1980-2019		
Malta	11–16	<1	2017-2018	complete	+		2008-2018	complete	+		1980-2018	complete	
Moldova	3000–5000	<1	2014-2017	partial	0		2007-2018	partial	0		1990-2018	expert	
Montenegro	1000–2000	<1	2002-2012	expert	0		2007-2018	expert	?				
Netherlands	15000–20000	<1	2013-2015	complete	0	-25 to 4	2006-2017	complete	-	-65 to -43	1984-2017	complete	

*Muscicapa striata* (Spotted Flycatcher)

**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>5</sup>				Long-term population trend <sup>5</sup>				Subspecific population (where relevant)
	Size (pairs) <sup>3</sup>	Europe (%)	Year(s)	Method <sup>4</sup>	Direction <sup>6</sup>	Magnitude (%) <sup>7</sup>	Year(s)	Method <sup>4</sup>	Direction <sup>6</sup>	Magnitude (%) <sup>7</sup>	Year(s)	Method <sup>4</sup>	
Norway	350000–600000	3	2013-2018	expert	0		2013-2018	partial	0		1980-2018	partial	
Poland	216000–310000	2	2013-2018	complete	-	-38 to -11	2007-2018	complete	?		1980-2018	deficient	
Portugal	500–1000	<1	2013-2018	partial	?		2007-2018	partial	?		1980-2018	deficient	
Romania	132000–327000	2	2013-2015	complete	?	-4 to 11	2008-2018	partial	?		1980-2018	deficient	
Russia	5000000–8600000	47	2006-2018	partial	0		2006-2018	expert	0		1980-2018	expert	
Serbia	22000–37000	<1	2013-2018	partial	0	0	2007-2018	complete	0	0	1980-2018	complete	
Slovakia	65000–150000	<1	2013-2018	expert	0		2007-2018	expert	0		1980-2018	expert	
Slovenia	23300–39000	<1	2018-2018	complete	0		2008-2018	complete	?		1980-2018	deficient	
Spain	650000–1480000	7	2013-2018	partial	0		2007-2018	partial	0		1980-2018	expert	
Sweden	938000–2180000	10	2013-2018	partial	0	0 to 20	2007-2018	partial	-	-45 to -19	1980-2018	partial	
Switzerland	35000–55000	<1	2013–2016	partial	-	-38 to -6	2007-2018	complete	-	-46 to -28	1990-2018	complete	
Turkey	30000–90000	<1	2002-2012	deficient	?		2008-2019	deficient	?		1980-2013	deficient	
Ukraine	220000–280000	2	2015-2017	partial	0		2010-2018	partial	0		1980-2019	partial	
United Kingdom	41300–41400	<1	2016	partial	-		2004-2016	complete	-		1980-2016	complete	
EU28	4420000–8380000	44											
<b>Europe</b>	<b>10300000–18700000</b>	<b>100</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 '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) Deficient: insufficient or no data available.

<sup>5</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>6</sup> Trend directions are reported as: increasing (+); decreasing (-); stable (0); fluctuating (F); or unknown (?).

<sup>7</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

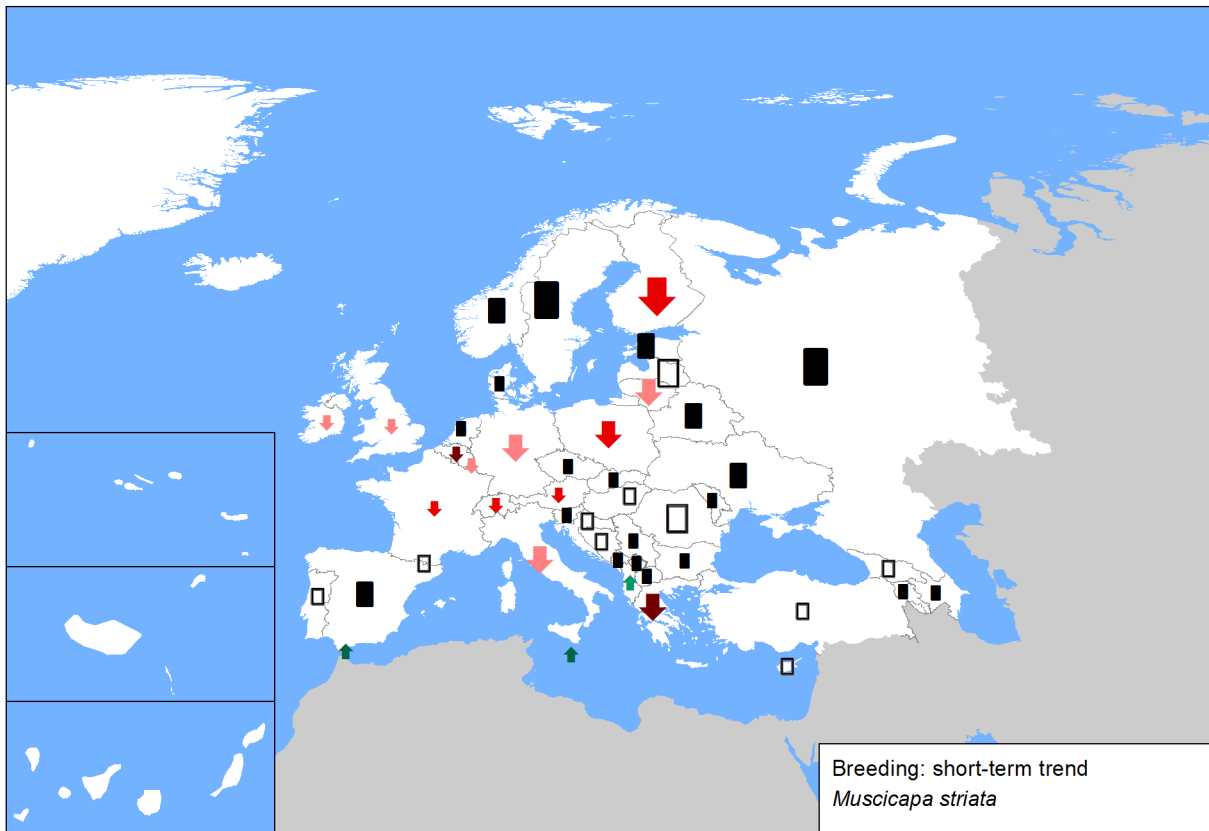
- |   |                                  |
|---|----------------------------------|
| ↑ Large increase ( $\geq 50\%$ )        | ↓ Large decrease ( $\geq 50\%$ ) |
| ↑ Moderate increase (20–49%)            | ↓ Moderate decrease (20–49%)     |
| ↑ Small increase ( $< 20\%$ )           | ↓ Small decrease ( $< 20\%$ )    |
| ↑ 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.

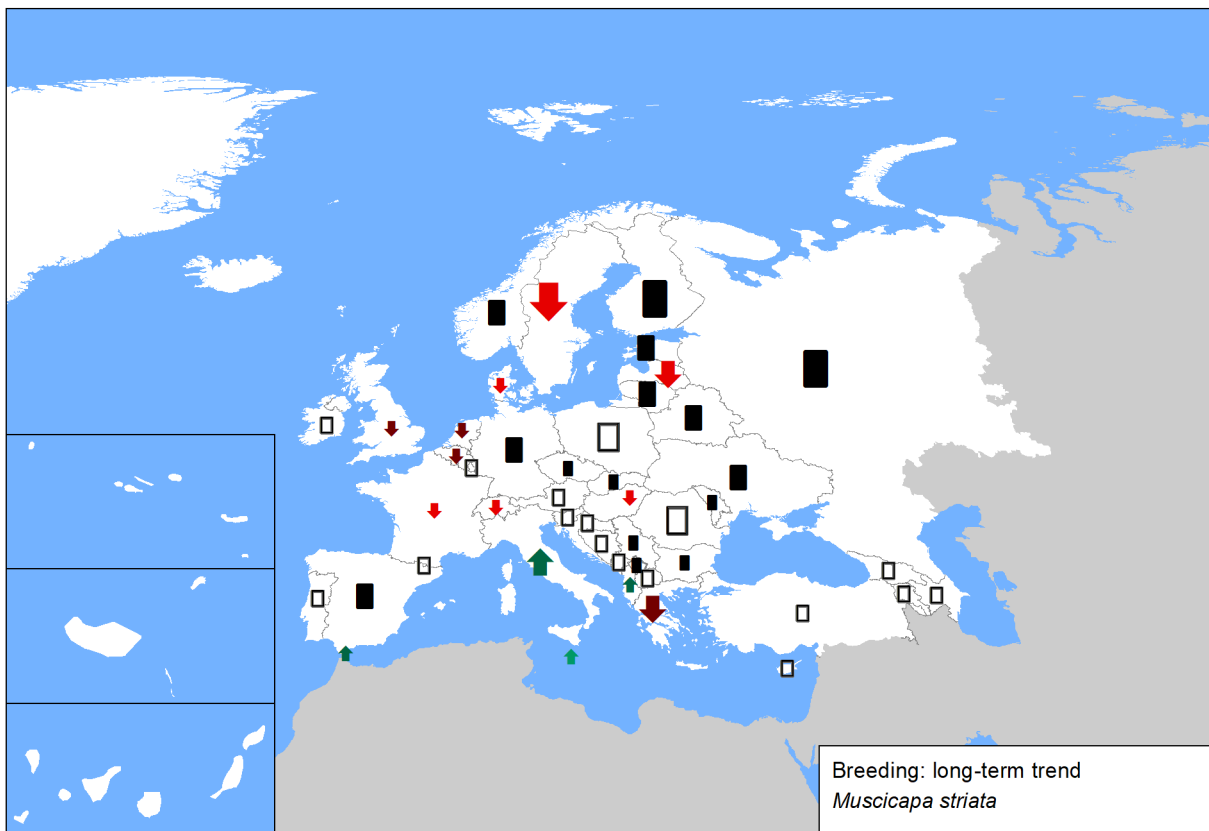
- ↑ Large:  $\geq 10\%$  of the European population
- ↑ Medium: 1–9% of the European population
- ↑ Small:  $< 1\%$  of the European population

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.



## *Muscicapa striata* (Spotted Flycatcher)

### Sources

#### Albania

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

#### Andorra

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

#### Armenia

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

#### Austria

<b>Breeding population size:</b> 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
<b>Breeding short-term trend:</b> BirdLife Austria, results of the Austrian Breeding bird monitoring ("Brutvogelmonitoring")
<b>Breeding long-term trend:</b> BirdLife Austria, unpublished

#### Azerbaijan

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

#### Belarus

<b>Breeding population size:</b> 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"
<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> 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.
<b>Breeding short-term trend:</b> 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.
<b>Breeding long-term trend:</b> 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

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

#### 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. (In Bulgarian and English); National Art. 12 reporting database 2013-2018; Nankinov, D. 2009. Studies on Fauna of Bulgaria, Birds - Aves, Passeriformes, Sofia, ETO, 407 p. (in Bulgarian) BSPB Database P.Shurulinkov,G.Daskalova- unpublished data
<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. (In Bulgarian and English); National Art. 12 reporting database 2013-2018; Nankinov, D. 2009. Studies on Fauna of Bulgaria, Birds - Aves, Passeriformes, Sofia, ETO, 407 p. (in Bulgarian) BSPB Database P.Shurulinkov,G.Daskalova- unpublished data
<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. (In Bulgarian and English) Nankinov, D. 2009. Studies on Fauna of Bulgaria, Birds - Aves, Passeriformes, Sofia, ETO, 407 p. (in Bulgarian) BSPB Database

#### Croatia

<b>Breeding population size:</b> BirdLife International 2015: European Red List of Birds. Luxembourg: Office for Official Publications of the European Communities.). <a href="http://datazone.birdlife.org/info/euroredlis">http://datazone.birdlife.org/info/euroredlis</a>
<b>Breeding short-term trend:</b> no data available
<b>Breeding long-term trend:</b> no data available

## *Muscicapa striata* (Spotted Flycatcher)

### Cyprus

**Breeding population size:** Survey data analysed using DISTANCE programme

**Breeding short-term trend:** Survey data analysed using DISTANCE programme

**Breeding long-term trend:** Bird sightings records as published in BirdLife Cyprus annual reports; Whaley DJ & Dawes JC, 2003 Cyprus Breeding Birds' Atlas; Birds in Europe II (2004), BirdLife International; Flint & Stewart BOU Checklist no.6 (1992) The Birds of Cyprus

### 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](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](http://seire.keskkonnainfo.ee/index.php?option=com_content&view=article&id=3417&Itemid=5815)

### Finland

**Breeding population size:** Lehtinen, 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., Lehtinen, A. & Sirkiä, P. 2018: Suomen pesivän maalinuston kannanvaihtelut 1975-2017. Linnut-vuosikirja 2017: 16 31.

**Breeding long-term trend:** Väisänen, R. A., Lehtinen, 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, Ilia 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](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](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).

**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).

## *Muscicapa striata* (Spotted Flycatcher)

### Gibraltar

**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:** National common bird monitoring scheme (MMM) database. MME Nomenclator Bizottság (2008): Magyarország madarainak névjegyzéke. Nomenclator avium Hungariae. Magyar Madártani és Természetvédelmi Egyesület, Budapest. 189-190 p.

**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:** BirdLife International 2017. European birds of conservation concern: populations, trends and national responsibilities. Cambridge, UK: BirdLife International.

**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

**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.

## *Muscicapa striata* (Spotted Flycatcher)

### 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

### Malta

**Breeding population size:** 'Malta Breeding Bird Atlas 2018' in preparation, (included a complete breeding bird population census in Malta together with a wintering bird census in 2017-2018)

**Breeding short-term trend:** Malta Breeding Bird Atlas (2018) in preparation, (included a complete breeding bird population census in Malta together with a wintering bird census in 2017-2018) Sultana, J., Borg, J.J., Gauci, C. & Falzon, V. (2011): The Breeding Birds of Malta. Malta: BirdLife Malta & BDL Publishing. Raine, A., Sultana, J. & Gillings, S. (2009) Malta Breeding Bird Atlas 2008, Malta: BirdLife Malta.

**Breeding long-term trend:** Malta Breeding Bird Atlas (2018) in preparation, (included a complete breeding bird population census in Malta together with a wintering bird census in 2017-2018) Sultana, J., Borg, J.J., Gauci, C. & Falzon, V. (2011): The Breeding Birds of Malta. Malta: BirdLife Malta & BDL Publishing. Raine, A., Sultana, J. & Gillings, S. (2009) Malta Breeding Bird Atlas 2008, Malta: BirdLife Malta. BirdLife International (2004) Birds in Europe: population estimates, trends and conservation status. BirdLife International (BirdLife Conservation Series No. 12), Cambridge, UK. Tucker, G.M. & Heath, M.F. (1994) Birds in Europe: their conservation status. BirdLife International (BirdLife Conservation Series No. 3), Cambridge, UK.

### 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., Saveljic, 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. Bestandsestimer 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. Bestandsestimer 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:** eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available: <http://www.ebird.org/po>

## *Muscicapa striata* (Spotted Flycatcher)

### Romania

<b>Breeding population size:</b> Romanian Common Bird Monitoring Programme, Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database
<b>Breeding short-term trend:</b> Romanian Common Bird Monitoring Programme, Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database
<b>Breeding long-term trend:</b> Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database, Rombird (Romanian Rarity Commission) Database

### Russia

<b>Breeding population size:</b> Voltzit & Kalyakin 2013-2019; Database of the project on Atlas of breeding birds of European Russia
<b>Breeding short-term trend:</b> Sarychev unpublished. vssar@yandex.ru Preobrazhenskaya unpublished. vooop21@rambler.ru
<b>Breeding long-term trend:</b> Rykova 2007; Sarychev unpublished. vssar@yandex.ru Preobrazhenskaya unpublished. vooop21@rambler.ru

### Serbia

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

<b>Breeding population size:</b> Coordinatory group for reporting 2019 Karaska D., Trnka A., Krištin A., Ridžoň J.: Chránené vtáčie územia Slovenska. ŠOP SR Banská Bystrica, 2015. Krištin in litt.
<b>Breeding short-term trend:</b> Coordinatory group for reporting 2019, AVES-Symfony Database 2013-2018, KIMS Database 2013-2018. Ridžoň in litt. (www.vtaky.sk, 2019, manuscript in preparation), Krištin in litt.
<b>Breeding long-term trend:</b> Coordinatory group for reporting 2019, AVES-Symfony Database 2013-2018, KIMS Database 2013-2018. Ridžoň in litt. (www.vtaky.sk, 2019, manuscript in preparation), Krištin in litt.

### Slovenia

<b>Breeding population size:</b> Mihelič T., Kmecl P., Denac K., Koce U., Vrezec A., Denac D. (eds.) (2019): Atlas ptic Slovenije. Popis gnezdičk 2002–2017. (The atlas of birds of Slovenia. The census of breeding birds 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. (Monitoring of common bird species for the determination of Slovenian farmland bird index - final report for the year 2018.) – DOPPS, Ljubljana.
<b>Breeding short-term trend:</b> Kmecl P. & Šumrada T. (2018): Monitoring splošno razširjenih vrst ptic za določitev slovenskega indeksa ptic kmetijske krajine - končno poročilo za leto 2018. (Monitoring of common bird species for the determination of Slovenian farmland bird index - final report for the year 2018.) – DOPPS, Ljubljana.
<b>Breeding long-term trend:</b> There are no sources for this information.

### Spain

<b>Breeding population size:</b> Carrascal, L.M. & Palomino, D. (2008). Las aves comunes reproductoras en España. Población en 2004-2006. SEO/BirdLife. Madrid. 202 pp. ( <a href="https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/19_paseriformes_2004_2006_tcm30-208258.pdf">https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/19_paseriformes_2004_2006_tcm30-208258.pdf</a> )
<b>Breeding short-term trend:</b> Información obtenida de la base de datos del Inventario Español de Especies Terrestres. Programa SACRE. Ministerio de Agricultura, Alimentación y Medio Ambiente ( <a href="https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/ieet_aves_sist_seg_tendencia_comunes_esp.aspx">https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/ieet_aves_sist_seg_tendencia_comunes_esp.aspx</a> ) SEO/BirdLife (2018). Programas de seguimiento y grupos de trabajo de SEO/BirdLife 2017. SEO/BirdLife. Madrid. 69 pp. ( <a href="https://www.seo.org/boletin/seguimiento/boletin/2017/html5forpc.html?page=0">https://www.seo.org/boletin/seguimiento/boletin/2017/html5forpc.html?page=0</a> ) SEO/BirdLife (2019). Programas de seguimiento y grupos de trabajo de SEO/BirdLife 2018. SEO/BirdLife. Madrid. ( <a href="https://doi.org/10.31170/0073">https://doi.org/10.31170/0073</a> )
<b>Breeding long-term trend:</b> BirdLife International (2018). <i>Muscicapa striata</i> . The IUCN Red List of Threatened Species 2018: e.T22709192A132079879. ( <a href="http://dx.doi.org/10.2305/IUCN.UK.2018-2.RLTS.T22709192A132079879.en">http://dx.doi.org/10.2305/IUCN.UK.2018-2.RLTS.T22709192A132079879.en</a> ) 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. ( <a href="https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/inventario-nacional-de-biodiversidad/ieet_aves_atlas.aspx">https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/inventario-nacional-de-biodiversidad/ieet_aves_atlas.aspx</a> ) Purroy, F.J. (Coord.) (1997). Atlas de las aves de España (1975-1995). SEO/BidLife. Lynx Edicions. Barcelona. 583 pp. SEO/BirdLife (2019). Programas de seguimiento y grupos de trabajo de SEO/BirdLife 2018. SEO/BirdLife. Madrid. ( <a href="https://doi.org/10.31170/0073">https://doi.org/10.31170/0073</a> )

### Sweden

<b>Breeding population size:</b> 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.
<b>Breeding short-term trend:</b> Svensk fågeltaxering - Swedish Bird Survey
<b>Breeding long-term trend:</b> Svensk fågeltaxering - Swedish Bird Survey, data from regional inventories

### Switzerland

<b>Breeding population size:</b> 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.
<b>Breeding short-term trend:</b> <a href="https://www.vogelwarte.ch/en/projects/population-trends/breeding-population-indices/">https://www.vogelwarte.ch/en/projects/population-trends/breeding-population-indices/</a>
<b>Breeding long-term trend:</b> <a href="https://www.vogelwarte.ch/en/projects/population-trends/breeding-population-indices/">https://www.vogelwarte.ch/en/projects/population-trends/breeding-population-indices/</a>

## *Muscicapa striata* (Spotted Flycatcher)

### Turkey

**Breeding population size:** Birdlife International (2004) Birds in Europe: population estimates, trends and conservation status, Cambridge UK: Birdlife International (Birdlife Conservation series no: 12) Kusbank Bird Database (Ebird)

### 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](http://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.
- Crick, H.Q.P. and Sparks, T.H. 1999. Climate change related to egg-laying trends. *Nature* 399: 423-424.
- EBCC. 2018. Pan-European Common Bird Monitoring Scheme. Available at: <https://pecbms.info/>.
- 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.
- Heath, M. and Tucker, G. 1994. Birds in Europe. *World Birdwatch* 16: 9-13.
- Hüppop, O. and Hüppop, K. 2003. North Atlantic Oscillation and timing of spring migration in birds. *Proceedings of the Royal Society of London Series B* 270: 233-240.
- Jenni, L. and Kery, M. 2003. Timing of autumn bird migration under climate change: advances in long-distance migrants, delays in short-distance migrants. *Proceedings of the Royal Society of London Series B* 270(1523): 1467-1471.
- Jonzén, N., Lindén, A., Ergon, T., Knudsen, E., Vik, J.O., Rubolini, D., Piacentini, D., Brinch, C., Spina, F., Karlsson, L., Stervander, M., Andersson, A., Waldenström, J., Lehikoinen, A., Edvardsen, E., Solvang, R. and Stenseth, N.C. 2006. Rapid advance of spring arrival dates in long-distance migratory birds. *Science* 312(5782): 1959-1961.
- Mezquida, E.T., Villaran, A. and Pascual-Parra, J. 2007. Timing of autumn bird migration in central Spain in light of recent climate change. *Ardeola* 54: 251-259.
- Stervander, M., Lindström, A., Jonzén, N. and Andersson, A. 2005. Timing of spring migration in birds: long-term trends, North Atlantic Oscillation and the significance of different migration routes. *Journal of Avian Biology* 36: 210-221.
- Taylor, B. 2006. Family Muscicapidae (Old World Flycatchers). In: del Hoyo, J.; Elliott, A.; Christie, D. A. (ed.), *Handbook of the Birds of the World. Vol. 11. Old World Flycatchers to Old World Warblers*, pp. 56-163. Lynx Edicions, Barcelona.
- Taylor, B. 2015. Spotted Flycatcher (*Muscicapa striata*). 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.
- Tøttrup, A.P., Thorup, K. and Rahbek, C. 2006. Patterns of change in timing of spring migration in North European songbird populations. *Journal of Avian Biology* 37: 84-92.
- Vähätalo, A.V., Rainio, K., Lehikoinen, A. and Lehikoinen, E. 2004. Spring arrival of birds depends on the North Atlantic Oscillation. *Journal of Avian Biology* 35: 210-216.