

***Tachymarptis melba* (Alpine Swift)**

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.

Tachymarptis melba (Alpine Swift)

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	1600–2800	<1	2007-2018	partial	-	-44 to -15	2007-2018	partial	-	-44 to -15	1980-2018	expert	
Armenia	7500–11400	2	2013-2018	complete	0		2007-2018		?		2003-2018	deficient	
Austria	250–400	<1	2013-2018	partial	+	30 to 100	2007-2018	partial	?		1981-2018	deficient	
Azerbaijan	1000–10000	<1	1996-2019	expert	0		2013-2019	expert	0		1980-2019	expert	
Bosnia & HG	400–600	<1	2015-2018	complete	?	-10 to 10	2007-2018	complete	?		1980-2018	deficient	
Bulgaria	2000–9000	<1	2005-2018	partial	+	20 to 30	2001-2018	expert	+	20 to 30	1980-2018	expert	
Croatia	10000–50000	5	2014-2014	expert	?		2007-2018	deficient	?		1980-2018	deficient	
Cyprus	200–500	<1	2013-2018	expert	0	0	2007-2018	expert	-	-30 to -10	1980-2018	expert	
France	4000–8000	1	2013-2018	partial	0		2007-2017	deficient	0	0	1980-2017	expert	
Georgia	present	<1		deficient	?			deficient	?				
Germany	300–350	<1	2012-2016	complete	+	60 to 123	2004-2016	complete	+		1985-2016	expert	
Gibraltar	6–10	<1	2014-2018	partial	0	0	2001-2018	partial	0	0	1980-2018	partial	
Greece	170000–390000	54	2013-2018	partial	?		2007-2018	deficient	?		1980-2018	deficient	
Italy	6000–12000	2	2013-2018	expert	?		2007-2018	expert	+		1993-2018	expert	
Kosovo	20–30	<1	2007-2019	partial	F		2007-2018	partial	?		1990-2018	partial	
North Macedonia	500–2000	<1	2014-2019	expert	0		2007-2018	expert	?		1980-2019		
Montenegro	300–550	<1	2002-2012	expert	0		2007-2018	expert	?				
Portugal	100–500	<1	2013-2018	partial	?		2007-2018	partial	?		1980-2018	deficient	
Romania	1200–3000	<1	2013-2018	expert	+	1 to 20	2007-2018	expert	+	500 to 1000	1980-2018	expert	
Russia	5500–9500	2	2008-2018	partial	-	0	2008-2018	expert	-	0	1980-2018	expert	
Serbia	90–140	<1	2013-2018	complete	+	30 to 49	2007-2018	complete	+	30 to 49	1980-2018	complete	
Slovenia	250–350	<1	2002-2018	complete	?		2007-2018	deficient	?		1980-2018	deficient	
Spain	9100–9200	2	1998-2002	partial	0		2007-2018	partial	0		1980-2018	expert	
Switzerland	1800–2300	<1	2013–2016	complete	0	0 to 47	2007-2018	complete	+	85 to 135	1990-2018	complete	
Turkey	100000–200000	30	2002-2012	partial	?		2008-2019	deficient	?		1980-2013	deficient	
Ukraine	1500–2500	<1	2015-2017	partial	?		2007-2019	deficient	F		1980-2018	deficient	
EU28	203000–484000	65											
Europe	323000–726000	100											

Tachymarptis melba (Alpine Swift)

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	

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

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

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

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

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

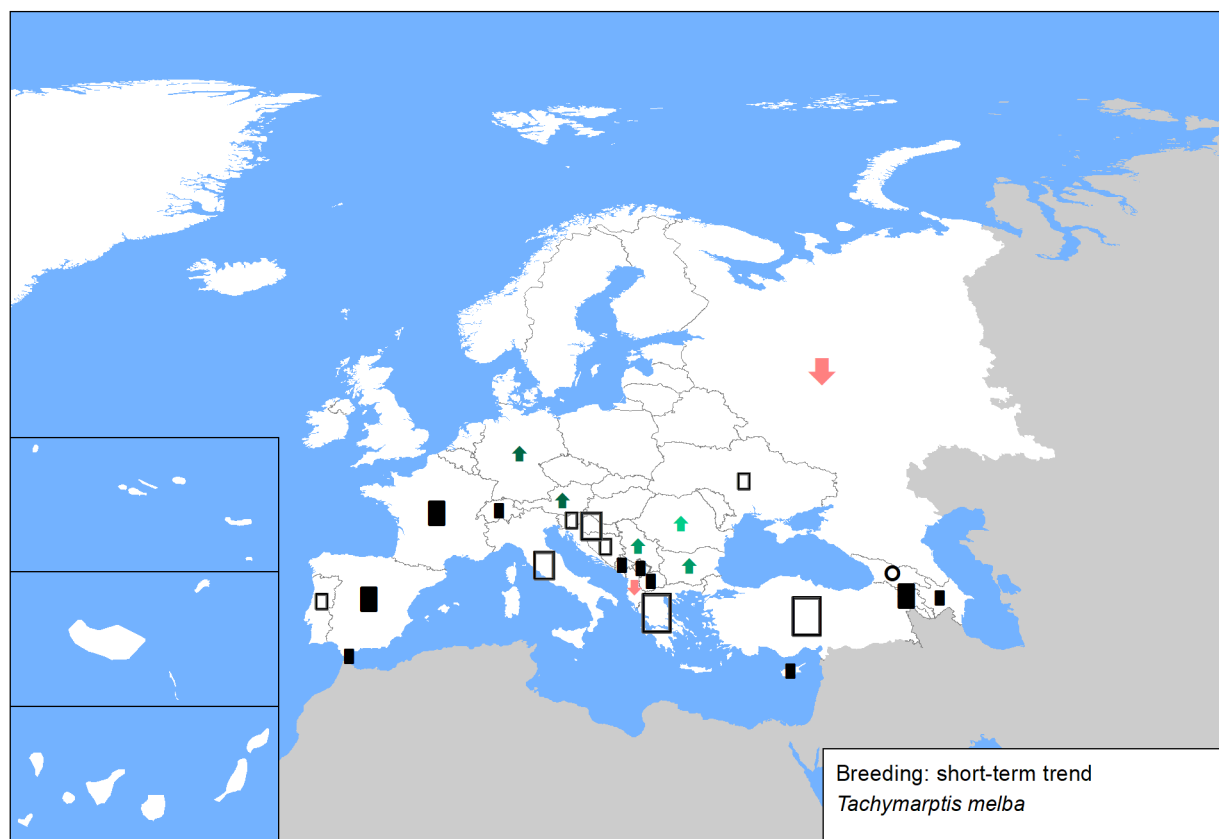
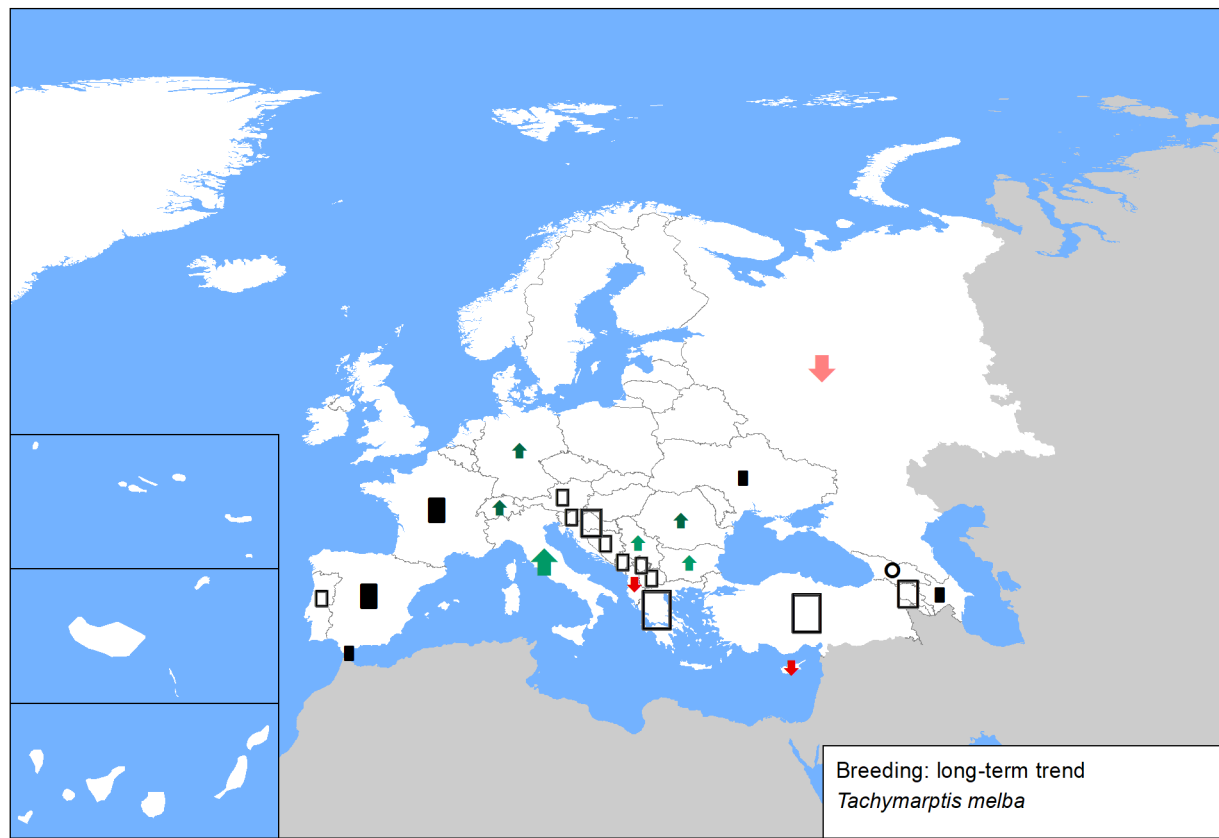


Figure 2. Breeding population sizes and long-term trends across Europe.



Sources

Albania

Breeding population size: Bino & Xeka pers. obs.
Breeding short-term trend: Bino & Xeka pers. obs.
Breeding long-term trend: Bino pers. obs.

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, unpublished data from www.ornitho.at
Breeding short-term trend: BirdLife Austria, unpublished data from www.ornitho.at ; BirdLife Austria, unpublished archive data
Breeding long-term trend: BirdLife Austria, unpublished archive data

Azerbaijan

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

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: Antonov, A., Mitev, I. 2007. <i>Tachymarptis melba</i> . In: Iankov, P. (Ed.) Atlas of breeding birds in Bulgaria. Bulgarian Society for the Protection of Birds Conservation series, Book 10, BSPB, Sofia.; National Art. 12 reporting database 2013-2018; Nankinov, D. et al. Breeding totals of the ornithofauna in Bulgaria. Green Balkans, Plovdiv, 2004.
Breeding short-term trend: Antonov, A., Mitev, I. 2007. <i>Tachymarptis melba</i> . In: Iankov, P. (Ed.) Atlas of breeding birds in Bulgaria. Bulgarian Society for the Protection of Birds Conservation series, Book 10, BSPB, Sofia.; National Art. 12 reporting database 2013-2018; Nankinov, D. et al. Breeding totals of the ornithofauna in Bulgaria. Green Balkans, Plovdiv, 2004.
Breeding long-term trend: Antonov, A., Mitev, I. 2007. <i>Tachymarptis melba</i> . In: Iankov, P. (Ed.) Atlas of breeding birds in Bulgaria. Bulgarian Society for the Protection of Birds Conservation series, Book 10, BSPB, Sofia. Nankinov, D. et al. Breeding totals of the ornithofauna in Bulgaria. Green Balkans, Plovdiv, 2004.

Croatia

Breeding population size: BirdLife International 2015: European Red List of Birds. Luxembourg: Office for Official Publications of the European Communities.). http://datazone.birdlife.org/info/euroredlist
Breeding short-term trend: no data available
Breeding long-term trend: no data available

Cyprus

Breeding population size: Analysis of recent BirdLife Cyprus bird sightings records reported in the society's annual reports
Breeding short-term trend: Analysis of recent BirdLife Cyprus bird sightings records reported in the society's annual reports
Breeding long-term trend: Analysis of BirdLife Cyprus bird sightings records reported in the society's 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

France

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

Georgia

Breeding population size: BirdLife International 2004
--

Germany

Breeding population size: Monitoring seltener Brutvögel (http://www.dda-web.de/index.php?cat=monitoring&subcat=ga&subsubcat=kontakt)
Breeding short-term trend: Monitoring seltener Brutvögel (http://www.dda-web.de/index.php?cat=monitoring&subcat=ga&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).

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: no data available

Italy

Breeding population size: Brichetti P & Fracasso G. 2007. Ornitologia italiana. Vol.4 (Apodidae-Prunellidae). Alberto Perdisa Editore, Bologna

Breeding short-term trend: No recent data available - Brichetti P & Fracasso G. 2007. Ornitologia italiana. Vol.4 (Apodidae-Prunellidae). Alberto Perdisa Editore, Bologna

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

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

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,

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>

Romania

Breeding population size: Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database, Rombird (Romanian Rarity Commission) Database

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

Tachymarptis melba (Alpine Swift)

Romania

Breeding long-term trend: Ciochia V., (1992), Păsările clocitoare din România, Editura Științifică, București Weber, P. (ed) (1994) Atlasul Provizoriu Al Păsărilor Clocitoare din România. Publ SOR 2, Mediaș Munteanu, D., Papadopol, A. și Weber, P. 2002. Atlasul Păsărilor Clocitoare din România. Societatea Ornitologică Română, Cluj-Napoca. 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: Belik et al. 2019

Breeding long-term trend: Belik et al. 2003; 2019

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: 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 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.

Slovenia

Breeding population size: Mihelič T., Kmecl P., Denac K., Koce U., Vrezec A., Denac D. (eds.) (2019): Atlas ptic Slovenije. Popis gnezdičk 2002–2017. DOPPS, Ljubljana.

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

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

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. (https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/inventario-nacional-de-biodiversidad/ieet_aves_atlas.aspx)

Breeding short-term trend: Database of the 'Atlas de las aves reproductoras de España'. Updated version 2011 with data from SEO/Birdlife's monitoring programmes. In: Inventario Español de Especies Terrestres, Inventario Español del Patrimonio Natural y de la Biodiversidad. Ministerio de Agricultura, Alimentación y Medio Ambiente (2013). (https://www.miteco.gob.es/fr/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/ieet_aves_sist_seg_tendencia_comunes_esp.aspx) Información proporcionada por las Comunidades Autónomas SEO/BirdLife (2012). Atlas de las aves en invierno en España 2007-2010. Ministerio de Agricultura, Alimentación y Medio Ambiente-SEO/ BirdLife. Madrid. 817 pp. (https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/atlas_aves_invierno_tcm30-198034.pdf)

Breeding long-term trend: Database of the 'Atlas de las aves reproductoras de España'. Updated version 2011 with data from SEO/Birdlife's monitoring programmes. In: Inventario Español de Especies Terrestres, Inventario Español del Patrimonio Natural y de la Biodiversidad. Ministerio de Agricultura, Alimentación y Medio Ambiente (2013). (https://www.miteco.gob.es/fr/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/ieet_aves_sist_seg_tendencia_comunes_esp.aspx) SEO/BirdLife (2012). Atlas de las aves en invierno en España 2007-2010. Ministerio de Agricultura, Alimentación y Medio Ambiente-SEO/ BirdLife. Madrid. 817 pp. (https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/atlas_aves_invierno_tcm30-198034.pdf)

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/>

Turkey

Breeding population size: personal communication (2019), 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) 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-

Ukraine

Breeding population size: Atlas work, non-published data

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.
- Chantler, P., de Juana, E. and Boesman, P. 2014. Alpine Swift (*Tachymarptis melba*). 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.
- 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.
- Perrins, C.M. 2009. *The encyclopedia of birds*. Oxford University Press, Oxford, UK.
- Snow, D.W. and Perrins, C.M. 1998. *The Birds of the Western Palearctic, Volume 1: Non-Passerines*. Oxford University Press, Oxford.