



THE IUCN RED LIST  
OF THREATENED SPECIES™



## ***Merops apiaster* (European Bee-eater)**

### **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).

*Merops apiaster* (European Bee-eater)

**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	5000–7400	<1	2007-2018	partial	+	391 to 904	2007-2018	partial	+	637 to 1573	1980-2018	expert	
Armenia	12200–18000	<1	2013-2018	complete	0		2007-2018		0		2003-2018	partial	
Austria	1100–2200	<1	2013-2017	complete	+		2007-2017	complete	+		1981-2017	complete	
Azerbaijan	5000–10000	<1	1996-2019	expert	0		2013-2019	expert	0		1980-2019	expert	
Belarus	200–400	<1	2010-2018	partial	+	300 to 400	2012-2019	expert	F	-90 to 90	1980-2019	expert	
Belgium	5–11	<1	2013-2018	complete	+	233 to 633	2008-2018	complete	+	400 to 1000	1973-2018	partial	
Bosnia & HG	2000–4000	<1	2015-2018	complete	?	-10 to 10	2007-2018	complete	?		1980-2018	deficient	
Bulgaria	20000–60000	<1	2005-2018	partial	+	10 to 15	2001-2018	expert	+	20 to 25	1980-2018	expert	
Croatia	5000–10000	<1	2014-2014	expert	?		2007-2018	deficient	?		1980-2018	expert	
Cyprus	100–250	<1	2013-2018	expert	+	0 to 25	2007-2018	expert	+	10 to 30	1980-2018	expert	
Czechia	700–900	<1	2014-2017	complete	+		2007-2018	expert	+		1980-2018	expert	
Denmark	4	<1	2017	complete	+		2006-2017	expert	?		1980-2017	deficient	
France	8000–15000	<1	2008-2012	partial	0		2007-2017	expert	+	0 to 100	1990-2017	expert	
Georgia	1100–11900	<1	2013-2017	partial	?			deficient	?				
Germany	2000–2300	<1	2012-2016	expert	+	250 to 433	2004-2016	complete	+	181 to 1000	1980-2016	expert	
Greece	4000–5000	<1	2013-2018	partial	?		2007-2018	deficient	0		1980-2018	partial	
Hungary	20000–30000	<1	2014-2018	partial	0		2007-2018	expert	?		1997-2018	deficient	
Italy	7000–13000	<1	2013-2018	expert	+	15 to 30	2000-2014	partial	+	225 to 250	1993-2018	expert	
Kosovo	300–400	<1	2007-2019	partial	+		2007-2018	partial	+		1990-2018	partial	
Latvia	5–10	<1	2013-2017	partial	-	-62 to -47	2012-2017	complete	?		1980-2018	deficient	
Lithuania	25–35	<1	2013-2018	complete	-		2013-2018	complete	+	2400 to 3400	1980-2018	partial	
North Macedonia	4000–20000	<1	2014-2019	expert	0		2007-2018	expert	?		1980-2019		
Moldova	4000–6000	<1	2014-2017	partial	0		2007-2018	partial	0		1990-2018	expert	
Montenegro	350–400	<1	2002-2012	expert	0		2007-2018	expert	?				
Poland	200–300	<1	2013-2018	expert	+	40 to 60	2008-2018	partial	+	250 to 300	1980-2018	expert	
Portugal	100000–500000	5	2013-2018	partial	-		2004-2018	partial	-		1980-2018	partial	
Romania	200000–400000	6	2013-2018	expert	?	-9 to 10	2008-2018	complete	?		1980-2018	deficient	
Russia	240000–400000	7	2008-2018	partial	+	10 to 15	2008-2018	expert	+	20 to 29	1980-2018	expert	
Serbia	5200–8500	<1	2013-2018	partial	0	0	2007-2018	complete	+	10 to 29	1980-2018	complete	
Slovakia	700–1300	<1	2013-2018	expert	0		2007-2018	expert	0		1980-2018	expert	
Slovenia	40–150	<1	2002-2018	complete	+	10 to 30	2007-2018	expert	+	10 to 30	1980-2018	expert	
Spain	2960000–3920000	76	2013-2018	partial	0		2007-2018	complete	-		1980-2018	complete	

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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>	
Switzerland	50–80	<1	2013–2016	complete	+	297 to 727	2007-2018	complete	+	3205 to 15856	1990-2018	complete	
Turkey	50000–100000	2	2002-2012	partial	?		2008-2019	deficient	?		1980-2013	deficient	
Ukraine	20000–50000	<1	2015-2017	expert	+	10 to 20	2007-2018	expert	+	20 to 30	1980-2018	expert	
EU28	3330000–4960000	90											
<b>Europe</b>	<b>3680000–5600000</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) Defficient: 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

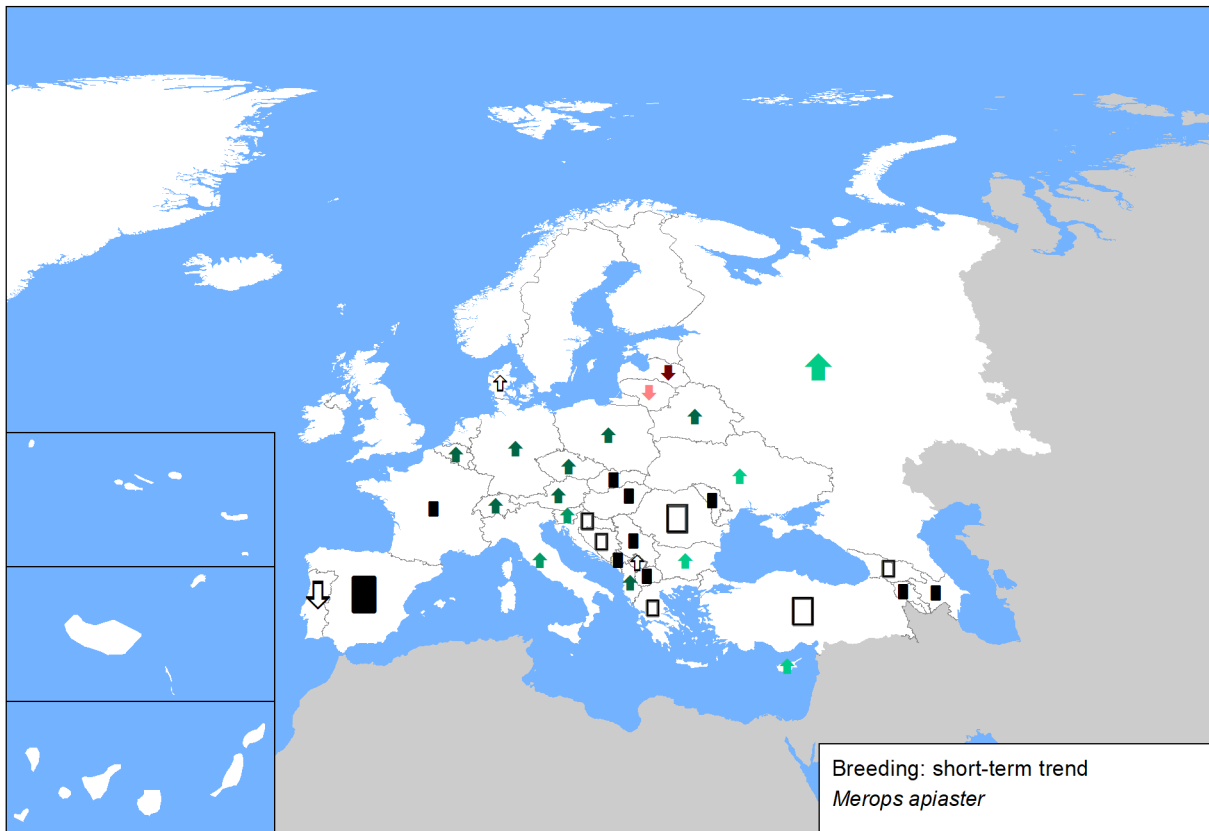
- |   |                                 |
|---|---------------------------------|
| ↑ Large increase (≥50%)                 | ↓ Large decrease (≥50%)         |
| ↑ Moderate increase (20–49%)            | ↓ Moderate decrease (20–49%)    |
| ↑ Small increase (<20%)                 | ↓ Small decrease (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

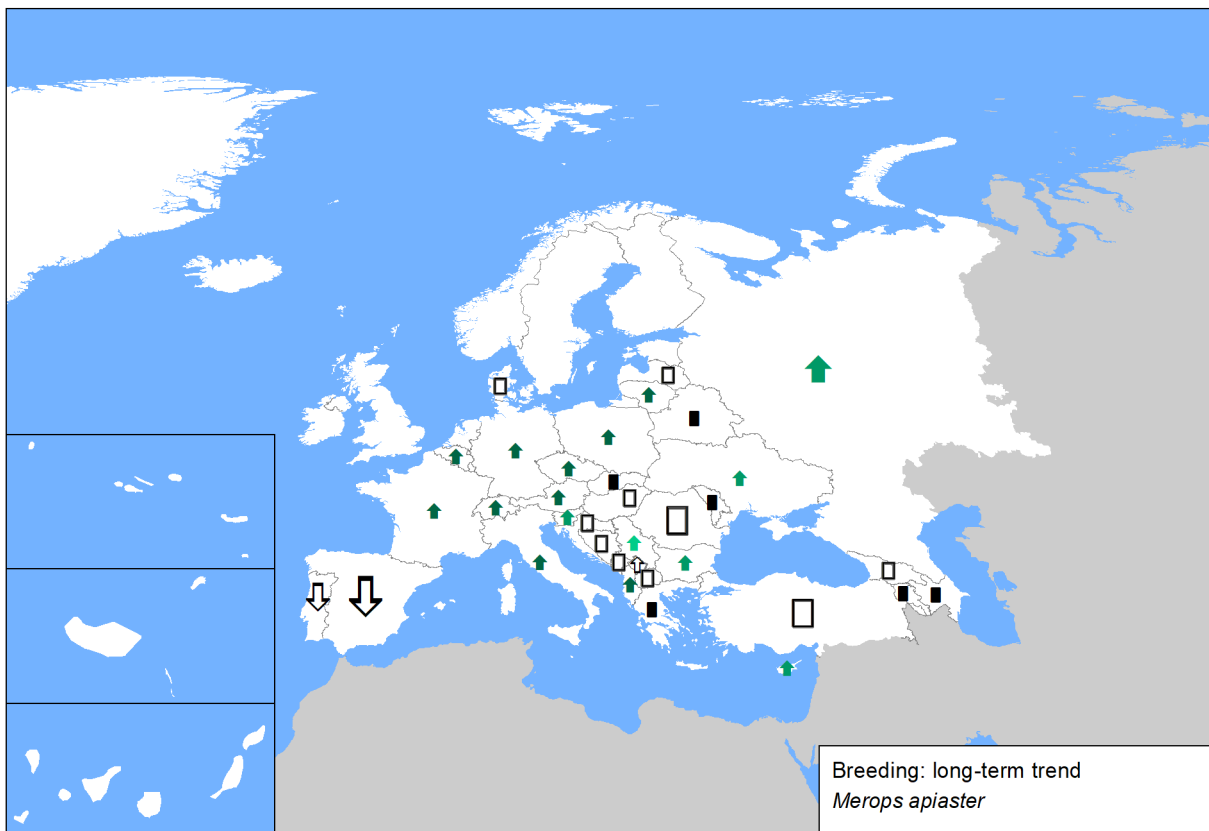
- ↑ Large: ≥10% of the European population
- ↑ Medium: 1–9% of the European population
- ↑ Small: <1% of the European population

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.



## *Merops apiaster* (European Bee-eater)

### Sources

#### Albania

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

#### 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> Frank Grinschgl, unpublished survey data for Lower Austria (2013+2016); Beate Wendelin, unpublished survey data for Burgenland (2013-2017); BirdLife Austria, unpublished data from <a href="http://www.ornitho.at">www.ornitho.at</a> (other counties)
<b>Breeding short-term trend:</b> Frank Grinschgl, unpublished survey data for Lower Austria (2007, 2008, 2011, 2013, 2016); Beate Wendelin, unpublished survey data for Burgenland (2007-2017); BirdLife Austria, unpublished data from <a href="http://www.ornitho.at">www.ornitho.at</a> ; BirdLife Austria, unpublished archive data (other counties)
<b>Breeding long-term trend:</b> Frank Grinschgl, unpublished survey data for Lower Austria (2013+2016); Beate Wendelin, unpublished survey data for Burgenland (2013-2017); BirdLife Austria, unpublished data from <a href="http://www.ornitho.at">www.ornitho.at</a> (other counties); Dvorak, Ranner & Berg 1993 (Atlas of Austrian Breeding Birds)

#### Azerbaijan

<b>Breeding population size:</b> AOS Data Base
<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"
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#### 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> Spasov, S., Mitev, I., Kutsarov, I. 2007. <i>Merops apiaster</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.
<b>Breeding short-term trend:</b> Spasov, S., Mitev, I., Kutsarov, I. 2008. <i>Merops apiaster</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.
<b>Breeding long-term trend:</b> Spasov, S., Mitev, I., Kutsarov, I. 2008. <i>Merops apiaster</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

<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/euroredlist">http://datazone.birdlife.org/info/euroredlist</a>
<b>Breeding short-term trend:</b> no data available
<b>Breeding long-term trend:</b> no data available

#### Cyprus

<b>Breeding population size:</b> Expert opinion
<b>Breeding short-term trend:</b> Expert opinion

## Merops apiaster (European Bee-eater)

### Cyprus

**Breeding long-term trend:** Whaley DJ & Dawes JC, 2003 Cyprus Breeding Birds' Atlas; Analysis of BirdLife Cyprus bird sightings records reported in the society's annual reports; Birds in Europe II (2004), BirdLife International; Flint & Stewart BOU Checklist no.6 (1992) The Birds of Cyprus; Kourtellarides, The Breeding birds of Cyprus (1997)

### Czechia

**Breeding population size:** Šťastný et Bejček in prep. - Atlas hnízdního rozšíření ptáků ČR 2014-2017

**Breeding short-term trend:** expert opinion

**Breeding long-term trend:** expert opinion

### Denmark

**Breeding population size:** www.dofbasen.dk & Nyegaard, T. et al., Truede og sjældne ynglefugle i Danmark 1998-2012, Dansk Ornitologisk Forenings Tidsskrift 108, nr 1, 2014 & Atlas III 2014-2017 (www.dofbasen.dk/atlas) & DOF BirdLifeDK Fugleåret 2006-2017 &

**Breeding short-term trend:** www.dofbasen.dk & Nyegaard, T. et al., Truede og sjældne ynglefugle i Danmark 1998-2012, Dansk Ornitologisk Forenings Tidsskrift 108, nr 1, 2014 & Atlas III 2014-2017 (www.dofbasen.dk/atlas) & DOF BirdLifeDK Fugleåret 2006-2017

**Breeding long-term trend:** www.dofbasen.dk & Nyegaard, T. et al., Truede og sjældne ynglefugle i Danmark 1998-2012, Dansk Ornitologisk Forenings Tidsskrift 108, nr 1, 2014 & Atlas III 2014-2017 (www.dofbasen.dk/atlas) & DOF BirdLifeDK Fugleåret 2006-2017

### 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:** EBBA Georgia, prepared by Sabuko-Society for nature conservation, Iliia state university, NGO "psovi".

### Germany

**Breeding population size:** Gerlach et al. (in Vorb.): Vögel in Deutschland – 2019. Dachverband Deutscher Avifaunisten, Bundesamt für Naturschutz und Länderarbeitsgemeinschaft der Vogelschutzwarten, Münster.

**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.

### Greece

**Breeding population size:** 1) BirdLife International (2017). European birds of conservation concern: populations, trends and national responsibilities. Cambridge. UK: BirdLife International. ISBN 978-1-912086-00-9 2) Natura Viewer (<http://natura2000.eea.europa.eu/#>). 3) Δημαλέξης, Τ., Καστρίτης, Θ., Γρίβας, Κ., Μανωλόπουλος, Α., Καρδακάρη, Ν., Κακαλής, Λ., Ξηρουχάκης, Σ., Τσαϊτουρίδης, Χ., Παπαζογλου, C. & Βαρον, Β. 2009. Προσδιορισμός συμβατών δραστηριοτήτων σε σχέση με τα είδη χαρακτηρισμού των Ζωνών Ειδικής Προστασίας της ορνιθοπανίδας. Παραδοτέο 8. Οδηγός οικολογικών απαιτήσεων, απειλών και ενδεδειγμένων μέτρων για τα είδη χαρακτηρισμού. 4) Πορτόλου, Δ., Μπουρδάκης, Σ., Βλάχος, Χ., Καστρίτης, Θ. & Δημαλέξης, Τ. (επιμ.). 2009. Οι Σημαντικές Περιοχές για τα Πουλιά της Ελλάδας: Περιοχές Προτεραιότητας για τη Διατήρηση της Βιοποικιλότητας. Ελληνική Ορνιθολογική Εταιρεία, Αθήνα. 5) Βλάχος Χ., Μπίρτσας Π., Θωμαΐδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιζώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Λ.Μ., Κασάμπαλης Δ., και Μελικώκη Κ. (Συντονιστές έκδοσης). 2015. Γ' Φάση της Μελέτης 9 «Εποπτεία και Αξιολόγηση της Κατάστασης Διατήρησης Ειδών Ορνιθοπανίδας στην Ελλάδα» ΥΠΑΠΕΝ, Αθήνα, Σύμπραξη Γραφείων Μελετών «Φ.ΦΑΣΟΥΛΑΣ-Ν.ΜΑΝΤΖΙΟΣ" Ε.Ε. – ΡΟΔΟΥΛΑ ΚΩΝΣΤΑΝΤΙΝΙΔΟΥ ΤΟΥ ΓΕΩΡΓΙΟΥ – "ΑΘ.ΤΖΑΚΟΠΟΥΛΟΣ ΚΑΙ ΣΙΑ" Ε.Ε.», Θεσσαλονίκη. 6. Dimalexis, T., Bousbouras, D., Kastritis, T., Manolopoulos, A. & Saravia, V. (eds.) 2009. Evaluation of 69 Important Bird Areas as Special Protection Areas. Hellenic Ministry for the Environment, Physical Planning and Public Works, Athens.

**Breeding short-term trend:** no data

**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). 3) Natura Viewer (<http://natura2000.eea.europa.eu/#>). 4) Δημαλέξης, Τ., Καστρίτης, Θ., Γρίβας, Κ., Μανωλόπουλος, Α., Καρδακάρη, Ν., Κακαλής, Λ., Ξηρουχάκης, Σ., Τσαϊτουρίδης, Χ., Παπαζογλου, C. & Βαρον, Β. 2009. Προσδιορισμός συμβατών δραστηριοτήτων σε σχέση με τα είδη χαρακτηρισμού των Ζωνών Ειδικής Προστασίας της ορνιθοπανίδας. Παραδοτέο 8. Οδηγός οικολογικών απαιτήσεων, απειλών και ενδεδειγμένων μέτρων για τα είδη χαρακτηρισμού. 5) Πορτόλου, Δ., Μπουρδάκης, Σ., Βλάχος, Χ., Καστρίτης, Θ. & Δημαλέξης, Τ. (επιμ.). 2009. Οι Σημαντικές Περιοχές για τα Πουλιά της Ελλάδας: Περιοχές Προτεραιότητας για τη Διατήρηση της Βιοποικιλότητας. Ελληνική Ορνιθολογική Εταιρεία, Αθήνα. 6) Βλάχος Χ., Μπίρτσας Π., Θωμαΐδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιζώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Λ.Μ., Κασάμπαλης Δ., και Μελικώκη Κ. (Συντονιστές έκδοσης). 2015. Γ' Φάση της Μελέτης 9 «Εποπτεία και Αξιολόγηση της Κατάστασης Διατήρησης Ειδών Ορνιθοπανίδας στην Ελλάδα» ΥΠΑΠΕΝ, Αθήνα, Σύμπραξη Γραφείων Μελετών «Φ.ΦΑΣΟΥΛΑΣ-Ν.ΜΑΝΤΖΙΟΣ" Ε.Ε. – ΡΟΔΟΥΛΑ ΚΩΝΣΤΑΝΤΙΝΙΔΟΥ ΤΟΥ ΓΕΩΡΓΙΟΥ – "ΑΘ.ΤΖΑΚΟΠΟΥΛΟΣ ΚΑΙ ΣΙΑ" Ε.Ε.», Θεσσαλονίκη.

### Hungary

**Breeding population size:** KEHOP-4.3.0-15-2016-00001 project results, unpublished. National park directorates' databases (Annual survey of colonially breeding and strictly protected bird species) <http://map.mme.hu/maps/map2>

**Breeding short-term trend:** [http://www.termesztvedelem.hu/\\_user/browser/File/Natura2000/BD\\_12\\_jelentes\\_2013\\_anyagai/Merops\\_apiaster.pdf](http://www.termesztvedelem.hu/_user/browser/File/Natura2000/BD_12_jelentes_2013_anyagai/Merops_apiaster.pdf) National park directorates' databases (Annual survey of colonially breeding and strictly protected bird species) <http://map.mme.hu/maps/map2>

**Breeding long-term trend:** Tucker, G. M. – Heath, M. F. (1994): Birds in Europe – Their Conservation Status. Royal Society for the Protection of Birds, BirdLife International, 338-339 p. Magyar G., Hadarics T., Waliczky Z., Schmidt A., Nagy T. & Bankovics A. (1998): Magyarország madarainak névjegyzéke. Madártani Intézet, Budapest, 91 p. Haraszthy, L. (szerk.) (1998): Magyarország madarai. Mezőgazda Kiadó, Budapest. 232-233 p. BirdLife International (2004) Birds in Europe: population estimates, trends and conservation status. Cambridge, UK: BirdLife International. (BirdLife Conservation Series No.12.), 172 p. Ecsedi Z. (szerk.) (2004): A Hortobágy madárvilága. Hortobágy Természetvédelmi Egyesület, Winter Fair, Balmazújváros - Szeged. 2004. 386-387 p. MME Nomenclator Bizottság (2008): Magyarország madarainak névjegyzéke. Nomenclator avium Hungariae. Magyar Madártani és Természetvédelmi Egyesület, Budapest. 90 p. KEHOP-4.3.0-15-2016-00001 project results, unpublished. National park directorates' databases (Annual survey of colonially breeding and strictly protected bird species) <http://map.mme.hu/maps/map2>

### Italy

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

## *Merops apiaster* (European Bee-eater)

### Italy

**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:** Unpublished data for European Breeding Bird Atlas (2013-2017); Expert: Andris Dekants, andris.dekants@lob.lv

**Breeding short-term trend:** Unpublished data for European Breeding Bird Atlas (2013-2017); Expert: Andris Dekants, andris.dekants@lob.lv <http://www.putni.lv/merapi.htm>

**Breeding long-term trend:** Unpublished data for European Breeding Bird Atlas (2013-2017); Expert: Andris Dekants, andris.dekants@lob.lv <http://www.putni.lv/merapi.htm>

### 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. Ministry of Environment of the Republic of Lithuania. 2016-2018. Leidinio "Lietuvos raudonoji knyga" parengimo paslaugos (Red data book of Lithuania). (Agreement No VPS-2016-104-ES) Ministry of Environment of the Republic of Lithuania. 2017-2018. Lietuvos saugomų gyvūnų, augalų ir grybų vertinimo pagal IUCN kategorijas ir rūšių aprašymų parengimo paslaugos (Protected species of animals, plants and mushrooms IUCN status estimation and descriptions in Lithuania (Agreement No VPS-2017-16-AARP) Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) Jusys, V., Karalius, S., Raudonikis, L. 2017. New and rare birds for Lithuania. Vilnius: „Lithuanian Ornithological Society“.

**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. Ministry of Environment of the Republic of Lithuania. 2016-2018. Leidinio "Lietuvos raudonoji knyga" parengimo paslaugos (Red data book of Lithuania). (Agreement No VPS-2016-104-ES) Ministry of Environment of the Republic of Lithuania. 2017-2018. Lietuvos saugomų gyvūnų, augalų ir grybų vertinimo pagal IUCN kategorijas ir rūšių aprašymų parengimo paslaugos (Protected species of animals, plants and mushrooms IUCN status estimation and descriptions in Lithuania (Agreement No VPS-2017-16-AARP) Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) Jusys, V., Karalius, S., Raudonikis, L. 2017. New and rare birds for Lithuania. Vilnius: „Lithuanian Ornithological Society“.

**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. Ministry of Environment of the Republic of Lithuania. 2016-2018. Leidinio "Lietuvos raudonoji knyga" parengimo paslaugos (Red data book of Lithuania). (Agreement No VPS-2016-104-ES) Ministry of Environment of the Republic of Lithuania. 2017-2018. Lietuvos saugomų gyvūnų, augalų ir grybų vertinimo pagal IUCN kategorijas ir rūšių aprašymų parengimo paslaugos (Protected species of animals, plants and mushrooms IUCN status estimation and descriptions in Lithuania (Agreement No VPS-2017-16-AARP) Expert working group of the Lithuanian Ornithological Society (lod@birdlife.lt) Jusys, V., Karalius, S., Raudonikis, L. 2017. New and rare birds for Lithuania. Vilnius: „Lithuanian Ornithological Society“.

### 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:** Jovičević, M., Saveljić, D (2012): Bee Eater *Merops apiaster*, short communications, *Acrocephalus* 33 (152/153):131, Slovenia

### Poland

**Breeding population size:** Chodkiewicz T., Kuczyński L., Sikora A., Chylarecki P., Neubauer G., Ławicki Ł., Stawarczyk T. 2015. Ocena liczebności populacji ptaków lęgowych w Polsce w latach 2008–2012. *Ornis Polonica* 56: 149-194; A. Sikora - unpublished information

**Breeding short-term trend:** Polish Society for the Protection of Birds (OTOP) / BirdLife Poland

**Breeding long-term trend:** Stawarczyk T., Cofta T., Kajzer Z., Lontkowski J., Sikora A. 2017. Rzadkie Ptaki Polski. Studio B&W Wojciech Janecki, Sosnowiec; Chodkiewicz T., Kuczyński L., Sikora A., Chylarecki P., Neubauer G., Ławicki Ł., Stawarczyk T. 2015. Ocena liczebności populac

### 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).

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### Portugal

**Breeding long-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); Relatório Nacional Directiva Aves (2008-2012).

### Romania

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

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

**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:** Belik in press.

**Breeding long-term trend:** Belik et al. 2003; Kotyukov 2009; Borodin expert opinion. spinus73@mail.ru

### 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. Karaska D., Trnka A., Krištin A., Ridzoň J.: Chránené vtáčie územia Slovenska. ŠOP SR Banská Bystrica, 2015.

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

**Breeding long-term trend:** Geister I. (1995): Ornitološki atlas Slovenije. Državna založba Slovenije, Ljubljana. Mihelič T., Kmecl P., Denac K., Koce U., Vrezec A., Denac D. (eds.) (2019): Atlas ptic Slovenije. Popis gnezdičk 2002–2017. DOPPS, Ljubljana.

### Spain

**Breeding population size:** 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/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)) Información proporcionada por las Comunidades Autónomas.

**Breeding short-term trend:** 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/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)). Información obtenida de la base de datos del Inventario Español de Especies Terrestres. Programa SACRE. Ministerio de Agricultura, Alimentación y Medio Ambiente ([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)). Información proporcionada por las comunidades autónomas. 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:** 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/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)) Información obtenida de la base de datos del Inventario Español de Especies Terrestres. Programa SACRE. Ministerio de Agricultura, Alimentación y Medio Ambiente ([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)) 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/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)) 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. (<https://doi.org/10.31170/0073>)

### 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/>

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### 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:** Expert: V. Grishchenko

**Breeding short-term trend:** 1. Горбань І. (2003): Оцінка чисельності гніздових птахів України. - Вісн. Львів. ун-ту. Сер. біол. 34: 147-158. 2. Гаврись Г.Г. (2003): Бджолоїдка звичайна. - Птахи України під охороною Бернської конвенції. Київ. 159-160. 3. Birds in Europe: Population Estimates, Trends and Conservation Status. BirdLife Conservation Series 12, 2004. 374 p.

**Breeding long-term trend:** 1. Hagemajjer W.J.M., Blair M.J. The EBCC Atlas of European Breeding Birds: Their Distribution and Abundance. Poyser. London. 1997. 903 p. 2. Горбань І. (2003): Оцінка чисельності гніздових птахів України. - Вісн. Львів. ун-ту. Сер. біол. 34: 147-158. 3. Гаврись Г.Г. (2003): Бджолоїдка звичайна. - Птахи України під охороною Бернської конвенції. Київ. 159-160. 4. Birds in Europe: Population Estimates, Trends and Conservation Status. BirdLife Conservation Series 12, 2004. 374 p.

## 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.

Fry, H. and Boesman, P. 2014. European Bee-eater (*Merops apiaster*). 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.

Heath, M. and Tucker, G. 1994. Birds in Europe. *World Birdwatch* 16: 9-13.

Snow, D.W. and Perrins, C.M. 1998. *The Birds of the Western Palearctic, Volume 2: Passerines*. Oxford University Press, Oxford.