Ardea purpurea (Purple Heron)

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

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.

Table 1. Reported national breeding population size and trends in Europe[1].

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	0	<1	2007-2018	complete	?		2007-2018	deficient	?	-100	1980-2018	expert	
Armenia	140–210	<1	2013-2018	complete	0		2007-2018		0		2003-2018	expert	
Austria	130–160	<1	2013-2017	complete	+		2007-2017	complete	+		1984-2017	complete	
Azerbaijan	500–2500	3	1996-2019	partial	0		2013-2019	expert	?		1980-2019	partial	
Bosnia & HG	50–100	<1	2015-2018	complete	?	-10 to 10	2007-2018	complete	?		1980-2018	deficient	
Bulgaria	100–200	<1	2005-2018	partial	?		2000-2018	deficient	+	50 to 100	1980-2018	expert	
Croatia	120–200	<1	2013-2018	partial	0	-10 to -5	2007-2018	partial	-	-50 to -40	1980-2018	expert	
Czechia	1–2	<1	2014-2017	complete	F	-60 to 0	2001-2017	complete	?		1981-2017	complete	
France	2500–2600	7	2007-2014	complete	-		2007-2014	complete	-		1974-2014	complete	
Georgia	16–160	<1	2013-2017	partial	?			deficient	?				
Germany	60	<1	2012-2016	complete	+	69 to 579	2004-2016	complete	+		1985-2016	expert	
Greece	45	<1	2013-2018	partial	0		2007-2018	partial	-		1980-2018	partial	
Hungary	630–810	2	2015-2017	complete	-	-58 to -11	2007-2018	partial	F		1980-2018	partial	
Italy	2000–2500	6	2013-2018	expert	+	5 to 9	2002-2018	expert	+	255 to 500	1993-2018	expert	
Kosovo	5–10	<1	2007-2019	partial	F		2007-2018	partial	?		1990-2018	partial	
North Macedonia	10–20	<1	2014-2019	expert	0		2007-2018	expert	?		1980-2019		
Moldova	180–240	<1	2014-2017	partial	+		2007-2018	partial	0		1990-2018	expert	
Montenegro	10–20	<1	2013-2018	partial	-		2007-2018	expert	?				
Netherlands	740–990	2	2013-2017	complete	+	16 to 84	2006-2017	complete	+	188 to 218	1980-2017	complete	
Poland	0	<1	2013-2018	complete	?		2007-2018	deficient	F		1980-2018	complete	
Portugal	790–920	2	2013-2018	complete	+		2008-2018	partial	+		1980-2018	partial	
Romania	1700–7900	10	2013-2015	complete	?		2007-2018	deficient	?		1980-2018	deficient	
Russia	6000–11000	22	2008-2018	partial	0		2010-2018	partial	0		1980-2018	expert	
Serbia	1100–1800	4	2013-2018	complete	+	30 to 49	2007-2018	complete	+	30 to 49	1980-2018	complete	
Slovakia	15–25	<1	2013-2018	partial	-	-40 to -20	2007-2018	partial	-	-40 to -20	1980-2018	partial	
Slovenia	0–3	<1	2013-2018	complete	+	0 to 200	2007-2018	complete	+	0 to 200	1980-2018	complete	
Spain	2700–2800	7	2010-2018	partial	-	-22 to -9	2007-2018	expert	+		1980-2018	partial	
Switzerland	6–17	<1	2013–2016	complete	+	247 to 26028	2007-2018	complete	+	20570 to 750153	1990-2018	complete	
Turkey	1000–1500	3	2002-2012	partial	?		2008-2019	deficient	?		1980-2013	deficient	
Ukraine	8000–12000	27	2014-2018	partial	+	10 to 20	2007-2018	partial	+	10 to 30	1980-2018	partial	
EU28	11700–19100	39											
Europe	**28800–48700**	**100**											

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[1] See 'Sources' at end of factsheet, and for more details on individual EU Member State reports, see the Article 12 reporting portal at http://bd.eionet.europa.eu/article12/report.
[2] The designation of geographical entities and the presentation of the material do not imply the expression of any opinion whatsoever on the part of IUCN or BirdLife International concerning the legal status of any country, territory or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.
[3] In the few cases where population size estimates were reported in units other than those specified, they were converted to the correct units using standard correction factors.
[4] The 'method used' (replacing the data 'quality' assessment in the 2015 European Red List) is reported as: a) Complete: complete survey or a statistically robust estimate; b) Partial: based mainly on extrapolation from a limited amount of data; c) Expert: based mainly on expert opinion with very limited data; d) Defficient: insufficient or no data available.
[5] The robustness of regional trends to the effects of any missing or incomplete data was tested using plausible scenarios, based on other sources of information, including any other reported information, recent national Red Lists, scientific literature, other publications and consultation with relevant experts.
[6] Trend directions are reported as: increasing (+); decreasing (-); stable (0); fluctuating (F); or unknown (?).
[7] Trend magnitudes are rounded to the nearest integer.

Trend maps

A symbol appears in each country where the species occurs: the shape and colour of the symbol represent the population trend in that country, and the size of the symbol corresponds to the proportion of the European population occurring in that country.

KEY

- Large increase (≥50%)
- Moderate increase (20–49%)
- Small increase (<20%)
- Increase of unknown magnitude
- Large decrease (≥50%)
- Moderate decrease (20–49%)
- Small decrease (<20%)
- 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

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

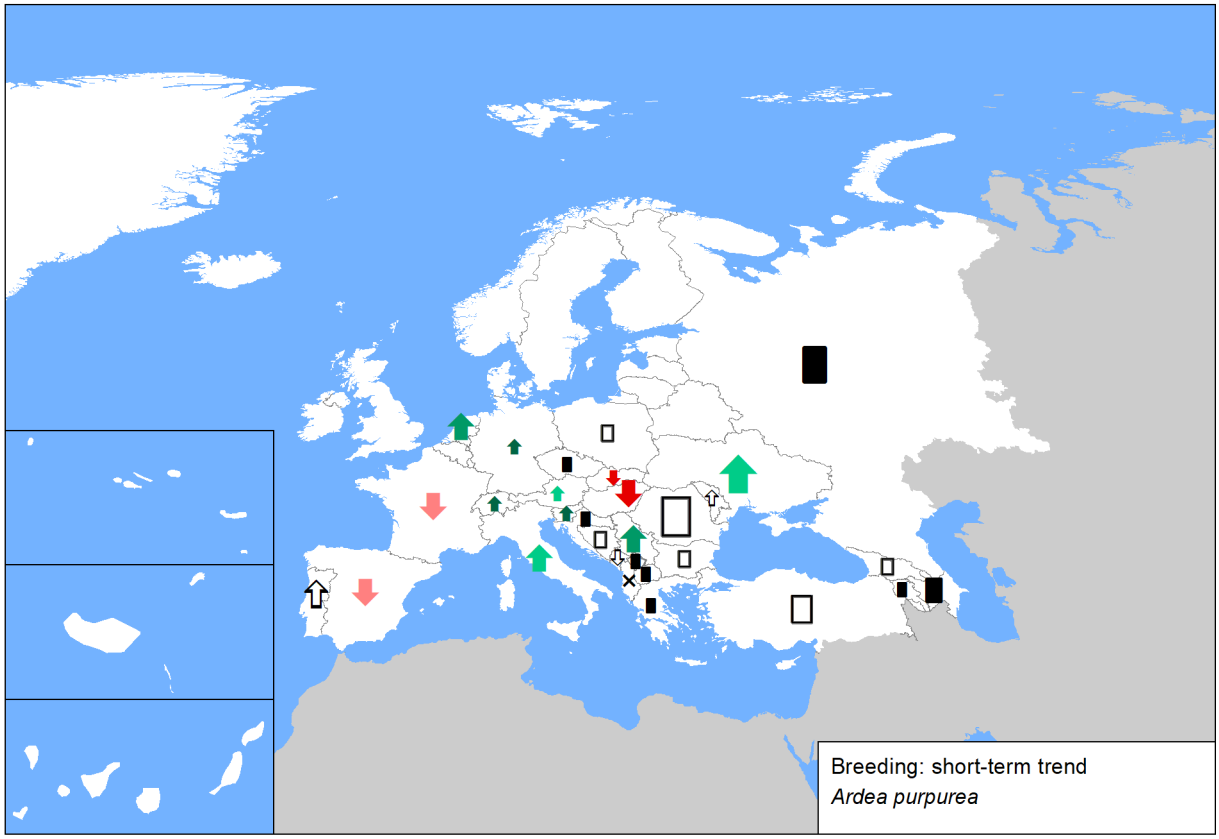
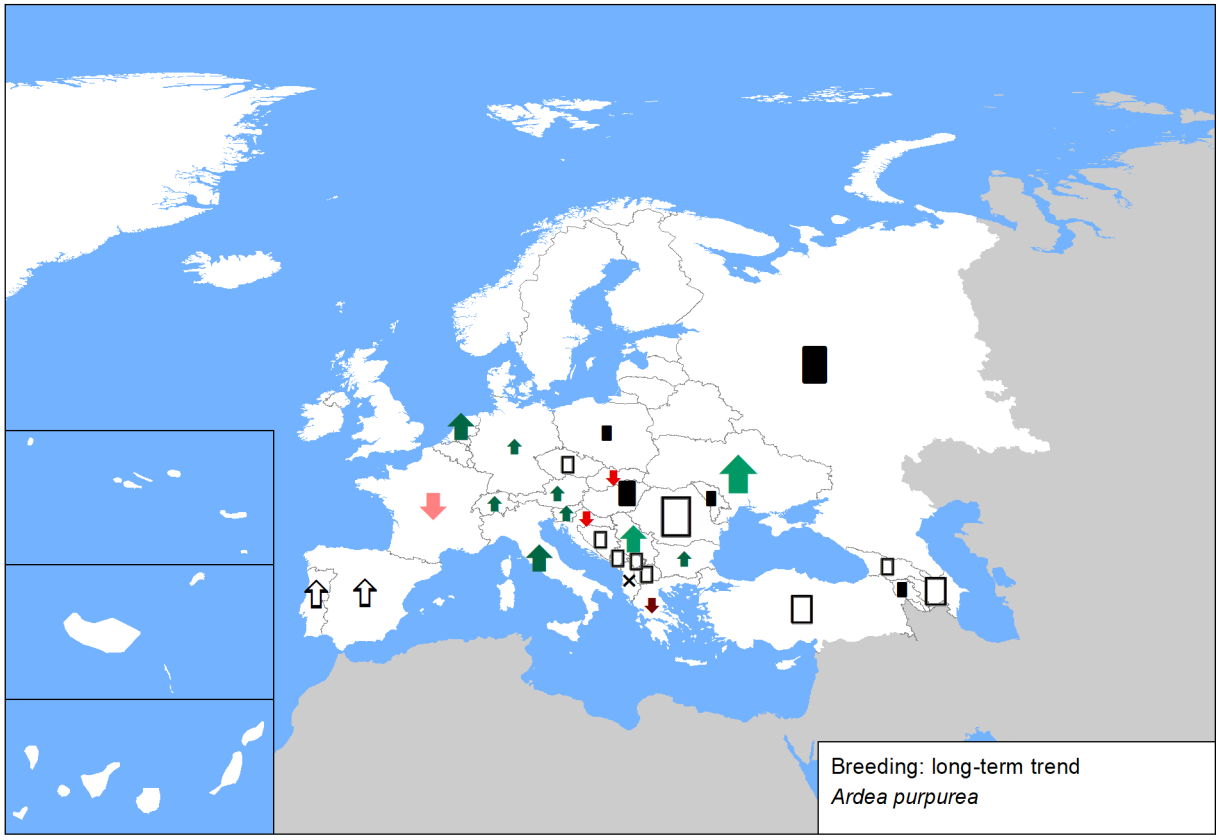


Figure 2. Breeding population sizes and long-term trends across Europe.



Sources

Albania

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

Armenia

Breeding population size: TSE NGO
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 the bird monitoring programm of the Neusiedler See - Seewinkel national park, unpublished reports of the Gebietsbetreuung Unterer Inn, BirdLife Austria, unpublished data from www.ornitho.at
Breeding short-term trend: BirdLife Austria, unpublished data from the bird monitoring programm of the Neusiedler See - Seewinkel national park, unpublished reports of the Gebietsbetreuung Unterer Inn, BirdLife Austria, unpublished data from www.ornitho.at, Ranner et al. 2015
Breeding long-term trend: BirdLife Austria, unpublished data from the bird monitoring programm of the Neusiedler See - Seewinkel national park, unpublished reports of the Gebietsbetreuung Unterer Inn, BirdLife Austria, unpublished data from www.ornitho.at, Dvorak, Ranner & Berg 1993 (Atlas of Austrian breeding birds 1981-1985)

Azerbaijan

Breeding population size: AOS data base
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: Boev Z., Michev T., Kambourova N. (2011). Purple Heron. In: Red Data Book of Bulgaria, Golemanski G. (ed.), (web edition, http://e-ecodb.bas.bg/rdb/bg/).; National Art. 12 reporting database 2013-2018; SPAs mapping in 2012 Common Bird Monitoring Scheme http://bspb.org/monitoring/
Breeding short-term trend: Iankov P. (ed.) 2007. Atlas of Breeding Birds in Bulgaria. Bulgarian Society for the protection of Birds, Conservation Series, Book 10, Sofia, BSPB, 80-81; National Art. 12 reporting database 2013-2018; Boev Z., Michev T., Kambourova N. (2011). Purple Heron. In: Red Data Book of Bulgaria, Golemanski G. (ed.), (web edition, http://e-ecodb.bas.bg/rdb/bg/).
Breeding long-term trend: Boev Z., Michev T., Kambourova N. (2011). Purple Heron. In: Red Data Book of Bulgaria, Golemanski G. (ed.), (web edition, http://e-ecodb.bas.bg/rdb/bg/).

Croatia

Breeding population size: Dumbović Mazal V., Pintar V., Zadravec M. (2019): Prvo izvješće o brojnosti i rasprostranjenosti ptica u Hrvatskoj sukladno odredbama Direktive o pticama. Zavod za ornitologiju (Sanja Barišić, Davor Ćiković, Jelena Kralj, Goran Sušić,Vesna Tutiš), Dragan Radović, Ivan Budinski, Robert Crnković, Antun Delić, Dubravko Dender, Vlatka Dumbović, Ivan Darko Grlica, Bariša Ilić, Luka Jurinović, Davor Krnjeta, Krešimir Leskovar, Duje Lisičić, Ivica Lolić, Gordan Lukač. Kristijan Mandić, Krešimir Mikulić, Tibor Mikuska, Gvido Piasevoli, Andrej Radalj, Zlatko Ružanović, Vlatka Šćetarić, Mirko Šetina, Adrian Tomik (2015): Procjene brojnosti za SPA područja. Državni zavod za zaštitu prirode, Zagreb
Breeding short-term trend: Dumbović Mazal V., Pintar V., Zadravec M. (2019): Prvo izvješće o brojnosti i rasprostranjenosti ptica u Hrvatskoj sukladno odredbama Direktive o pticama.
Breeding long-term trend: Dumbović Mazal V., Pintar V., Zadravec M. (2019): Prvo izvješće o brojnosti i rasprostranjenosti ptica u Hrvatskoj sukladno odredbama Direktive o pticama.

Czechia

Breeding population size: Šťastný et Bejček in prep. - Atlas hnízdního rozšíření ptáků ČR 2014-2017
Breeding short-term trend: Trends in waterbird breeding population size were estimated using changes in population data from nation-wide numbers project of "Atlas of Breeding Bird Distribution" carried out in whole Czech Republic in 2001 -2003 and 2014 – 2017. Range of relative change in breeding population size was used as the measurement of population trend. The values of relative rate of change were compared with data from annual monitoring (census in May – see Musil & Fuchs 1994, Musil et al. 2001, Čehovská et al. 2019 for the methods) on limited amount of sites (fishpond regions in south and central Bohemia - see Musil & Fuchs 1994). Čehovská M., Musil P., Musilová Z., Poláková, K. & Zouhar J. 2019: Diving duck census efficiency based on monitoring of individually marked females: the influence of breeding stage of individual females and timing of census. Bird Study in press. Musil P. Cepák J. Hudec K. & Zárybnický J. 2001. The long-term trends in the breeding waterfowl populations in the Czech Republic. OMPO, Institute of Applied Ecology, Kostelec nad Černými lesy. Musil P. & Fuchs R. 1994: Changes in abundance of water birds species in southern Bohemia (Czech Republic) in the last 10 years. Development in Hydrobiology. In: Kerekes J. J. [ed.]: Aquatic Birds in Trophic Web of Lakes. Hydrobiologia 279/280: 511–519.

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Czechia

Breeding long-term trend: Waterbird numbers were recorded in mid-January by regular citizen-science monitoring programme - the International Waterbird Census (IWC) – see Gilissen et al. 2002, Wetlands International 2006, Wetlands International 2019. Hundreds of volunteer birdwatchers conduct the mid-January counts on predetermined dates and sites each year, aiming to maximize synchrony (Gilissen et al. 2002, Musil et al. 2011, Musilová et al. 2014). The individual species trends in numbers was calculated by Trends and Indices for Monitoring data (TRIM) software (Statistics Netherlands version 3.52, Pannekoek and Van Strien, 2005). The additive slope (i.e. the change in indices from one year to the next) was used to estimate the Czech trend, see also Fouque et al. (2009), Musil et al. (2011), Musilová et al. (2015), Musilová et al. (2018 a, b). Fouque C, Guillemain M, Schricke V (2009) Trends in the numbers of Coot Fulica atra and wildfowl Anatidae wintering in France and their relationship with hunting activity at wetland sites. Wildfowl. Special Issue 2: 42–59. Gilissen N, Haanstra L, Delany S, Boere G, Hagemeijer W (2002) Numbers and distribution of wintering waterbirds in the Western Palearctic and Southwest Asia in 1987, 1988 and 1999. Results from the International Waterbird Census. Wetlands International Global Series No. 11, Wetlands International, Wageningen, The Netherlands. Musil P, Musilová Z, Fuchs R, Poláková S (2011) Long-term changes in numbers and distribution of wintering waterbirds in the Czech Republic, 1966–2008. Bird Study 58: 450–460. Musilová Z, Musil P, Zouhar J, Adam M (2018a) Changes in habitat suitability influence non-breeding distribution of waterbirds in central Europe. Ibis: 160: 582–596. Musilová Z, Musil P, Zouhar J, Adam M, Bejček V (2018b) Importance of Natura 2000 sites for wintering waterbirds: Low preference, species' distribution changes and carrying capacity of Natura 2000 could fail to protect the species. Biological Conservation 228: 79–88. Musilová Z, Musil P, Zouhar J, Bejček V, Šťastný K, Hudec K (2014) Numbers of wintering waterbirds in the Czech Republic: long-term and spatial-scale approaches to assess population size. Bird Study 61: 321–331. Musilová Z, Musil P, Zouhar J, Romportl D (2015) Long-term trends, total numbers and species richness of increasing waterbird populations at sites on the edge of their winter range: cold-weather refuge sites are more important than protected sites. J Ornithol: 1–10. Pannekoek J, Van Strien AJ (2005) TRIM 3 Manual (TRends and Indices for Monitoring Data). Statistics Netherlands, Voorburg, The Netherlands. Wetlands International (2006) Waterbird population estimates. Fourth Edition. Wetlands International, Wageningen, The Netherlands. Wetlands International (2019) Waterbird Population Estimates. Available at: wpe.wetlands.org (accessed 10 March 2019).

France

Breeding population size: Loïc Marion 2018. Recensement National des Hérons coloniaux de France en 2014. Recensement National des Hérons coloniaux de France en 2014, SESLG-Uniiversité de Rennes1-CNRS, https://cdnfiles1.biolovision.net/franche-comte.lpo.fr/userfiles/publications/rapportsmissions/RapportrecHrons2014FINAL-compress.pdf

Breeding short-term trend: Loïc Marion 2018. Recensement National des Hérons coloniaux de France en 2014. Recensement National des Hérons coloniaux de France en 2014, SESLG-Uniiversité de Rennes1-CNRS, https://cdnfiles1.biolovision.net/franche-comte.lpo.fr/userfiles/publications/rapportsmissions/RapportrecHrons2014FINAL-compress.pdf

Georgia

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

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.

Greece

Breeding population size: 1. Λεγάκις, Α. & Μαραγκού, Π. (επιμ.). 2009. Το Κόκκινο Βιβλίο των Απειλούμενων Ζώων της Ελλάδας. Ελληνική Ζωολογική Εταιρεία, Αθήνα, 528 σελ. 2. Δημαλέξης, Τ., Καστρίτης, Θ., Γρίβας, Κ., Μανωλόπουλος, Α., Καρδακάρη, Ν., Κακαλής, Λ., Ξηρουχάκης, Σ., Τσαϊτουρίδης, Χ., Papazoglou, C. & Barov, B. 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. 3. 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. 4. Βλάχος Χ., Μπίρτσας Π., Θωμαΐδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης 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. 5. BirdLife International (2017). European birds of conservation concern: populations, trends and national responsibilities. Cambridge. UK: BirdLife Internationa. ISBN 978-1-912086-00-9 6. Kazantzidis, S. & G. Yfantis. 2012. Heronries in Greece - 2nd national Census. Oionos (Hellenic Ornithological Society' s 3-mothly edition) 49: 8-9.

Breeding short-term trend: 1) BirdLife International (2017). European birds of conservation concern: populations, trends and national responsibilities. Cambridge. UK: BirdLife Internationa. ISBN 978-1-912086-00-9 2) Λεγάκις, Α. & Μαραγκού, Π. (επιμ.). 2009. Το Κόκκινο Βιβλίο των Απειλούμενων Ζώων της Ελλάδας. Ελληνική Ζωολογική Εταιρεία, Αθήνα, 528 σελ. 3) Δημαλέξης, Τ., Καστρίτης, Θ., Γρίβας, Κ., Μανωλόπουλος, Α., Καρδακάρη, Ν., Κακαλής, Λ., Ξηρουχάκης, Σ., Τσαϊτουρίδης, Χ., Papazoglou, C. & Barov, B. 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., Μπραζιώτης 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) Natura Viewer (http://natura2000.eea.europa.eu/#) 7) Kazantzidis, S. & G. Yfantis. 2012. Heronries in Greece - 2nd national Census. Oionos (Hellenic Ornithological Society' s 3-mothly edition) 49: 8-9..

Breeding long-term trend: 1) BirdLife International (2004) Birds in Europe:Population estimates, trends and conservation status. Cambridge, UK: Birdlife International (Birdlife Conservation Series No. 12). 2) Λεγάκις, Α. & Μαραγκού, Π. (επιμ.). 2009. Το Κόκκινο Βιβλίο των Απειλούμενων Ζώων της Ελλάδας. Ελληνική Ζωολογική Εταιρεία, Αθήνα, 528 σελ. 3) Δημαλέξης, Τ., Καστρίτης, Θ., Γρίβας, Κ., Μανωλόπουλος, Α., Καρδακάρη, Ν., Κακαλής, Λ., Ξηρουχάκης, Σ., Τσαϊτουρίδης, Χ., Papazoglou, C. & Barov, B. 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., Μπραζιώτης 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) Natura Viewer (http://natura2000.eea.europa.eu/#). 7) Handrinos,G., & Akriotis, T., (1997) The birds of Greece. C. Helm, A & C Black, London.

Hungary

Breeding population size: National park directorates' databases (Annual survey of colonially breeding and strictly protected bird species) http://map.mme.hu/maps/map2
Breeding short-term trend: Haraszthy L. (szerk.) (2014): Natura 2000 fajok és élőhelyek Magyarországon. Pro Vértes Közalapítvány, Csákvár. p. 522-524. National park directorates' databases (Annual survey of colonially breeding and strictly protected bird species) http://map.mme.hu/maps/map2
Breeding long-term trend: Haraszthy, L. (szerk.) (1998): Magyarország madarai. Mezőgazda Kiadó, Budapest. 441 p. Haraszthy L. (szerk.) (2014): Natura 2000 fajok és élőhelyek Magyarországon. Pro Vértes Közalapítvány, Csákvár. p. 518-521. National park directorates' databases (Annual survey of colonially breeding and strictly protected bird species) http://map.mme.hu/maps/map2

Italy

Breeding population size: Fasola M., 2017. Monitoraggio garzaie in Lombardia, Piemonte, Emilia 2017 - 45° anno. Rapporto 2017 del gruppo GarzaieItalia. 9 pp. - Fasola com.pers., in Gustin M., 2018. Redazione del Rapporto sullo stato di conservazione delle popolazioni italiane di u
Breeding short-term trend: Fasola M., 2017. Monitoraggio garzaie in Lombardia, Piemonte, Emilia 2017 - 45° anno. Rapporto 2017 del gruppo GarzaieItalia. 9 pp. - Fasola pers. Comm. 2018, in Gustin M., 2018. ISPRA, relazione interna su incarico a LIPU, 14 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

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: Rubinić,B., Sackl, P. & Gramatikov, M. (2019): Conserving of wild birds in Montenegro. The first inventory of potential Special Protection Areas in Montenegro. Aam Consulting. Budapest xiii + 328 pp.

Netherlands

Breeding population size: Sovon NEM (Sovon, CBS and provincies) and Bird atlas (Sovon 2018)
Breeding short-term trend: NEM (Sovon, RWS, CBS, provincies)
Breeding long-term trend: Sovon

Poland

Breeding population size: The Polish Avifaunistic Commission http://komisjafaunistyczna.pl/
Breeding short-term trend: Chief Inspectorate of Environmental Protection & 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; The Polish Avifaunistic Commission http://komisjafaunistyczna.pl/

Portugal

Breeding population size: unpublished data ICNF; 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
Breeding long-term trend: eBird: An online database of bird distribution and abundance [web application]. eBird, Ithaca, New York. Available: http://www.ebird.org/po; Relatório Nacional Directiva Aves (2008-2012)

Romania

Breeding population size: Romanian Common Bird Monitoring Programme, Breeding Waterbird Monitoring Programme, Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database
Breeding short-term trend: Ornitodata (Romanian Ornithological Society) Database, OpenBirdMaps (Milvus Group) Database, Rombird (Romanian Rarity Commission) 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: Rusanov et al. 2017; Jamirzoev at al. 2017
Breeding long-term trend: Belik & Dinkevich 2004; Rusanov et al. 2017; Jamirzoev at al. 2017

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: 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.

Slovakia

Breeding population size: Coordinatory group for reporting 2019. Karaska D., Trnka A., Krištín A., Ridzoň J.: Chránené vtáčie územia Slovenska. ŠOP SR Banská Bystrica, 2015. Danko Štefan, Darolová Alžbeta, Krištín Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002. Program starostlivosti CHVÚ Medzibodrožie 2016-2045, B. Bystrica, ŠOP SR, 2015

Breeding short-term trend: Coordinatory group for reporting 2019, AVES-Symfony Database 2013-2018, KIMS Database 2013-2018. Danko Štefan, Darolová Alžbeta, Krištín 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, Krištín 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 gnezdilk 2002–2017. – DOPPS, Ljubljana.

Breeding short-term trend: Denac K., Mihelič T., Božič L., Kmecl P., Jančar T., Figelj J., Rubinić B. (2011): Strokovni predlog za revizijo posebnih območij varstva (SPA) z uporabo najnovejših kriterijev za določitev mednarodno pomembnih območij za ptice (IBA). Končno poročilo (dopolnjena verzija). – DOPPS, Ljubljana. Mihelič T., Kmecl P., Denac K., Koce U., Vrezec A., Denac D. (eds.) (2019): Atlas ptic Slovenije. Popis gnezdilk 2002–2017. – DOPPS, Ljubljana.

Breeding long-term trend: Bordjan D., Božič L. (2009): Pojavljanje vodnih ptic in uged na območju vodnega zadrževalnika Medvedce (Dravsko polje, SV Slovenija) v obdobju 2002–2008. – Acrocephalus 30 (141/142/143): 55–163. Denac, K., T. Mihelič, L. Božič, P. Kmecl, T. Jančar, J. Figelj & B. Rubinić (2011): Strokovni predlog za revizijo posebnih območij varstva (SPA) z uporabo najnovejših kriterijev za določitev mednarodno pomembnih območij za ptice (IBA). Končno poročilo (dopolnjena verzija). Naročnik: Ministrstvo za okolje in prostor. DOPPS – BirdLife, Ljubljana. Geister I. (1995): Ornitološki atlas Slovenije. Razširjenost gnezdilk. – DZS, Ljubljana. Mihelič T., Kmecl P., Denac K., Koce U., Vrezec A., Denac D. (eds.) (2019): Atlas ptic Slovenije. Popis gnezdilk 2002–2017. – DOPPS, Ljubljana.

Spain

Breeding population size: Garrido, J.R., Molina, B. & del Moral, J.C. (2012). Las garzas en España: población reproductora e invernante en 2010-2011 y método de censo. Seo/BirdLife. Madrid, 219 pp. (https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/38-garzas_tcm30-207952.pdf) Información proporcionada por las Comunidades Autónomas.

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) Garrido, J.R., Molina, B. & del Moral, J.C. (2012). Las garzas en España: población reproductora e invernante en 2010-2011 y método de censo. Seo/BirdLife. Madrid, 219 pp. (https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/38-garzas_tcm30-207952.pdf) Información proporcionada por las Comunidades Autónomas.

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) Garrido, J.R., Molina, B. & del Moral, J.C. (2012). Las garzas en España: población reproductora e invernante en 2010-2011 y método de censo. Seo/BirdLife. Madrid, 219 pp. (https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/38-garzas_tcm30-207952.pdf) Información proporcionada por las Comunidades Autónomas.

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: 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: 1. Горбань І. (2003): Оцінка чисельності гніздових птахів України. - Вісн. Львів. ун-ту. Сер. біол. 34: 147-158. 2. Birds in Europe: Population Estimates, Trends and Conservation Status. BirdLife Conservation Series 12; 2004. 374 p. 3. Directory of Ukraine's Wetlands / Ed. By G. Marushevsky& I. Zaruk. – Kyiv, 2006, Wetland International Black Sea Programme. - 312 p.

Breeding short-term trend: 1. Горбань І. (2003): Оцінка чисельності гніздових птахів України. - Вісн. Львів. ун-ту. Сер. біол. 34: 147-158. 2. Birds in Europe: Population Estimates, Trends and Conservation Status. BirdLife Conservation Series 12; 2004. 374 p. 3. Directory of Ukraine's Wetlands / Ed. By G. Marushevsky& I. Zaruk. – Kyiv, 2006, Wetland International Black Sea Programme. - 312 p. 4. Гудина А.Н. (2007): Редкие и малоизученные птицы Восточной Украины. Т. 1. Gaviiformes - Galliformes. Запорожье: Днепровский металлург. 1-232. 5. Атемасова Т.А. (2013): Руда чапля. - Червона книга Харківської області. Тваринний світ. Харків: ХНУ імені В.Н. Каразіна. 304. 6. Мосін Г.Г., Бронсков О.І. (2017): Чапля руда. - Червона книга Донецької області. Тваринний світ. Вінниця: Вінницька обласна друкарня. 281.

Ukraine

Breeding long-term trend: 1. Hagemaijer W.J.M., Blair M.J. The EBCC Atlas of European Breeding Birds: Their Distribution and Abundance. Poyser. - London. 1997. 903 p. 2. Серебряков В.В., Грищенко В.Н. (1992): Распределение и численность колоний цапель на территории Украины по данным анкетного учета в 1986 г. - Беркут. 1: 52-56. 3. Кныш Н.П., Сыпко А.В. Материалы по распространению и экологии рыжей цапли в Сумской области. - Беркут. 7 (1-2): 23-28. 4. Гаврись Г.Г., Боярчук В.П. (2003): Чапля руда. - Птахи України під охороною Бернської конвенції. Київ. 34-35. 5. Горбань І. (2003): Оцінка чисельності гніздових птахів України. - Вісн. Львів. ун-ту. Сер. біол. 34: 147-158. 6. Birds in Europe: Population Estimates, Trends and Conservation Status. BirdLife Conservation Series 12; 2004. 374 p. 7. Directory of Ukraine's Wetlands / Ed. By G. Marushevsky& I. Zaruk. – Kyiv, 2006, Wetland International Black Sea Programme. - 312 p. 8. Гудина А.Н. (2007): Редкие и малоизученные птицы Восточной Украины. Т. 1. Gaviiformes - Galliformes. Запорожье: Днепровский металлург. 1-232. 9. Атемасова Т.А. (2013): Руда чапля. - Червона книга Харківської області. Тваринний світ. Харків: ХНУ імені В.Н. Каразіна. 304. 10. Мосін Г.Г., Бронсков О.І. (2017): Чапля руда. - Червона книга Донецької області. Тваринний світ. Вінниця: Вінницька обласна друкарня. 281.

Bibliography

Barbraud, C.; Lepley, M.; Mathevet, R.; Mauchamp, A. 2000. Reedbed selection and colony size of breeding purple herons Ardea purpurea in southern France. Ibis 144(2): 227-235.

Billerman, S.M., Keeney, B.K., Rodewald, P.G. and Schulenberg, T.S. (eds). 2020. Birds of the World. Cornell Laboratory of Ornithology, Ithaca.

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.

Brazil, M. 2009. Birds of East Asia: eastern China, Taiwan, Korea, Japan, eastern Russia. Christopher Helm, London.

Brown, L.H., Urban, E.K. and Newman, K. 1982. The Birds of Africa, Volume I. Academic Press, London.

Delany, S. and Scott, D. 2006. Waterbird population estimates. Wetlands International, Wageningen, The Netherlands.

Hancock, J. and Kushlan, J. 1984. The herons handbook. Croom Helm, London.

Hockey, P. A. R., Dean, W. R. J. & Ryan, P. G. 2005. Roberts Birds of Southern Africa. Trustees of the John Voelcker Bird Book Fund, Cape Town, South Africa.

Kushlan, J.A. and Hancock, J.A. 2005. The herons. Oxford University Press, Oxford, U.K.

Turner, D. 2000. Herons in Africa and the Malagasy Region. In: Kushlan, J. A.; Hafner, H. (ed.), Heron Conservation, pp. 99-122. Academic Press, San Diego.

del Hoyo, J., Elliot, A. & Sargatal, J. (ed.). 1992. Handbook of the Birds of the World, Vol. 1: Ostrich to Ducks. Lynx Edicions, Barcelona, Spain.