

## ***Aythya nyroca* (Ferruginous Duck)**

### **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).

*Aythya nyroca* (Ferruginous Duck)

**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                             | 11–26                     | <1         | 2007-2018 | complete            | +                                        | -13 to 120                 | 2007-2018 | complete            | 0                                       | -13 to 10                  | 1980-2018 | expert              |                                         |
| Armenia                             | 50–90                     | <1         | 2013-2018 | complete            | +                                        | 1 to 3                     | 2007-2018 | complete            | -                                       | -15 to 30                  | 2003-2018 | expert              |                                         |
| Austria                             | 100–150                   | <1         | 2013-2018 | expert              | ?                                        |                            | 2007-2018 | deficient           | -                                       | -80 to -20                 | 1981-2018 | expert              |                                         |
| Azerbaijan                          | 1000–3000                 | 12         | 1996-2019 | expert              | 0                                        |                            | 2013-2019 | expert              | ?                                       |                            | 1980-2019 | complete            |                                         |
| Belarus                             | 30–90                     | <1         | 2010-2018 | partial             | 0                                        | -10 to 10                  | 2012-2019 | expert              | -                                       | -50 to -40                 | 1980-2019 | expert              |                                         |
| Bosnia & HG                         | 500–800                   | 4          | 2015-2018 | complete            | +                                        | 10 to 20                   | 2007-2018 | complete            | +                                       | 5 to 10                    | 1980-2018 | complete            |                                         |
| Bulgaria                            | 120–400                   | 2          | 2000-2018 | complete            | F                                        |                            | 2000-2018 | complete            | -                                       | -40 to -10                 | 1980-2018 | partial             |                                         |
| Croatia                             | 1000–2000                 | 10         | 2013-2018 | expert              | -                                        | -50 to -30                 | 2007-2018 | expert              | ?                                       |                            | 1980-2018 | deficient           |                                         |
| Cyprus                              | 4–8                       | <1         | 2013-2018 | partial             | +                                        | 33 to 300                  | 2007-2018 | partial             | +                                       | 200 to 500                 | 1980-2018 | expert              |                                         |
| Czechia                             | 1–2                       | <1         | 2014-2017 | complete            | F                                        |                            | 2001-2017 | complete            | ?                                       |                            | 1981-2017 | complete            |                                         |
| Georgia                             | 10–30                     | <1         | 2013-2017 | partial             | ?                                        |                            |           | deficient           | ?                                       |                            |           |                     |                                         |
| Germany                             | 1–7                       | <1         | 2012-2016 | complete            | ?                                        |                            | 2004-2016 | deficient           | -                                       |                            | 1980-2016 | expert              |                                         |
| Greece                              | 130–250                   | 1          | 2015      | partial             | 0                                        |                            | 2007-2018 | partial             | -                                       |                            | 1980-2018 | partial             |                                         |
| Hungary                             | 800–1500                  | 8          | 2013-2018 | complete            | 0                                        |                            | 2007-2018 | partial             | +                                       | 60 to 88                   | 1980-2018 | partial             |                                         |
| Italy                               | 60–90                     | <1         | 2013-2018 | expert              | ?                                        |                            | 2007-2018 | deficient           | +                                       | 75 to 150                  | 1993-2018 | expert              |                                         |
| Latvia                              | 0                         | <1         | 2013-2018 | expert              | 0                                        |                            | 2012-2018 | partial             | -                                       |                            | 1992-2017 | complete            |                                         |
| Lithuania                           | 2–10                      | <1         | 2013-2018 | partial             | 0                                        |                            | 2013-2018 | partial             | -                                       | -90 to -50                 | 1980-2018 | partial             |                                         |
| North Macedonia                     | 50–70                     | <1         | 2014-2019 | expert              | 0                                        |                            | 2007-2018 | expert              | ?                                       |                            | 1980-2019 |                     |                                         |
| Moldova                             | 30–60                     | <1         | 2014-2017 | partial             | 0                                        |                            | 2007-2018 | partial             | 0                                       |                            | 1990-2018 | expert              |                                         |
| Montenegro                          | 50–80                     | <1         | 2013-2018 | partial             | +                                        |                            | 2007-2018 | expert              | ?                                       |                            |           |                     |                                         |
| Poland                              | 80–140                    | <1         | 2013-2018 | complete            | 0                                        |                            | 2007-2018 | complete            | ?                                       |                            | 1980-2018 | deficient           |                                         |
| Portugal                            | 10–25                     | <1         | 2013-2018 | partial             | ?                                        |                            | 2007-2018 | deficient           | ?                                       |                            | 1980-2018 | deficient           |                                         |
| Romania                             | 2600–10500                | 37         | 2013-2015 | complete            | ?                                        |                            | 2007-2018 | deficient           | ?                                       |                            | 1980-2018 | deficient           |                                         |
| Russia                              | 600–1500                  | 7          | 2008-2018 | partial             | ?                                        |                            | 2008-2018 | deficient           | -                                       | 0                          | 1980-2018 | expert              |                                         |
| Serbia                              | 830–1300                  | 7          | 2013-2018 | partial             | +                                        | 10 to 29                   | 2007-2018 | complete            | +                                       | 10 to 29                   | 1980-2018 | complete            |                                         |
| Slovakia                            | 0–10                      | <1         | 2013-2018 | complete            | 0                                        |                            | 2007-2018 | complete            | -                                       | -50 to -30                 | 1980-2018 | complete            |                                         |
| Slovenia                            | 25–40                     | <1         | 2013-2018 | complete            | +                                        |                            | 2007-2018 | complete            | +                                       | 200 to 400                 | 1980-2018 | expert              |                                         |
| Spain                               | 9–20                      | <1         | 2013-2018 | complete            | +                                        | 7 to 100                   | 2007-2018 | complete            | +                                       | 1 to 200                   | 1980-2018 | complete            |                                         |
| Turkey                              | 480–760                   | 4          | 2002-2012 | partial             | ?                                        |                            | 2012-2018 | deficient           | ?                                       |                            | 1980-2013 | deficient           |                                         |
| Ukraine                             | 400–550                   | 4          | 2012-2018 | partial             | F                                        |                            | 2010-2018 | partial             | F                                       |                            | 1980-2018 | partial             |                                         |
| EU28                                | 4900–15200                | 59         |           |                     |                                          |                            |           |                     |                                         |                            |           |                     |                                         |
| Europe                              | 9000–23500                | 100        |           |                     |                                          |                            |           |                     |                                         |                            |           |                     |                                         |

*Aythya nyroca* (Ferruginous Duck)

**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> |                                         |

<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.

*Aythya nyroca* (Ferruginous Duck)

**Table 2.** Reported national wintering population sizes and trends in Europe<sup>1</sup>. Note that some countries within the species' wintering range did not report any data, and that only minimum totals are presented, to avoid double-counting of birds moving between countries.

| 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 (individuals) <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                             | 0–25                            | <1         | 2007-2018 | complete            | +                                        | 0 to 150                   | 2007-2018 | complete            | 0                                       | 0                          | 1980-2018 | complete            |                                         |
| Armenia                             | 1–10                            | <1         | 2013-2018 | partial             | ?                                        |                            | 2007-2018 |                     | ?                                       |                            | 2003-2018 | deficient           |                                         |
| Azerbaijan                          | 1000–5000                       | 45         | 1996-2019 | partial             | ?                                        |                            | 2010-2019 | partial             | ?                                       |                            | 1980-2019 | expert              |                                         |
| Belarus                             |                                 | <1         | 2013-2018 | partial             | ?                                        |                            | 2000-2012 | deficient           | ?                                       |                            |           |                     |                                         |
| Belgium                             | 2–7                             | <1         | 2013-2018 | complete            | ?                                        |                            | 2007-2018 | deficient           | ?                                       |                            | 1992-2018 | deficient           |                                         |
| Bosnia & HG                         | 400–1000                        | 13         | 2015-2018 | complete            | ?                                        |                            | 2007-2018 | deficient           | ?                                       |                            | 1980-2018 | deficient           |                                         |
| Bulgaria                            | 2–40                            | <1         | 2013-2018 | complete            | F                                        |                            | 2000-2018 | complete            | +                                       | 0 to 100                   | 1980-2018 | complete            |                                         |
| Croatia                             | 50–200                          | 2          | 2014-2014 | expert              | 0                                        |                            | 2007-2018 | expert              | ?                                       |                            | 1980-2013 | deficient           |                                         |
| Cyprus                              | 60–160                          | 2          | 2013-2018 | partial             | +                                        | 30 to 120                  | 2007-2018 | partial             | +                                       | 200 to 500                 | 1980-2018 | expert              |                                         |
| Czechia                             | 0–3                             | <1         | 2015-2019 | complete            | ?                                        |                            | 2008-2019 | complete            | ?                                       |                            | 1980-2019 | complete            |                                         |
| France                              | 38–90                           | 1          | 2013-2018 | complete            | ?                                        | -25 to 106                 | 2007-2017 | complete            | +                                       | 394 to 1318                | 1980-2017 | complete            |                                         |
| Germany                             | 50                              | 1          | 2011-2016 | complete            | +                                        | 221 to 572                 | 2003-2016 | complete            | +                                       | 114 to 269                 | 1980-2016 | complete            |                                         |
| Greece                              | 500–700                         | 12         | 2015      | partial             | ?                                        |                            | 2007-2018 | deficient           | ?                                       |                            | 1980-2018 | deficient           |                                         |
| Italy                               | 390–740                         | 11         | 2013-2015 | partial             | +                                        | 5 to 50                    | 2009-2015 | partial             | +                                       | 200 to 470                 | 1991-2015 | partial             |                                         |
| North Macedonia                     | 5–100                           | <1         | 2013-2018 | complete            | 0                                        |                            | 2010-2019 | complete            | ?                                       |                            | 1988-2018 | complete            |                                         |
| Moldova                             | 0                               | <1         | 2018-2019 | deficient           | ?                                        |                            | 2007-2018 | deficient           | ?                                       |                            | 1990-2018 | expert              |                                         |
| Montenegro                          | 20–40                           | <1         | 2013-2018 | expert              | 0                                        |                            | 2007-2018 | expert              | ?                                       |                            |           |                     |                                         |
| Netherlands                         | 10–15                           | <1         | 2013-2015 | complete            | ?                                        | -31 to 99                  | 2004-2015 | complete            | 0                                       | -40 to 75                  | 1981-2015 | complete            |                                         |
| Romania                             | 24–80                           | <1         | 2013-2018 | partial             | ?                                        | -12 to 5                   | 2013-2018 | complete            | -                                       | -14 to -5                  | 2000-2018 | partial             |                                         |
| Serbia                              | 20–100                          | <1         | 2013-2018 | complete            | +                                        | 10 to 29                   | 2013-2018 | complete            | +                                       | 80 to 100                  | 1980-2018 | partial             |                                         |
| Slovenia                            | 1–12                            | <1         | 2013-2018 | complete            | ?                                        |                            | 2007-2018 | complete            | +                                       |                            | 1980-2018 | expert              |                                         |
| Spain                               | 140–250                         | 4          | 2013-2018 | complete            | -                                        |                            | 2007-2018 | expert              | -                                       |                            | 1980-2018 | expert              |                                         |
| Switzerland                         | 42–60                           | 1          | 2015-2019 | complete            | +                                        | 21 to 90                   | 2008-2019 | complete            | +                                       | 421 to 664                 | 1980-2019 | complete            |                                         |
| Turkey                              | 42–880                          | 4          | 2013-2019 | complete            | ?                                        |                            | 2008-2019 | deficient           | ?                                       |                            | 1980-2019 | deficient           |                                         |
| Ukraine                             | 20–50                           | <1         | 2014-2017 | expert              | ?                                        |                            | 2007-2018 | deficient           | -                                       |                            | 1980-2018 | partial             |                                         |
| EU28                                | 1200–2300                       | 33         |           |                     |                                          |                            |           |                     |                                         |                            |           |                     |                                         |
| Europe                              | 2800–9600                       | 100        |           |                     |                                          |                            |           |                     |                                         |                            |           |                     |                                         |

*Aythya nyroca* (Ferruginous Duck)

**Table 2.** Reported national wintering population sizes and trends in Europe<sup>1</sup>. Note that some countries within the species' wintering range did not report any data, and that only minimum totals are presented, to avoid double-counting of birds moving between countries.

| 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 (individuals) <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> |                                         |

<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 ( $\geq 50\%$ )        | ↓ 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

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

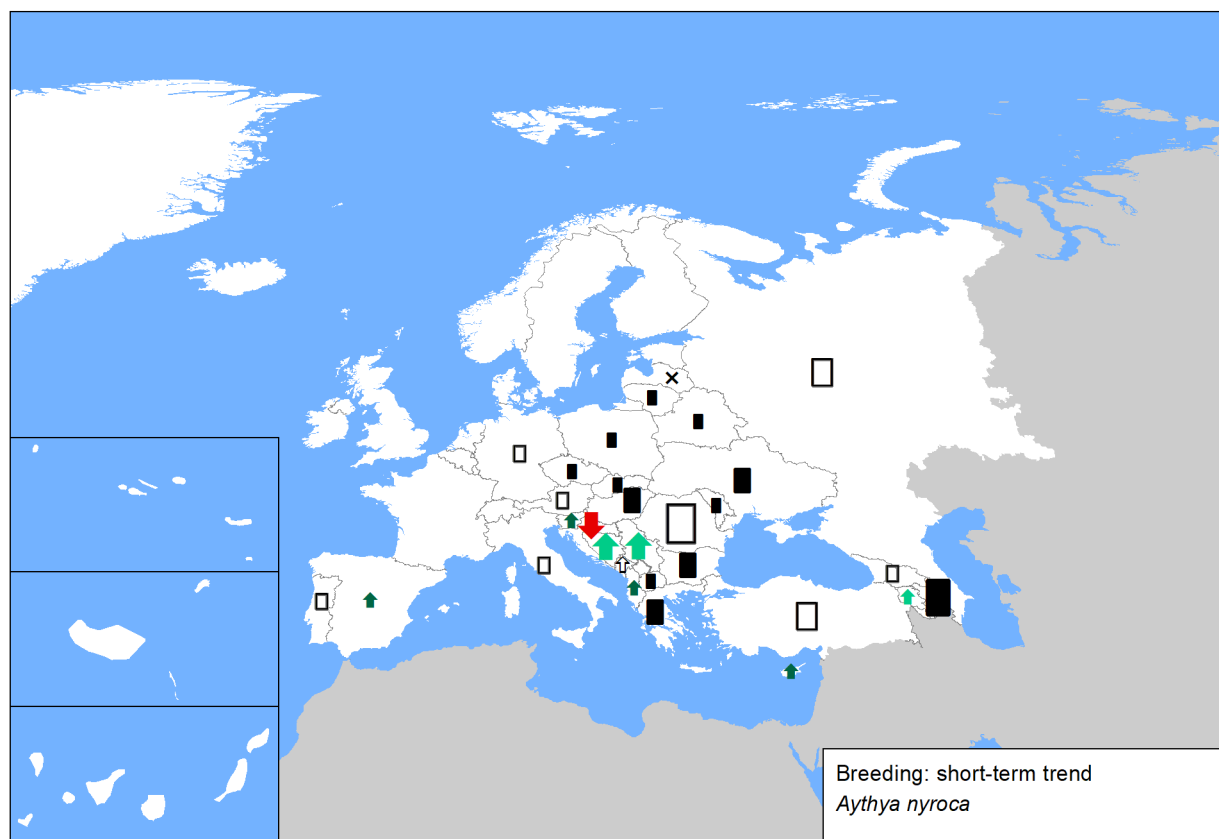


**Figure 2.** Breeding population sizes and long-term trends across Europe.

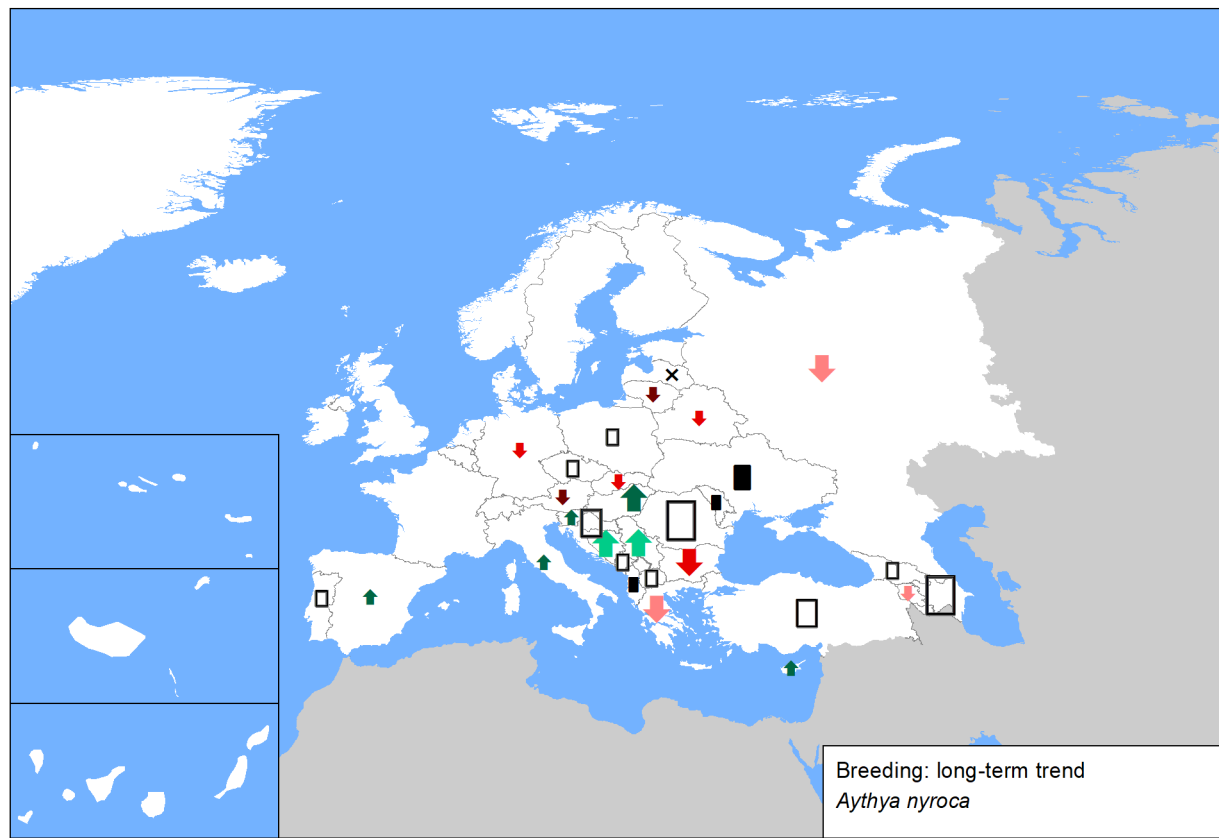


**Figure 3.** Reported wintering population sizes and short-term trends across Europe. Note that some countries within the species' wintering range did not report any data.

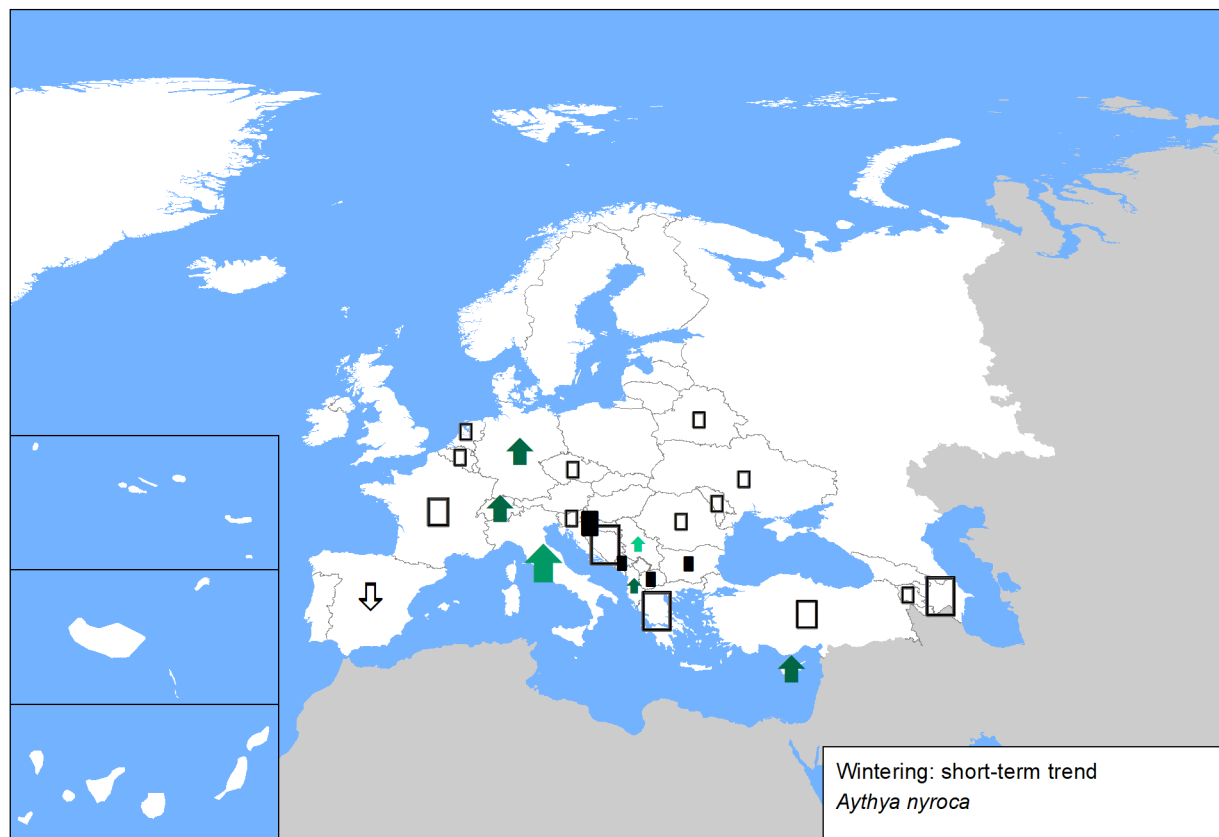
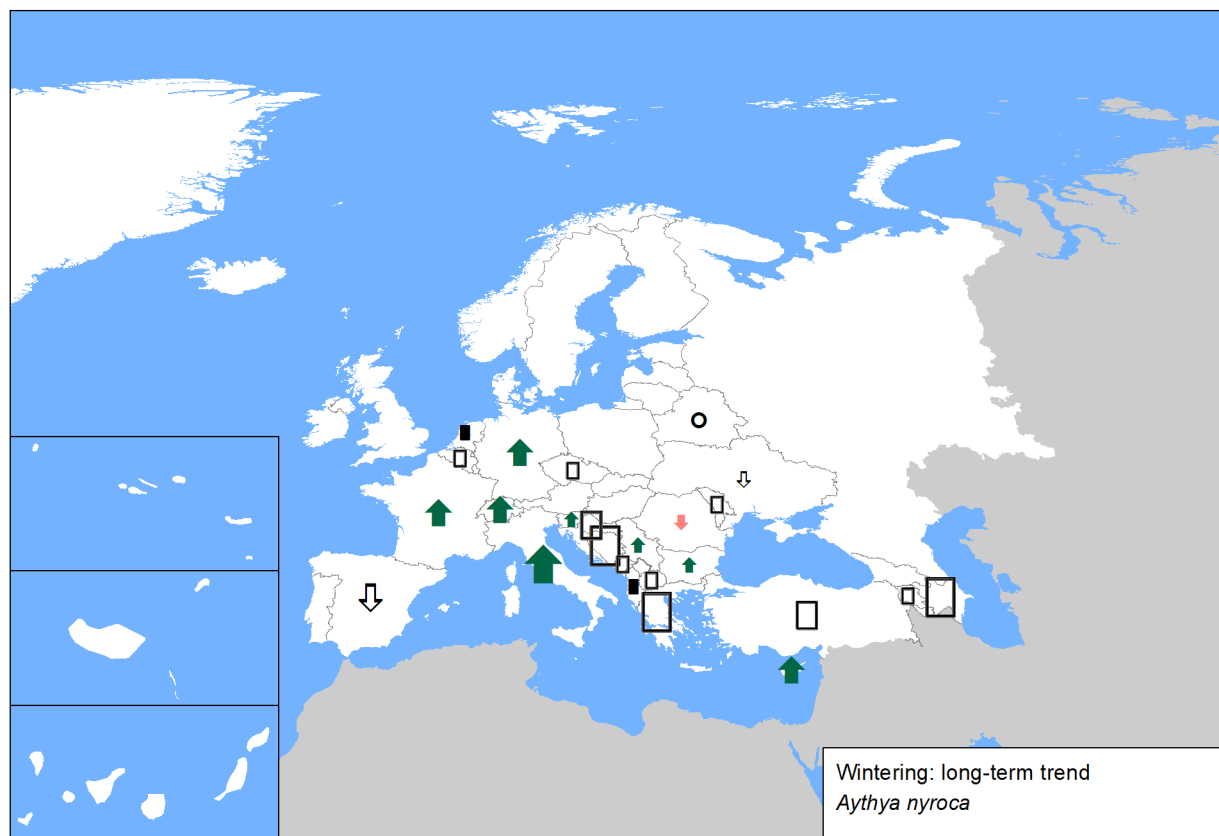


**Figure 4.** Reported wintering population sizes and long-term trends across Europe. Note that some countries within the species' wintering range did not report any data.



## *Aythya nyroca* (Ferruginous Duck)

# 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.         |
| <b>Winter population size:</b> Bino pers. obs.           |
| <b>Winter short-term trend:</b> Bino et al. 2018         |
| <b>Winter long-term trend:</b> Bino et al. 2018          |

### Armenia

|                                                                                                          |
|----------------------------------------------------------------------------------------------------------|
| <b>Breeding population size:</b> TSE NGO                                                                 |
| <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.  |
| <b>Winter population size:</b> TSE NGO, National Bird Monitoring                                         |
| <b>Winter short-term trend:</b> TSE calculations using TRIM                                              |
| <b>Winter long-term trend:</b> TSE calculations using TRIM                                               |

### Austria

|                                                                             |
|-----------------------------------------------------------------------------|
| <b>Breeding population size:</b> Dvorak & Nemeth 2014                       |
| <b>Breeding short-term trend:</b> no sources                                |
| <b>Breeding long-term trend:</b> BirdLife Austria, unpublished archive data |

### Azerbaijan

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

### Belarus

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Breeding population size:</b> Research work of the National Academy of Sciences of the Republic of Belarus "Dynamics and predictive assessment of changes in the state of populations of the main resource and biocenotically most important bird species in Belarus"                                                                                                                                                                                                                                                           |
| <b>Breeding long-term trend:</b> Viksne J., Svazas S., Czajkovski A., Janaus M., Mischenko A., Kozulin A., Kuresoo A., Serebryakov V. Atlas of Duck populations in Eastern Europe. – 2010. – Vilnius, Akstis. – 199 p. Kozulin A., Yourko V., Pareiko O., Pavlushchick T., Tcherkas N. 1998. Waterfowl in Belarus - population estimates and habitat changes. Acta orn. 33:113-126. Nikiforov M.E., Kozulin A.V., eds. Belarussian birds at the beginning of XXI century: status, numbers, distribution. - 1997. - Minsk. - 187 p. |
| <b>Winter population size:</b> Bogdanovich I.A. - personal communication                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Winter short-term trend:</b> Bogdanovich I.A. - personal communication Data of midwinter counts of wintering waterbirds in Belarus (2009-2013). BirdLife International (2004) Birds in Europe: population estimates, trends and conservation status. Cambridge, UK: BirdLife International. (BirdLife Conservation Series, No 12).                                                                                                                                                                                              |

### Belgium

|                                                                |
|----------------------------------------------------------------|
| <b>Winter population size:</b> Waterbird database INBO         |
| <b>Winter short-term trend:</b> Waterbird database INBO & Aves |
| <b>Winter long-term trend:</b> Waterbird database INBO & Aves  |

### 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) |
| <b>Breeding long-term trend:</b> Obratil S., 2000: Istraživanja faune ptica na Hutovu blatu u period siječanj – prosinac 2000 god. Nepublikovan izvještaj za projekat "Nova politika gospodarenja močvarom Hutovo blato", individual reports, reports for EBBA2                              |
| <b>Winter population size:</b> based on IWC reports-all reports published in magazine Bilten mreže posmatrača ptica ( <a href="http://www.ptice.ba">www.ptice.ba</a> )                                                                                                                       |
| <b>Winter short-term trend:</b> based on IWC reports-all reports published in magazine Bilten mreže posmatrača ptica ( <a href="http://www.ptice.ba">www.ptice.ba</a> )                                                                                                                      |
| <b>Winter long-term trend:</b> There are no qualitative data before 2005 to make estimates                                                                                                                                                                                                   |

### Bulgaria

|                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Breeding population size:</b> Petkov, N. 2004. Comparative Ecological Studies on the Ferruginous Duck and Common Pochard during breeding season in Bulgaria. PhD thesis. Bulgarian Academy of Sciences Iankov, P. (ed) 2007. Breeding Bird Atlas of Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10. Sofia, BSPB; National Art. 12 reporting database 2013-2018; |
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## *Aythya nyroca* (Ferruginous Duck)

### Bulgaria

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Breeding short-term trend:</b> Iankov, P. (ed) 2007. Breeding Bird Atlas of Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10. Sofia, BSPB; National Art. 12 reporting database 2013-2018;                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Breeding long-term trend:</b> Petkov, N. 2004. Comparative Ecological Studies on the Ferruginous Duck and Common Pochard during breeding season in Bulgaria. PhD thesis. Bulgarian Academy of Sciences Iankov, P. (ed) 2007. Breeding Bird Atlas of Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10. Sofia, BSPB                                                                                                                                                                                                                                                   |
| <b>Winter population size:</b> Wetlands International (2019): Submitted IWC data for Bulgaria for period 2013-2018.; National Art. 12 reporting database 2013-2018; National workshop of experts, Sofia 27-29.8.2019.                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Winter short-term trend:</b> Petkov, N. 1996. Current Status and Distribution of Ferruginous Duck in Bulgaria. MSc Thesis, Sofia University, Faculty of Biology, Sofia.; National Art. 12 reporting database 2013-2018; Kostadinova, I. and S. Dereliev. 2001. Results from the mid-winter counts of waterbirds in Bulgaria for the period 1997-2001. BSPB Conservation Series, Book 3, Sofia.; Golemansky V. (ed.) 2011. Red Data Book of the Republic of Bulgaria. Digital edition, Vol. 2, Animals. BAS-MOEWS, Sofia, <a href="http://ecodb.bas.bg/rdb/en/vol2">http://ecodb.bas.bg/rdb/en/vol2</a> ; |
| <b>Winter long-term trend:</b> Petkov, N. 1996. Current Status and Distribution of Ferruginous Duck in Bulgaria. MSc Thesis, Sofia University, Faculty of Biology, Sofia. Kostadinova, I. and S. Dereliev. 2001. Results from the mid-winter counts of waterbirds in Bulgaria for the period 1997-2001. BSPB Conservation Series, Book 3, Sofia.                                                                                                                                                                                                                                                            |

### Croatia

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| <b>Breeding population size:</b> Dumbović Mazal V., Pintar V., Zdravac M. (2019): Prvo izvješće o brojnosti i rasprostranjenosti ptica u Hrvatskoj sukladno odredbama Direktive o pticama. Zavod za ornitologiju (Sanja Barišić, Davor Čiković, 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 Lesković, Duje Lisičić, Ivica Lolić, Gordan Lukač. Kristijan Mandić, Krešimir Mikulić, Tibor Mikuska, Gvido Piasevoli, Andrej Radalj, Zlatko Ružanović, Vlatka Ščetarić, Mirko Šetina, Adrian Tomik (2015): Procjene brojnosti za SPA područja. Državni zavod za zaštitu prirode, Zagreb |
| <b>Breeding short-term trend:</b> Dumbović Mazal V., Pintar V., Zdravac M. (2019): Prvo izvješće o brojnosti i rasprostranjenosti ptica u Hrvatskoj sukladno odredbama Direktive o pticama.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Breeding long-term trend:</b> Dumbović Mazal V., Pintar V., Zdravac M. (2019): Prvo izvješće o brojnosti i rasprostranjenosti ptica u Hrvatskoj sukladno odredbama Direktive o pticama.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Winter population size:</b> T. Mikuska in 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>Winter short-term trend:</b> T. Mikuska in 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>Winter long-term trend:</b> no data available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### Cyprus

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| <b>Breeding population size:</b> Systematic monthly waterbird counts by BirdLife Cyprus as published in BirdLife Cyprus monthly checklists; Birdwatching records as reported in BirdLife Cyprus annual reports                                                                                                    |
| <b>Breeding short-term trend:</b> Systematic monthly waterbird counts by BirdLife Cyprus as published in BirdLife Cyprus monthly checklists; Birdwatching records as reported in BirdLife Cyprus annual reports                                                                                                   |
| <b>Breeding long-term trend:</b> Analysis of recent BirdLife Cyprus bird sightings records reported in the society's annual reports. First confirmed breeding was in 2005.                                                                                                                                        |
| <b>Winter population size:</b> Monthly waterbird counts by BirdLife Cyprus and Game & Fauna Service, as published in BirdLife Cyprus monthly checklists and also by the Game & Fauna Service; Analysis of recent BirdLife Cyprus bird sightings records reported in the society's annual reports. Very poor data  |
| <b>Winter short-term trend:</b> Monthly waterbird counts by BirdLife Cyprus and Game & Fauna Service, as published in BirdLife Cyprus monthly checklists and also by the Game & Fauna Service; Analysis of recent BirdLife Cyprus bird sightings records reported in the society's annual reports. Very poor data |
| <b>Winter long-term trend:</b> More recent records (2000 onwards) as above, pre-2000 records based on birdwatching records as reported in BirdLife Cyprus annual reports                                                                                                                                          |

### Czechia

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| <b>Breeding population size:</b> Šťastný et Bejček in prep. - Atlas hnízdního rozšíření ptáků ČR 2014-2017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Breeding short-term trend:</b> 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. Čepák 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. |

## *Aythya nyroca* (Ferruginous Duck)

### Czechia

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| <b>Breeding long-term trend:</b> 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 <i>Fulica atra</i> and wildfowl <i>Anatidae</i> wintering in France and their relationship with hunting activity at wetland sites. <i>Wildfowl. Special Issue 2</i> : 42–59. Gilissen N, Haanstra L, Delany S, Boere G, Hagemeyer 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. <i>Wetlands International Global Series No. 11</i> , 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. <i>Bird Study</i> 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. <i>Ibis</i> : 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. <i>Biological Conservation</i> 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. <i>Bird Study</i> 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. <i>J Ornithol</i> : 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: <a href="http://wpe.wetlands.org">wpe.wetlands.org</a> (accessed 10 March 2019). |
| <b>Winter population size:</b> Musil P. et Musilová Z.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Winter short-term trend:</b> Musil P. et Musilová Z.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Winter long-term trend:</b> Musil P. et Musilová Z.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

### France

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| <b>Winter population size:</b> . Gaudard C., Quaintenne G. & Dupuis J. (2019) Comptage des Oiseaux d'eau à la mi-janvier en France. Résultats 2018 du comptage Wetlands International. pp. 24 (& Annexes pp. 104). LPO BirdLife France - Service Connaissance, Wetlands International, Ministère de la Transition écologique et solidaire, Rochefort, France. . |
| <b>Winter short-term trend:</b> . Quaintenne G. & Gaudard C. (2018) Analyses de tendances oiseaux d'eau recensés en France à la mi-janvier 1980-2017. Rapport technique préalable à la rédaction de la synthèse Wetlands de Gaudard et al. (2018), pp. 53. Ligue Pour la Protection des Oiseaux, BirdLife France - Wetlands International, Rochefort, France..  |
| <b>Winter long-term trend:</b> . Quaintenne G. & Gaudard C. (2018) Analyses de tendances oiseaux d'eau recensés en France à la mi-janvier 1980-2017. Rapport technique préalable à la rédaction de la synthèse Wetlands de Gaudard et al. (2018), pp. 53. Ligue Pour la Protection des Oiseaux, BirdLife France - Wetlands International, Rochefort, France..   |

### Georgia

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| <b>Breeding population size:</b> Nika Kerdikoshvili: <a href="mailto:niko.kerdikoshvili.1@iliauni.edu.ge">niko.kerdikoshvili.1@iliauni.edu.ge</a> ; Zura Javakhishvili: <a href="mailto:zurab.javakhishvili.1@iliauni.edu.ge">zurab.javakhishvili.1@iliauni.edu.ge</a> ; |
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### Germany

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| <b>Breeding population size:</b> Gerlach et al. (in Vorb.): Vögel in Deutschland – 2019. Dachverband Deutscher Avifaunisten, Bundesamt für Naturschutz und Länderarbeitsgemeinschaft der Vogelschutzwarten, Münster.  |
| <b>Breeding short-term trend:</b> Gerlach et al. (in Vorb.): Vögel in Deutschland – 2019. Dachverband Deutscher Avifaunisten, Bundesamt für Naturschutz und Länderarbeitsgemeinschaft der Vogelschutzwarten, Münster. |
| <b>Breeding long-term trend:</b> Gerlach et al. (in Vorb.): Vögel in Deutschland – 2019. Dachverband Deutscher Avifaunisten, Bundesamt für Naturschutz und Länderarbeitsgemeinschaft der Vogelschutzwarten, Münster.  |
| <b>Winter population size:</b> Dachverband Deutscher Avifaunisten e.V. ( <a href="http://www.dda-web.de">http://www.dda-web.de</a> )                                                                                  |
| <b>Winter short-term trend:</b> Dachverband Deutscher Avifaunisten e.V. ( <a href="http://www.dda-web.de">http://www.dda-web.de</a> )                                                                                 |
| <b>Winter long-term trend:</b> Dachverband Deutscher Avifaunisten e.V. ( <a href="http://www.dda-web.de">http://www.dda-web.de</a> )                                                                                  |

### Greece

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| <b>Breeding population size:</b> 1. 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., Κασάμπης 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. 2. Δημαλέξης, Τ., Καστρίτης, Θ., Γρίβας, Κ., Μανωλόπουλος, Α., Καρδακάρη, Ν., Κακαλής, Λ., Ξηρουχάκης, Σ., Τσαϊτουρίδης, Χ., Παρζαζογλου, C. & Barou, 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. Λεγάκης Α. & Μαραγκού Π. (επιμ.) 2009. Το Κόκκινο Βιβλίο των Απειλούμενων Ζώων της Ελλάδας. Ελληνική Ζωολογική Εταιρεία, Αθήνα, 528 σελ. 4. BirdLife International (2004) Birds in Europe : Population estimates, trends and conservation status, Cambridge, UK: Birdlife International (Birdlife Conservation Series No. 12). 5. Natura viewer ( <a href="http://natura2000.eea.europa.eu/#">http://natura2000.eea.europa.eu/#</a> ). 6. 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.  |
| <b>Breeding short-term trend:</b> 1. 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., Κασάμπης 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. 2. Δημαλέξης, Τ., Καστρίτης, Θ., Γρίβας, Κ., Μανωλόπουλος, Α., Καρδακάρη, Ν., Κακαλής, Λ., Ξηρουχάκης, Σ., Τσαϊτουρίδης, Χ., Παρζαζογλου, C. & Barou, 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. Λεγάκης Α. & Μαραγκού Π. (επιμ.) 2009. Το Κόκκινο Βιβλίο των Απειλούμενων Ζώων της Ελλάδας. Ελληνική Ζωολογική Εταιρεία, Αθήνα, 528 σελ. 4. BirdLife International (2004) Birds in Europe : Population estimates, trends and conservation status, Cambridge, UK: Birdlife International (Birdlife Conservation Series No. 12). 5. Natura viewer ( <a href="http://natura2000.eea.europa.eu/#">http://natura2000.eea.europa.eu/#</a> ). 6. 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. |

## *Aythya nyroca* (Ferruginous Duck)

### Greece

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| <p><b>Breeding long-term trend:</b> 1. Βλάχος Χ., Μπίρτσας Π., Θωμαΐδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Α.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. 2. Δημαλέξης, Τ., Καστρίτης, Θ., Γρίβας, Κ., Μανωλόπουλος, Α., Καρδακάρη, Ν., Κακαλής, Λ., Ξηρουχάκης, Σ., Τσαϊτουρίδης, Χ., Παπαζoglou, C. &amp; 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. Λεγάκης Α. &amp; Μαραγκού Π. (επιμ.) 2009. Το Κόκκινο Βιβλίο των Απειλούμενων Ζώων της Ελλάδος. Ελληνική Ζωολογική Εταιρεία, Αθήνα, 528 σελ. 4. BirdLife International (2004) Birds in Europe : Population estimates, trends and conservation status, Cambridge, UK: Birdlife International (Birdlife Conservation Series No. 12). 5. Natura viewer (<a href="http://natura2000.eea.europa.eu/#">http://natura2000.eea.europa.eu/#</a>). 6. Πορτόλου, Δ., Μπουρδάκης, Σ., Βλάχος, Χ., Καστρίτης, Θ. &amp; Δημαλέξης, Τ. (επιμ.).2009. Οι Σημαντικές Περιοχές για τα Πουλιά της Ελλάδας: Περιοχές Προτεραιότητας για τη Διατήρηση της Βιοποικιλότητας. Ελληνική Ορνιθολογική Εταιρεία, Αθήνα.</p> <p><b>Winter population size:</b> 1. Natura viewer (<a href="http://natura2000.eea.europa.eu/#">http://natura2000.eea.europa.eu/#</a>). 2. Βλάχος Χ., Μπίρτσας Π., Θωμαΐδης Χ., Χατζηνίκος Ε., Μποντζώρλος Β., Μπραζιώτης Σ., Κόντος Κ., Βλαχάκη Δ., Δεδουσοπούλου Ε., Κιούσης Δ., Ξένος Α., Στεφάνου Α.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.</p> <p><b>Winter short-term trend:</b> no data available</p> <p><b>Winter long-term trend:</b> no data available</p> |
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### Hungary

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| <p><b>Breeding population size:</b> National Park Directorates' databases "A közösségi jelentőségű természeti értékek hosszú távú megőrzését és fejlesztését, valamint az EU Biológiai Sokféleség Stratégia 2020 célkitűzéseinek hazai szintű megvalósítását megalapozó stratégiai vizsgálatok" programme</p> <p><b>Breeding short-term trend:</b> Barabás, L. (2013): Breeding distribution of Hungarian Duck species. Hungarian Waterfowl Publications 23: 79-120. Expert opinions MME Nomenclator Bizottság (2008): Magyarország madarainak névjegyzéke. Nomenclator avium Hungariae. Magyar Madártani és Természetvédelmi Egyesület, Budapest. P. 278 National Park Directorates' databases</p> <p><b>Breeding long-term trend:</b> Barabás, L. (2013): Breeding distribution of Hungarian Duck species. Hungarian Waterfowl Publications 23: 79-120. Expert opinions MME Nomenclator Bizottság (2008): Magyarország madarainak névjegyzéke. Nomenclator avium Hungariae. Magyar Madártani és Természetvédelmi Egyesület, Budapest. P. 278 National Park Directorates' databases</p> |
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### Italy

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| <p><b>Breeding population size:</b> Brichetti P., Fracasso G., 2018. The Birds of Italy. Vol. I. Anatidae-Alcidae. Ed. Belvedere, Latina (Italy), "historia naturae" (6), pp. 512.</p> <p><b>Breeding short-term trend:</b> No recent data available - Brichetti P., Fracasso G., 2018. The Birds of Italy. Vol. I. Anatidae-Alcidae. Ed. Belvedere, Latina (Italy), "historia naturae" (6), pp. 512.</p> <p><b>Breeding long-term trend:</b> 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.</p> <p><b>Winter population size:</b> ISPRA-IWC Database</p> <p><b>Winter short-term trend:</b> ISPRA-IWC Database - Zenatello M., Baccetti N., Borghesi F., 2014. Risultati dei censimenti degli uccelli acquatici svernanti in Italia. Distribuzione, stima e trend delle popolazioni nel 2001-2010. ISPRA, Serie Rapporti, 206/2014, pp: 24-28.</p> <p><b>Winter long-term trend:</b> ISPRA-IWC Database; Baccetti N, Dall'Antonia P, Magagnoli P, Melega L, Serra L, Soldatini C, Zenatello M 2002. Risultati dei censimenti degli uccelli acquatici svernanti in Italia: distribuzione, stima e trend delle popolazioni nel 1991-2000. Biol. Cons. Fauna 111: 19-20.</p> |
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### Latvia

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| <p><b>Breeding population size:</b> Unpublished data for European Breeding Bird Atlas (2013-2017); Expert: Andris Dekants, andris.dekants@lob.lv</p> <p><b>Breeding short-term trend:</b> Unpublished data for European Breeding Bird Atlas (2013-2017); Expert: Andris Dekants, andris.dekants@lob.lv <a href="http://www.putni.lv/aytnyr.htm">http://www.putni.lv/aytnyr.htm</a></p> <p><b>Breeding long-term trend:</b> <a href="http://www.putni.lv/aytnyr.htm">http://www.putni.lv/aytnyr.htm</a></p> |
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### Lithuania

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| <p><b>Breeding population size:</b> 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) 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“.</p> <p><b>Breeding short-term trend:</b> 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) 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“.</p> <p><b>Breeding long-term trend:</b> 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 &amp; Institute of Ecology of Vilnius University. Lututė, 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) 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“.</p> |
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### North Macedonia

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| <p><b>Breeding population size:</b> unpublished data from the European Breeding Bird Atlas 2</p> <p><b>Breeding short-term trend:</b> unpublished data from the European Breeding Bird Atlas 2</p> |
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## *Aythya nyroca* (Ferruginous Duck)

### North Macedonia

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| <b>Winter population size:</b> unpublished IWC data of the Macedonian Ecological Society                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Winter short-term trend:</b> unpublished IWC data of the Macedonian Ecological Society                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Winter long-term trend:</b> Micevski, B. (1991). Faunistical analysis and structure of Dojran Lake winter ornithofauna. God. zb., Biol. 43–44: 65–73; Micevski, B. (1999). Winter census of the waterfowl on the Macedonian part of Ohrid Lake in January 1998 (with structural, dietary and evaluation analyses. In: Special issues of Macedonian Ecological Society. pp. 313–323. MES.; Micevski, B. (1992). Structural and faunistical characteristics of the Prespa Lake winter ornithofauna. God. zb., Biol. 45: 51–55; Micevski, B., Schneider, M. (1997). Winter census of waterfowl in Macedonian part of Prespa Lake in January 1997 (with structural, dietary and evaluation analyses). In: Towards Integrated Conservation and Sustainable Development of Transboundary Macro and Micro Prespa Lakes pp. 160–164. Towards Integrated Conservation and Sustainable Development of Transboundary Macro and Micro Prespa Lakes. Preservation and Protection of Natural Environment in Albania, Korcha, Albania.; Micevski, B. (1996). Ohrid Lake winter ornithofauna (Faunistical and Structural Characteristics). God. Zb., Biol. 49: 85–93; Fremuth, W., Bino, T., Bego, F., Jorgo, G., Micevski, B., Anastasovski, V., Tzvetkov, T., Hristov, I., Schneider-Jacoby, M., Shumka, S. (2000). Four years of simultaneous wintering waterbird census at the Ohrid and Prespa Lakes 1997-2000. In: Grupche, Lj. & Kungulovski, Gj. (eds.). Proceedings of the International Symposium 'Sustainable development of Prespa Region' pp. 28–38. Macedonian Ecological Society; Catsadorakis, G., Aleksi, P., Avramoski, O., Bino, T., Bojadzi, A., Brajanoski, Z., Fremuth, W., Kazoglou, Y., Koutseri, I., Logotheti, A., Malakou, M., Nikolaou, H., Nikolaou, L., Putilin, K., Shumka, S., Uzunova, D., Veleviski, M. (2013). Waterbirds wintering at the Prespa lakes as revealed by simultaneous counts in the three adjoining littoral states. Macedonian Journal of Ecology and Environment 15(1): 23–31; unpublished IWC data of the Macedonian Ecological Society |

### Moldova

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| <b>Breeding population size:</b> Moldova's contribution for the second European Breeding Bird Atlas (EBBA2) |
| <b>Breeding short-term trend:</b> SPPN expert opinion (sppn.moldova@gmail.com)                              |
| <b>Breeding long-term trend:</b> SPPN expert opinion (sppn.moldova@gmail.com)                               |
| <b>Winter population size:</b> International Waterbird Census                                               |
| <b>Winter short-term trend:</b> SPPN expert opinion (sppn.moldova@gmail.com)                                |
| <b>Winter long-term trend:</b> SPPN expert opinion (sppn.moldova@gmail.com)                                 |

### Montenegro

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| <b>Breeding population size:</b> 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. |
| <b>Winter population size:</b> IWC reports (2013-2018): Dubak, Vešović, N., Jovičević, M., Vizi O., Vizi, A.                                                                                                                              |

### Netherlands

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| <b>Winter population size:</b> Sovon Bird atlas (Sovon 2018)                                       |
| <b>Winter short-term trend:</b> NEM waterbird monitoring scheme (Sovon, RWS, CBS, provinces), NDFF |
| <b>Winter long-term trend:</b> NEM waterbird monitoring scheme (Sovon, RWS, CBS, provinces), NDFF  |

### Poland

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| <b>Breeding population size:</b> State Environmental Monitoring / Chief Inspectorate of Environmental Protection (survey: MPO – Ferruginous Duck Census) |
| <b>Breeding short-term trend:</b> State Environmental Monitoring / Chief Inspectorate of Environmental Protection (survey: MPO)                          |
| <b>Breeding long-term trend:</b> Chief Inspectorate of Environmental Protection & Polish Society for the Protection of Birds (OTOP) / BirdLife Poland    |

### Portugal

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

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

### Russia

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| <b>Breeding population size:</b> Voltzit & Kalyakin 2013-2019; Database of the project on Atlas of breeding birds of European Russia |
| <b>Breeding long-term trend:</b> Morozov 2001; Belik et al. 2003; Dzhmirzoev & Bukreev 2013                                          |

### Serbia

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

## *Aythya nyroca* (Ferruginous Duck)

### Serbia

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| <b>Breeding long-term trend:</b> EBBA2 project; Puzović, S., Radišić, D., Ružić, M., Rajković, D., Radaković, M., Pantović, U., Janković, M., Stojnić, N., Šćiban, M., Tucakov, M., Gergelj, J., Sekulić, G., Agošton, A. & Raković, M. 2015. Birds of Serbia: Breeding Population Estimates and Trends for the Period 2008-2013. Bird protection and study society of Serbia, and Department of Biology and Ecology, Faculty of Sciences, University of Novi Sad, Novi Sad. |
| <b>Winter population size:</b> IWC database                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Winter short-term trend:</b> IWC database                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Winter long-term trend:</b> IWC database; Bioras database <a href="http://www.bioras.petnica.rs/home.php">http://www.bioras.petnica.rs/home.php</a>                                                                                                                                                                                                                                                                                                                       |

### Slovakia

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| <b>Breeding population size:</b> Coordinatory group for reporting 2019. Danko Štefan, Darolová Alžbeta, Krištín Anton: Rozšírenie vtákov na Slovensku. VEDA, vyd. SAV Bratislava, 2002. Karaska D., Trnka A., Krištín A., Ridzoň J.: Chránené vtácie územia Slovenska. ŠOP SR Banská Bystrica, 2015. |
| <b>Breeding short-term trend:</b> 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.                                                   |
| <b>Breeding long-term trend:</b> Coordinatory group for reporting 2019, AVES-Symfony Database 2013-2018, KIMS Database 2013-2018.                                                                                                                                                                    |

### Slovenia

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| <b>Breeding population size:</b> Denac K., Jančar T., Božič, L., Mihelič, T., Koče, U., Kmecl, P., Kljun, I., Denac, D., Bordjan, D. (2018): Monitoring populacij izbranih ciljnih vrst ptic na območjih Natura 2000 v letu 2018 in sinteza monitoringa 2016-2018. Poročilo. Naročnik: Ministrstvo za kmetijstvo, gozdarstvo in prehrano. DOPPS, Ljubljana. Mihelič T., Kmecl P., Denac K., Koče U., Vrezec A., Denac D. (eds.) (2019): Atlas ptic Slovenije. Popis gnezdk 2002–2017. – DOPPS, Ljubljana.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Breeding short-term trend:</b> Bordjan D. (2012): Vodne ptice in ujede Cerkljanskega polja (južna Slovenija) v letih 2007 in 2008, s pregledom zanimivejših opazovanj do konca leta 2010. – Acrocephalus 33 (152/153): 25–104. Denac K., Mihelič T., Božič L., Kmecl P., Jančar T., Figelj J., Rubinič 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. Denac K., Jančar T., Božič, L., Mihelič, T., Koče, U., Kmecl, P., Kljun, I., Denac, D., Bordjan, D. (2018): Monitoring populacij izbranih ciljnih vrst ptic na območjih Natura 2000 v letu 2018 in sinteza monitoringa 2016-2018. Poročilo. Naročnik: Ministrstvo za kmetijstvo, gozdarstvo in prehrano. DOPPS, Ljubljana. Mihelič T., Kmecl P., Denac K., Koče U., Vrezec A., Denac D. (eds.) (2019): Atlas ptic Slovenije. Popis gnezdk 2002–2017. – DOPPS, Ljubljana.                                                                                                                                                                                                                                                                                                                                                                 |
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## *Aythya nyroca* (Ferruginous Duck)

### Spain

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| <p><b>Winter short-term trend:</b> Conservación de especies amenazadas. (<a href="https://www.miteco.gob.es/es/biodiversidad/temas/conservacion-de-especies-amenazadas/Porrón_pardo_tcm30-195023.pdf">https://www.miteco.gob.es/es/biodiversidad/temas/conservacion-de-especies-amenazadas/Porrón_pardo_tcm30-195023.pdf</a>) Madroño, A., González, C. &amp; Atienza, J.C. (Eds.). (2004). Libro Rojo de las Aves de España. Dirección General para la Biodiversidad-SEO/BirdLife, Madrid. 452 pp. (<a href="https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/lrcompletoparaweb_tcm30-207942.pdf">https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/lrcompletoparaweb_tcm30-207942.pdf</a>) Martí, R. &amp; del Moral, J.C. (Eds.) (2003). Atlas de las Aves Reproductoras de España. Dirección General de Conservación de la Naturaleza- Sociedad Española de Ornitología. Madrid, 733 pp. (<a href="https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/inventario-nacional-de-biodiversidad/ieet_aves_atlas.aspx">https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especies-terrestres/inventario-nacional-de-biodiversidad/ieet_aves_atlas.aspx</a>) SEO/BirdLife (2012). Atlas de las aves en invierno en España 2007-2010. Ministerio para la Transición Ecológica. (<a href="https://www.miteco.gob.es/es/biodiversidad/publicaciones/atlas_aves_invierno_tcm30-198034.pdf">https://www.miteco.gob.es/es/biodiversidad/publicaciones/atlas_aves_invierno_tcm30-198034.pdf</a>). SEO/BirdLife (2018). Censos de aves acuáticas. (<a href="http://www.acuaticas.org/WebForms/ConsultaContenidos/Paginas/RealMapasDistAbunEspecie.aspx">http://www.acuaticas.org/WebForms/ConsultaContenidos/Paginas/RealMapasDistAbunEspecie.aspx</a>)</p> |
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| <p><b>Winter long-term trend:</b> Strebel, N. (2019): Überwinternde Wasservögel in der Schweiz: Ergebnisse der Wasservogelzählungen 2018/2019. Schweizerische Vogelwarte, Sempach./Strebel, N. (2019): Monitoring hivernal des oiseaux d'eau en Suisse: Résultats des recensements des oiseaux d'eau 2018/2019. Station ornithologique suisse, Sempach.</p>  |

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| <p><b>Winter population size:</b> Ebird Database and Midwinter Fowl Counts (2013-2018), Birdlife Estimate</p>                                                                                                                                                                                                                                     |
| <p><b>Winter short-term trend:</b> Midwinter bird counts 2012-2019</p>                                                                                                                                                                                                                                                                            |
| <p><b>Winter long-term trend:</b> Midwinter bird counts 1980-2019 and Historical Records come from OSME and other midwinter counts</p>                                                                                                                                                                                                            |

### Ukraine

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