

**Jihočeská univerzita v Českých Budějovicích  
Přírodovědecká fakulta**

**Long-term changes in  
numbers and distribution of  
wintering waterbirds in the  
Czech Republic, 1966 - 2008.**

**RIGORÓZNÍ PRÁCE**

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Poláková S. (2012): Long-term changes in numbers and distribution of wintering waterbirds in the Czech Republic, 1966 – 2008, RNDr. Thesis, in English, 15 p. University of South Bohemia, Faculty of Science, České Budějovice, Czech Republic.

#### Annotation

This paper assessed long-term trends in the numbers and distribution of the 26 most abundant wintering waterbird species in the Czech Republic. Data were based on International Waterbird Census data, that started in our country in 1966. Climatic variables and all-european trends were taken in account.

#### Funding

The long-term changes in numbers and distribution of waterbirds in the Czech Republic in relation to climatic and environmental changes. VaV MŽP ČR SP/2d3/109/07. 2006 - 2010

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Simona Poláková substantially participated in evaluating of the long-term trends in numbers and distribution of wintering waterbirds and on revision of the manuscript Musil P., Musilová Z., Fuchs R., Poláková S. (2011): Long-term changes in numbers and distribution of wintering waterbirds in the Czech Republic, 1966 - 2008. Bird Study 58 (4), 450-460.

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## Summary

**Capsule** Of 26 species of wintering waterbirds, 18 showed an increase in numbers, five showed a decrease and two showed no change.

**Aim** To assess long-term trends in the numbers and distribution of the 26 most abundant wintering waterbird species in the Czech Republic.

**Methods** We used International Waterbird Census data from between 48 and 639 wetland sites which had been counted annually in the Czech Republic from 1966 to 2008. From this data long-term changes in numbers and distributions were determined. Log-linear Poisson regression analysis was used to estimate missing data using TRIM software. The distribution of each species was described as the ratio of the number of sites occupied by that species to the total number of sites investigated.

**Results** Increasing trends were found for 18 species, five species were found to be declining, one species was stable and two species were found with uncertain trends. Wintering distributions (the ratio of sites occupied by a given species to the total number of sites counted) increased in 16 species and decreased in two species, broadly correlated with the species changes in numbers.

**Conclusion** In most species changes in numbers as well as changes in distribution followed the Western Palearctic population trends. Those species which increased were mainly piscivores and included, geese, ducks, and gulls. Scarcer species also exhibited an increase in numbers. The changes in numbers (both positive and negative) were more frequent among species associated with running water, whereas species which showed uncertain trends were more frequently recorded on standing water, which is more affected by variable weather conditions.