

Short overview of use of PECBMS data for research

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Our objectives

- gain credibility for our work
- disseminate knowledge on the methodology
- disseminate knowledge about large scale population trends
- raise hypotheses on trend change by explorative analyses
- test hypotheses on large scale drivers for population change
- motivate further detailed research by external scientists

Recent papers based on PECBMS data

By authors

- 1) PECBMS network (12)
- 2) External (6)

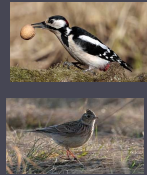
By topic

- 1) Description of population changes, indicators, methods (12)
- 2) Exploration of potential drivers of population changes (6)

1) Description of population changes, methods

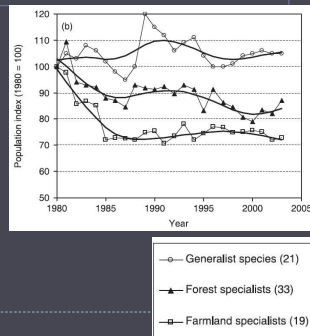
Contents

- methods
- trends of European birds
- the Farmland Bird Indicator and indicator of common forest birds



2) Exploration of potential drivers of population changes

- woodland birds (Gregory et al. 2007)
 - trends differ according to:
 - habitat
 - degree of specialization in habitat use
 - nest-site
 - the specialists declined more steeply than the generalists

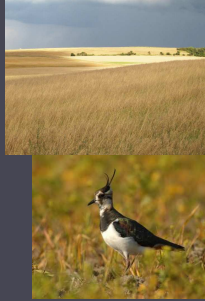


Declines in farmland bird abundance and biomass (Voříšek et al. et al. 2010)

- the numbers of common farmland birds nearly halved during the last 27 years
- in New EU Member States trends less negative
- main drivers: land and crop management
 - in S and C-E Europe also land abandonment and afforestation (e. g. Reif et al. 2008a)
- research has been concentrated to W Europe (mainly UK)
 - An urgent need to explore other regions, mainly E and S Europe

Population declines of farmland birds (Butler et al. 2010)

- changes in land-use and management
 - not equal impact of each EU Member State on EFBI (European Farmland Bird Index) – mainly Spain has large influence
 - prediction of the EFBI in 2020 for a number of land-use change scenarios:
 - further agricultural intensification in East Europe – the worst scenario



All common species

- includes farmland, forest and „other“ species
- other:
 - specialists of other habitats (inland wetlands, urban)
 - generalists



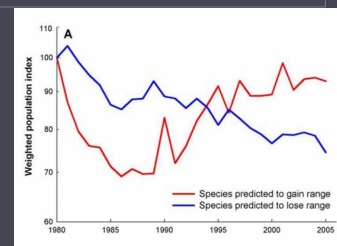
Population declines in long-distance migrants

- long-distance migrants – more declining trends (Sanderson et al.)
 - BUT farmland birds (Voříšek et al. 2010)
 - population-specific migration routes and wintering areas
- mismatch between timing of food requirements and food availability caused by climate change
- mainly in highly seasonal habitats (forests)
- short food peak (Both et al. 2010)



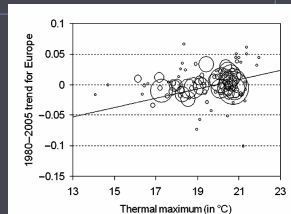
An indicator of the impact of climatic change (Gregory et al. 2009)

- relationship between variation in population trend and change in range forecasted by climatic envelope models
- to assess the fate of species: account for both land-use and climate changes



Identification of predictors of species resilience or susceptibility to climate warming (Jiguet et al. 2010)

- sharpest declines: species with the lowest thermal maxima



Other research (P. S. Jorgensen) is already in process.

Future research

I) Indicators

- New habitats
- Species selection
- Data quality

II) Species trends, driving forces

- Farmland birds in eastern and southern Europe
- Migratory species
- Climate change
- Life history traits
- Role of common birds

What is needed

- increase capacity (within wider PECBMS network)
- cooperate with external researchers
- discuss data access policy

• **Any idea is appreciated.**

- ▶ **Our dataset is unique.**
- ▶ **Come and explore it together!**

