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Bird Census News is the Journal of the European Bird Census Council or EBCC. The EBCC exists to promote the organisation and development of atlas, census work and population studies in all European countries; it promotes communication and arranges contacts between organisations and individuals interested in census and atlas work, primarily (but not exclusively) in Europe.

Bird Census News reports developments in census and atlas work in Europe, from the local to the continental scale, and provides a forum for discussion on methodological issues.

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Bird Census News
Volume 27/1–2, June 2015

EDITORIAL

With this double issue, the volume of 2014, we have finally catched up our delay and will now start with the preparation of the two issues of volume 28 of 2015!

In the first contribution, Gabriel Gargallo and co-authors present the EuroBirdPortal (EBP) project and its role in the framework of the EBCC. The EBP will be the perfect companion to the work developed by the other two main projects undertaken by the EBCC, the Pan-European Common Bird Monitoring Scheme (PECBMS, a joint initiative of EBCC and BirdLife International) and the new European Breeding Bird Atlas (EBBA2). Aleksi Leihikoinen and his Scandinavian colleagues describe their work on a multi-national Nordic bird indicator for the Fennoscandian mountain range. When fully developed this monitoring system will include more than 400 survey plots and will form a solid base for a robust bird indicator in this climate-sensitive montane region of northern Europe. Kai Gedeon and his colleagues active in the German Breeding Bird Atlas project, give us an overview of this very important project that ran between 2005 and 2009. The results have recently been published in a very interesting book. Do not hesitate to order it!

In the European Atlas News section Sergi Herrando and co-authors present the results of the request for pilot data on five species for EBBA2 in autumn 2014. Almost all national coordinators across Europe have provided 50 x 50 km data following the methodological standards of the project and preliminary maps could be prepared showing up-to-date distribution for these species.

In the Short Notes section Malou Fenger and co-authors give a review of the status for Denmark's Important Bird Areas.

And finally, in the Events section you find information on the next 20th International Conference of EBCC, the Joint workshops of the Pan European Bird Monitoring Scheme (PECBMS) and the 2nd European Breeding Bird Atlas (EBBA2) projects, and a reminder to visit the EBBA2 facebook page!

Enjoy this volume!

Anny Anselin
Editor Bird Census News

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The EuroBirdPortal (EBP) project

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Abstract. During the last ten years, the number and diversity of web portals dedicated to the collection of bird observations has increased rapidly and most of Europe is now covered by at least one of them. While there is substantial variation in the scope and volumes of data gathered by different portals, the advent of online data collection has produced a vast amount of data that would previously have been impossible to amass. However, in order to make best use of the data gathered by online portals across Europe, a common database will need to be developed. The EuroBirdPortal (EBP) project has been conceived to overcome this problem by creating a common data repository that will hold data from each of the existing systems. It is a project of the EBCC developed through a partnership that currently comprises 29 institutions from 21 different European countries and was formally established in March 2015. The EBP will be the perfect companion to the work developed by the other two main projects undertaken by the EBCC: the Pan-European Common Bird Monitoring Scheme (PECBMS, undertaken with Birdlife International) and the new European Breeding Bird Atlas (EBBA2). The article describes in more detail the organization and geographical coverage, EBP's main goals and its role in the framework of the EBCC, and gives a review of the first developments and possible products.

Introduction

During the last ten years, the number and diversity of web portals dedicated to the collection of bird observations has increased rapidly and most of Europe is now covered by at least one of them. Some portals are based on very specific systems and cover a limited geographical area (e.g. a region or country) while others function across several countries using the same basic package. While there is substantial variation in the scope and volumes of data gathered by different portals, the advent of online data collection has produced a vast amount of data that would previously have been impossible to amass.

Unlike more traditional monitoring projects, which focus on structured data collection, these portals aim to obtain year-round data from the relatively unstructured but intensive and widespread activities of birdwatchers. However, despite the fact that data are gathered following simple standardised protocols (e.g. complete lists), or in some cases even no protocol (casual observations), the vast amount of data contained in these portals and the sheer amplitude of their combined geographical and taxonomic coverage offer great potential for research on the temporal and spatial distribution of birds across large geographical areas. This is particularly the case where at least some basic information on recording effort is available. Such knowledge is urgently needed in order to increase understanding of bird distributions and movements throughout the year and to address issues concerned with conservation and management (e.g. wind farms, avian borne diseases, flight safety). It should be emphasised that such data are in no sense a substitute for well-structured monitoring

Figure 1. Countries currently involved in the EBP project.

programmes and atlases. Rather, they allow us to provide at least some basic information from situations where more structured surveys are not available.

In order to make best use of the data gathered by online portals across Europe, however, a common database will need to be developed. Data sources are very scattered, and several portals provide limited access to raw data or are available only in the native languages of their host countries. Moreover, given the diversity of initiatives and the well established nature of some of them, any attempt to favour only one of the systems or to create a new common one would be both undesirable and impractical.

The EuroBirdPortal (EBP) project has been conceived to overcome this problem by creating a common data repository that will hold data from each of the existing systems. This will contain the minimum aggregated information required to realise the full potential for large scale spatiotemporal analyses of such data and for other research and applied uses that are appropriately undertaken at a European scale. Our plan is that in due course this repository will be updated automatically in close to real time, facilitating the production of near real time outputs.

Organization & geographical coverage

EBP is a project of the EBCC developed through a partnership that currently comprises 29 institutions from 21 different European countries (Figure 1). The partnership involves biodiversity data centres and ornithological institutions in their respective countries, which between them have extensive experience of collecting high quality monitoring data from thousands of volunteer birdwatchers and turning this information in sound science. This expertise will allow us to develop the scientific capability of EBP, and also to recognize its limitations.

The EBP project was formally established in March 2015. However, it is the result of an intensive ini-

Table 1. EBP timeline.

September 2012

- Creation of a working group for exploring the possibilities of on-line bird portals data integration and analysis

June 2013

- 1st EBP meeting (Sempach, Switzerland)
- First analyses done using aggregated data from 5 on-line bird portals operating in 12 countries

September 2013

- 2nd EBP meeting (Cluj, Romania)
- Definition of the EBP overall goals and expected products
- Overall agreement between on-line bird recording schemes approved by the EBCC

February 2014

- 3rd EBP meeting (Ilmitz, Austria)
- EuroBirdPortal becomes the official name of the project
- Initial data sharing structure defined (based on aggregated data by week and 10×10 km square)

June 2014

- 4th EBP meeting (Thetford, UK)

October 2014

- 5th EBP meeting (Satigny, Switzerland)
- EBCC Board agrees EBP to become an EBCC project

March 2015

- 6th EBP meeting (Hoeilaart, Belgium)
- EBP agreement formally approved
- EBP demo viewer ready to be launched in June 5th (Green Week)

Table 2. Links to the on-line bird portals currently submitting data to the EBP project (see the corresponding websites and http://www.eurobirdportal.org/ —to be launched in early June— for further information and the list of organizations involved).

On-line bird portal	Country/Region
http://www.ornitho.at/	Austria
http://observations.be/ & http://waarnemingen.be/	Belgium
http://avif.birds.cz	Czech Republic
http://www.dofbasen.dk/	Denmark
http://tiira.fi/	Finland
http://www.faune-ain.org/	Ain (France)
http://www.faune-alsace.org/	Alsace (France)
http://www.faune-aquitaine.org/	Aquitaine (France)
http://www.faune-ardeche.org/	Ardèche (France)
http://www.faune-auvergne.org/	Auvergne (France)
http://www.faune-tarn-aveyron.org/	Aveyron-Tarn (France)
http://www.faune-bretagne.org/	Bretagne (France)
http://www.faune-champagne-ardenne.org/	Champagne-Ardenne (France)
http://www.faune-charente.org/	Charente (France)
http://www.faune-charente-maritime.org/	Charente-Maritime (France)
http://www.faune-cher.org/	Cher (France)
http://www.oiseaux-cote-dor.org/	Côte-d'Or (France)
http://www.nature79.org/	Deux-Sèvres (France)
http://www.faune-drome.org/	Drôme (France)
http://franche-comte.lpo.fr/	Franche-Comté (France)
http://haute-savoie.lpo.fr/	Haute-Savoie (France)
http://www.faune-iledefrance.org/	Île-de-France (France)
http://www.faune-touraine.org/	Indre-et-Loire (France)
http://www.faune-isere.org/	Isère (France)
http://www.faune-lr.org/	Languedoc-Roussilion (France)
http://www.faune-loire.org/	Loire (France)

Table 2 continued.

http://www.faune-loire-atlantique.org/	Loire-Atlantique (France)
http://www.faune-lorraine.org/	Lorraine (France)
http://www.faune-anjou.org/	Maine-et-Loire (France)
http://www.faune-maine.org/	Mayenne-Sarthe (France)
http://www.faune-nievre.org/	Nièvre (France)
http://www.faune-paca.org/	Provence-Alpes-Côte d'Azur (France)
http://www.faune-rhone.org/	Rhône (France)
http://www.faune-savoie.org/	Savoie (France)
http://www.faune-vendee.org/	Vendée (France)
http://vienne.lpo.fr/	Vienne (France)
http://www.faune-yonne.org/	Yonne (France)
http://www.ornitho.de/	Germany
http://blx1.bto.org/birdtrack/main/data-home.jsp	Ireland
http://www.ornitho.it/	Italy
http://dabasdati.lv/	Latvia
http://www.ornitho.de/	Luxembourg
https://ndff-ecogrid.nl	Netherlands
http://artsobservasjoner.no/fugler/	Norway
http://birdlaa5.memset.net/worldbirds/poland.php	Poland
http://birdlaa5.memset.net/worldbirds/portugal.php	Portugal
http://aves.vtaky.sk/en/zoology	Slovakia
http://www.ornitho.cat/	Catalonia (Spain)
http://www.worldbirds.org/v3/spain.php	Spain
http://svalan.artdata.slu.se/birds/	Sweden
http://www.ornitho.ch/	Switzerland
http://blx1.bto.org/birdtrack/main/data-home.jsp	United Kingdom

tiative started in September 2012 with the creation of a working group devoted to explore the possibilities of integrating and analysing data from different European on-line bird portals, and with the organization of the first EBP meeting in Switzerland in June 2013 (Table 1). The partnership is formally based in two key agreements: the *Collaborative agreement between on-line bird recording schemes operating in Europe* and the *Collaborative agreement between on-line bird recording schemes participating in the EuroBirdPortal (EBP) project.* The first is a generic agreement promoted by the EBCC since 2013 to encourage data sharing and research at the European scale and to support the development of future European Breeding Bird Atlases. The second and more recent agreement is made within the framework of the more generic one, and sets out the specific terms and conditions of the EBP initiative and names EBCC as the organization formally responsible of the project and owner of the intellectual property.

Overall, the online data gathering portals run by the EBP partners (Table 2) collect some 30 million bird records every year thanks to the collaboration of more than 100,000 active observers (Figures 2 & 3). This is the largest and most dynamic citizen science biodiversity data flow in Europe, and, has great potential in terms of conservation, research and outreach.

The EBP goals and its role in the framework of the EBCC

The EBP will be the perfect companion to the work developed by the other two main projects undertaken by the EBCC: the Pan-European Common Bird Monitoring Scheme (PECBMS, undertaken with Birdlife International) and the new European Breeding Bird Atlas (EBBA2). The EBP project will, specifically, complement PECBMS and EBBA2 by focussing on the study of continent-wide seasonal changes in bird distributions as well as those seasonal changes

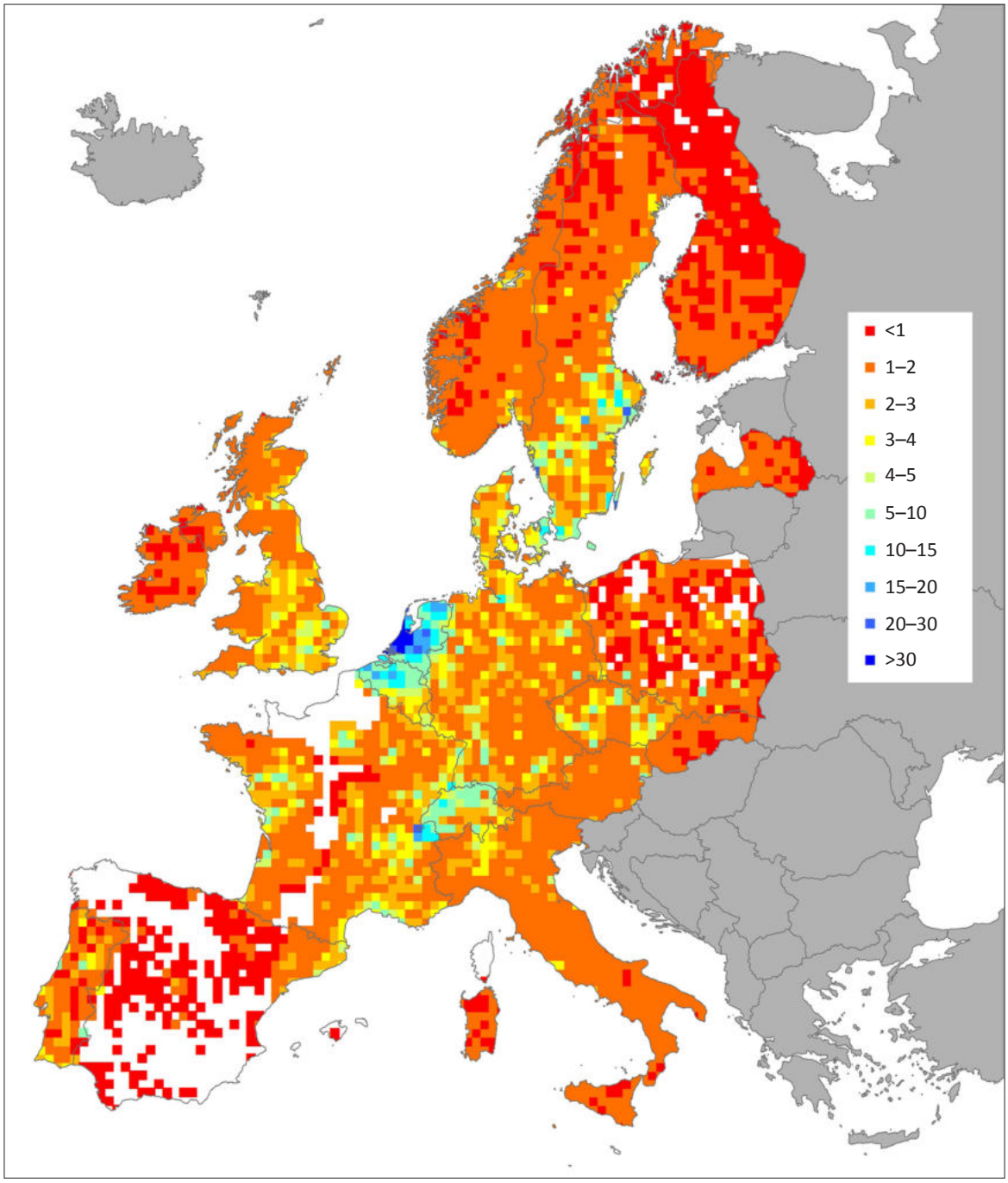

Figure 2. Mean weekly number of observers by 10×10 km square that submitted records to the EBP partner's on-line bird portals in 2013.

taking place too fast as to be properly tracked by more traditional monitoring projects. EPB will promote the use of simple, standardized bird recording protocols so as to improve the quality of the results that can be produced using these data.

EBP main objectives

The purpose of EBP is to establish a European data repository based on aggregated data from online bird recording portals from across Europe with the following major objectives:

1) To describe large scale spatiotemporal patterns of bird distributions (seasonal distributional changes, migratory patterns, phenology) and their changes over time.

Modelling bird distributions in time and space.

Delimitating migratory flyways and bird movements.

Modelling phenological patterns.

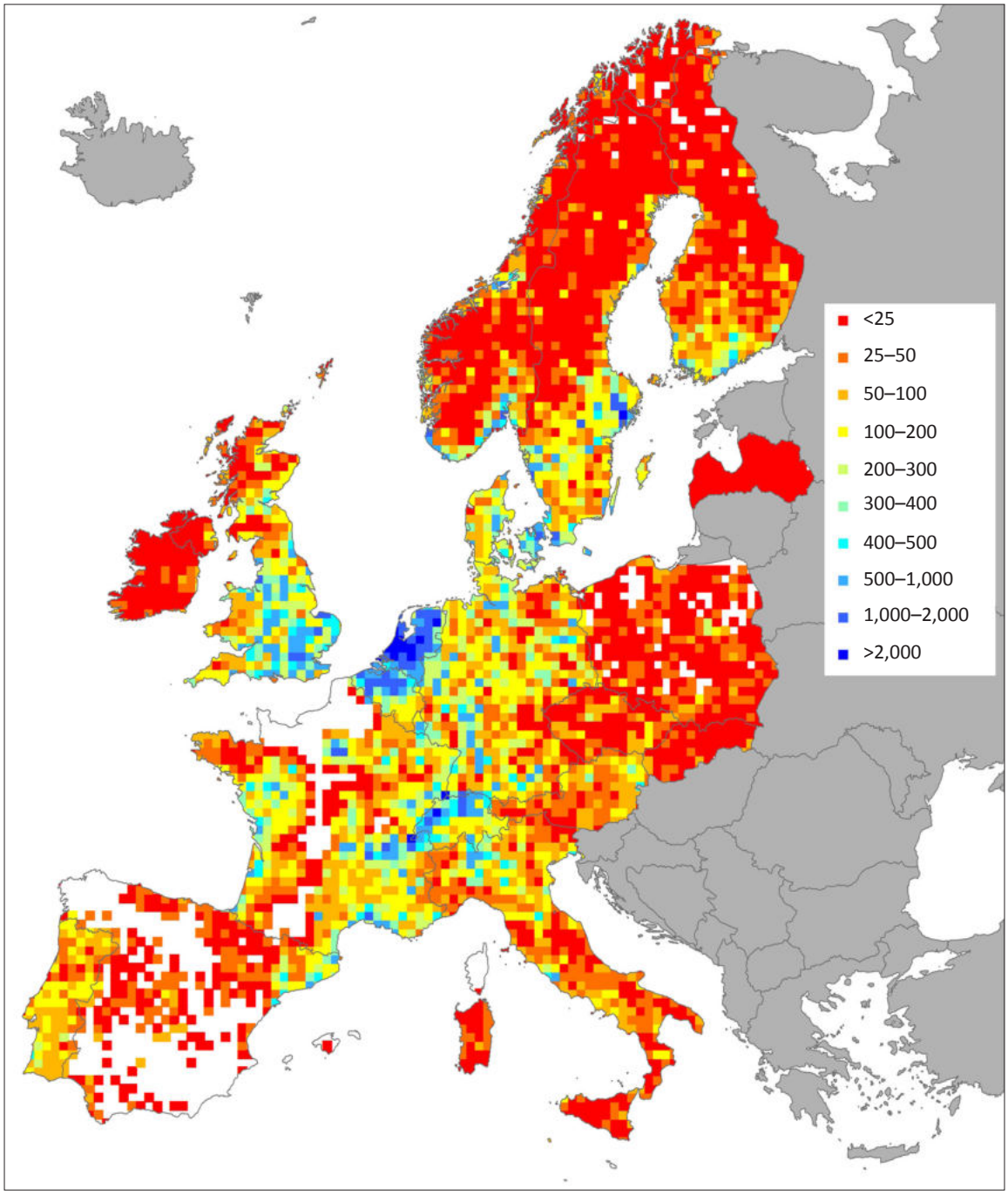

Figure 3. Mean weekly number of observations by 30×30 km square submitted to the EBP partner's on-line bird portals in 2013.

2) To improve the value of online data gathering portals.

Increase relevance and interest of the data collected, adding value to partner portals and thus encouraging people to record birds.

Promote standardisation and best practices.

Improve cooperation amongst birdwatchers and organisations.

EBP products

The purpose of the EBP project is to develop different products and initiatives that will help fulfil the objectives of the initiative. The following are some of the most relevant ones:

1) The EBP data repository.

2) The establishment of early warning systems for human-bird related conflicts.

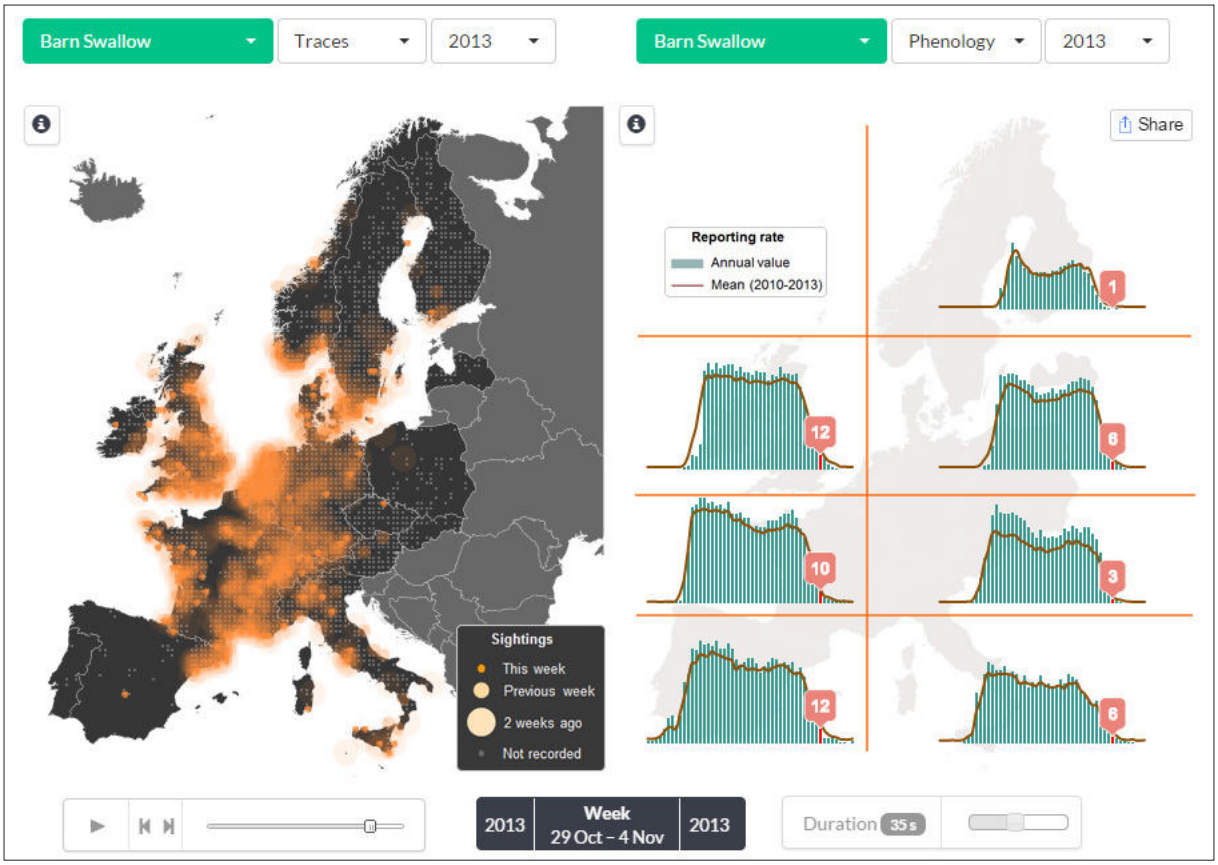

Figure 4. Screenshot of one of the map combinations that will be shown in the EBP demo viewer (http://www.eurobird-portal.org/ —to be launched in early June—). The viewer will allow users to compare two animated maps of any species (or climatic variable), year and type. In this case (though only one week frame is shown here), the left map would show the 30×30 km squares where the Barn Swallow was recorded in each given week and the previous two ones ("traces map"), while the right one would depict the phenology of the same species in seven different geographical sectors according to the percentage of 30×30 km squares where the species was been recorded in each sector and week ("phenology map"). Data from 2013 was selected in both cases.

3) The creation of climate change bird indicators based on phenological patterns.

4) The implementation of a Spatiotemporal Bird Modelling Network.

5) The EBP website.

The first EBP developments

To attain the main objectives of the EBP project will certainly take time and will require us to raise significant funding. Therefore, the initial aims of the project are to demonstrate the scope and potential of the initiative and of its potential future developments. A perspectives paper, highlighting the soundness and relevance of the project and its several applications in research and conservation, is expected to be ready for submission in the forthcoming months. An on-line demo viewer giving an initial indication of the potential outputs from collaborative work between European on-line bird recording schemes will be launched in early June in the framework of the Green Week, the annual conference on European environment policy organized by the European Commission (cf. http://www.greenweek2015.eu/).

The EBP demo viewer will be accessible from each of the partner's on-line bird portals and will show a set of five different animated maps depicting the week by week continent-wide distributional patterns of selected bird species in four years (2010–2013) and at a resolution of 30×30 km (Figure 4). Temperature and precipitation maps will also be shown for comparative purposes. In total, there will be several thousands of different map combinations available to choose from.

Acknowledgements

The EBP project is possible thanks to the activity of many thousands of birdwatchers who submit their observations to the on-line bird recording schemes run by the EBP partners. Without their ongoing contribution in time, effort and expertise the EBP project would not be feasible. A very big thank you to all of them.

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A common montane bird indicator for North Europe

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Abstract. Large-scale multi-species studies on population changes of montane or arctic species are scarce, not least because of logistic challenges. We recently presented a multi-national (Finland, Sweden and Norway) bird indicator for the Fennoscandian mountain range (Lehikoinen et al. 2014). An updated version is presented here. The indicator includes 14 common montane bird species collected at 291 different alpine survey plots, covering an area of 250 000 km2 and a distance of 1600 km in southwest-northeast direction. We briefly discuss the new results and discuss various practical and methodological aspects of this international cooperation. When fully developed the Fennoscandian monitoring system will include more than 400 montane survey plots, which will form a solid base for a robust bird indicator in this climate-sensitive montane region of northern Europe.

Introduction

Montane species and habitats are expected to be highly influenced by climate change the next century (Huntley et al. 2007, Gonzalez et al. 2010), with an increased risk of local species extinction (Sekercioglu et al. 2008). As far as birds are concerned, montane species have received relatively little attention compared to farmland and forest birds (Gregory et al. 2005, 2007). Recently, Chamberlain et al. (2012) called for "long-term monitoring programmes across a relatively broad area (a minimum of an entire mountain range) that could act as a baseline to monitor altitudinal shifts in bird communities in response to climate change, and environmental change more broadly".

The Fennoscandian mountain range ("the Scandes") constitutes a very distinct and easily defined biogeographical region and it makes perfect sense to monitor it as one unit. However, like many other mountain ranges in Europe it stretches over several countries. This fact, together with the remoteness and often difficult terrain, poses some special challenges. For a long time, none of the national monitoring schemes of Norway, Sweden and Finland were even close to covering the birds of the Scandes to any representative degree, although some long-term monitoring series do exist from a few sites (Väisänen et al. 1998, Enemar et al. 2004, Svensson 2006, Byrkjedal & Kålås 2012, Svensson & Andersson 2013).

Since 2002 there have been nationwide bird monitoring schemes in all three countries, consisting of pre-defined routes placed in a grid over each country, making sure all relevant habitats are covered in a representative way. Accordingly, also the birds of the Scandes are well monitored. In a recent paper we calculated population trends for 14 common and typical montane bird species of the Scandes, by combining data from the generic nationwide monitoring schemes of Norway, Sweden, and Finland (Lehikoinen et al. 2014, see also Figure 1). The species trends were then combined into a single montane bird indicator (a multi-species trend; Gregory et al. 2005).

We here present an updated version of the indicator (adding two years), and discuss various aspects of our cooperative project.

Material and methods

We calculated trends for 2002–2014, a period with relevant data available from all three countries. The survey routes included in the analysis cover

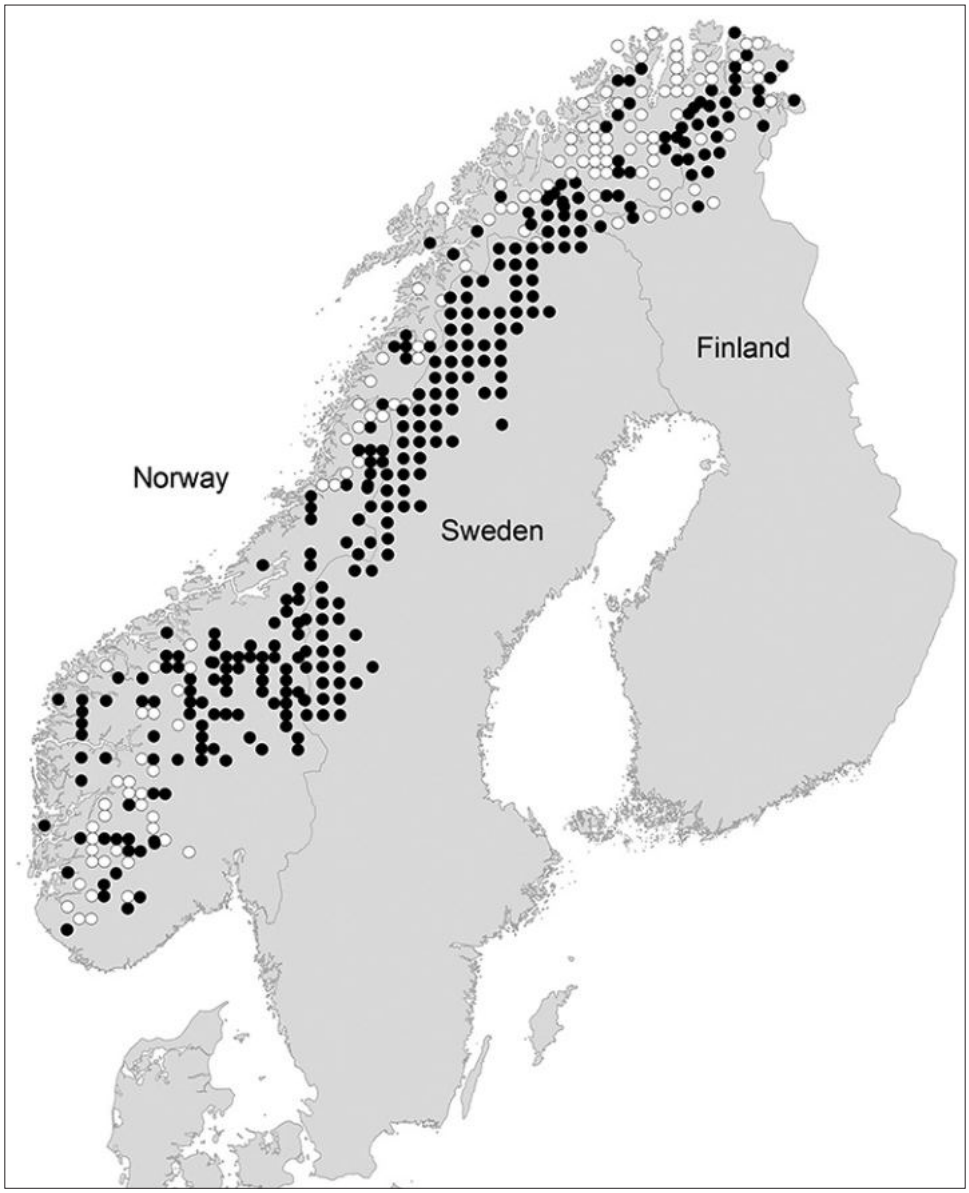

Figure 1. Map showing the 420 bird monitoring sites in the Fennoscandian mountain range. Black dots are sites sampled in at least two different years (2002–2014, n = 291). White dots indicate sites that have not yet been surveyed twice.

the full extent of the Scandes, an area of about 250 000 km^2, with 1600 km between the most distant routes (Figure 1). Although the highest peaks of the Scandes (<2500 m a.s.l.) are not very impressive from a European perspective, the high latitudes help to create two very distinct montane habitats; tundra and subalpine birch forest.

All survey routes included in our analysis are situated in tundra and/or subalpine birch forest. The tundra occurs above 1300 m a.s.l. in southern Norway and at gradually lower altitudes the further north in in Fennoscandia you go. In northernmost Norway the tundra reaches sea level. In most of the mountain range the tundra is gradually replaced by subalpine birch forest at lower altitudes (*Betula pubescens* ssp. *czerepanovii*). At still lower altitudes the birch forest is replaced by either spruce (*Picea*) or pine (*Pinus*) forest of the taiga zone (Kullman and Öberg 2009).

Given the distinct habitats and their distinct bird faunas (Husby and Kålås 2011, Ottosson et al. 2012), it was easy to designate both routes and species to represent alpine birds in the Scandes (Table 1).

Monitoring schemes and route selection

All data from Sweden originate from one single monitoring scheme for the entire period. The data from Norway and Finland originate from different

Table 1. Habitat classification (tundra or birch forest), migration strategy (R = resident, S = short-distance migrant, L = long-distance migrant), population trends and sample sizes (individuals counted: annual mean, min-max) of the common mountain bird species of Fennoscandia used in the analyses. Significant population trends are in bold.

Species	Scientific name	Habitat	Migration	Trend ± SE	N
Willow grouse	*Lagopus lagopus*	Birch	R	**-0.119 ± 0.026**	136, 73–202
Rock ptarmigan	*L. mutus*	Tundra	R	**-0.047 ± 0.013**	84, 40–211
Golden plover	*Pluvialis apricaria*	Tundra	S	-0.003 ± 0.008	942, 370–1652
Long-tailed skua	*Stercorarius longicaudus*	Tundra	L	0.014 ± 0.017	93, 15–177
Meadow pipit	*Anthus pratensis*	Tundra	S	**-0.017 ± 0.007**	1905, 802–3377
Bluethroat	*Luscinia svecica*	Birch	L	-0.026 ± 0.014	268, 137–437
Common redstart	*Phoenicurus phoenicurus*	Birch	L	0.014 ± 0.009	430, 172–734
Common wheatear	*Oenanthe oenanthe*	Tundra	L	-0.016 ± 0.012	374, 147–746
Redwing	*Turdus iliacus*	Birch	S	**-0.033 ± 0.008**	672, 249–1090
Willow warbler	*Phylloscopus trochilus*	Birch	L	**-0.035 ± 0.005**	3558, 2015–5036
Brambling	*Fringilla montifringilla*	Birch	S	**-0.034 ± 0.007**	1780, 969–2743
Common redpoll	*Carduelis flammea*	Birch	S	**-0.084 ± 0.014**	769, 218–1502
Lapland bunting	*Calcarius lapponicus*	Tundra	S	**-0.027 ± 0.011**	402, 143–678
Snow bunting	*Plectrophenax nivalis*	Tundra	S	**-0.042 ± 0.014**	70, 26–116

types of counts in 2002–2005, but from 2006 onwards the main bulk of data come from almost identical sampling schemes to that in Sweden. In all countries the counts are single visit censuses conducted mainly in June (late May – early July; for more details see Lehikoinen et al. 2014 and Figure 1). Only routes counted in at least two years were included in the analysis.

Finland: From 2006 onwards, data from 23 routes within a countrywide system of fixed line transect routes (6 km long) are included. There are also data from 2002–2014 from six line transects belonging to a separate monitoring scheme.

Sweden: The Swedish data stem from the so called Fixed routes (8 km long line transects) which are distributed systematically over Sweden. Of these 104 are montane routes and they all are included in the analysis.

Norway: From 2006 onwards the bulk of data come from 148 systematically distributed point count routes over Norway. For the period 2002–2009 there are additional annual data from 10 point-count survey routes from five different montane areas.

In all three countries, the areas of the Scandes are characterized by low human density, difficult terrain and many sites situated far from roads. Most surveyors of montane routes in the three countries are from more southern latitudes and paid for their surveys. In Norway and Sweden some remote routes are reached by helicopter.

Study species selection

We included 14 common and typical species, which had enough data to allow analyses in all three countries (Table 1). As the census networks grow in Finland and Norway, it will be possible to add more species in the future. Of the 14 species, seven are included for each of the two main habitats (tundra and birch forest).

Analyses

We used log-linear regression (program Trends & Indices for Monitoring data, TRIM, Pannekoek and van Strien 2004, www.ebcc.info/trim.html) to estimate annual bird abundances. We analysed each species including all data and using country as a covariate if possible.

We calculated the multi-species indicator by taking geometric mean of the annual species-specific indices (TRIM). Standard errors for geometric means were computed from the indices and standard errors of individual species (Gregory et al. 2005).

Results

Of the 14 species analysed for 2002–2014, nine species declined significantly, while none increased significantly (Table 1). The montane bird indicator decreased by about 20 % during 2002–2014 (Fig. 2a).

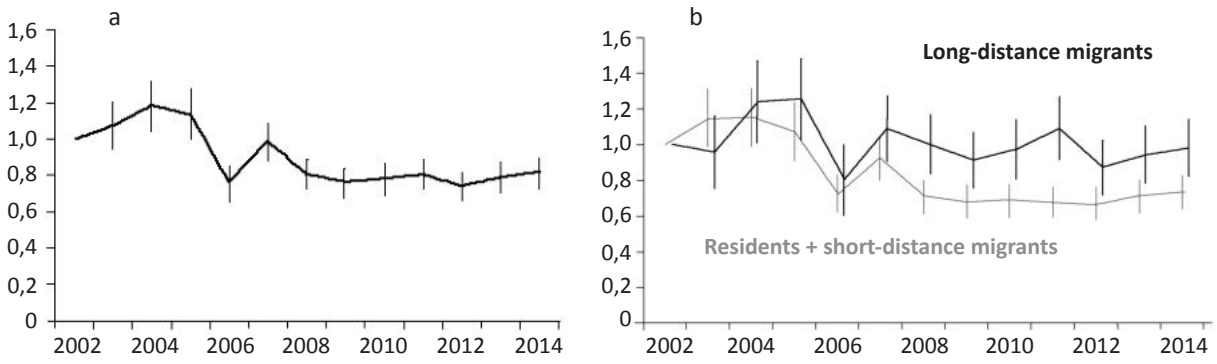

Figure 2. Geometric mean (bars indicating the 95% c.i.) of the abundance indices of 14 montane bird species (left) using combined data from Finland, Sweden and Norway and separated based on migration behaviour (right; long-distance migrants, n = 5 species, black line, and residents & short-distance migrants, n = 9, grey line).

The general decline of species in the multi-national data set concerned both tundra and birch forest species. The population development of long-distance migrants was tentatively less negative than that for short-distance migrants and residents (ANOVA, $F_{1,12} = 3.94$, $P = 0.07$, Fig. 2b).

Discussion

This update of the Fennoscandian montane indicator (Lehikoinen et al. 2014) stresses the recent bleak situation for many montane birds. A majority of the species included in our study declined significantly in numbers during 2002–2014. The declines were synchronous in all three countries (Lehikoinen et al. 2014) and occurred both in tundra and birch forest. One may therefore suspect that they were driven by the same large-scale phenomena.

It is well known that European long-distance migrants have declined more than species in other migratory groups (Sanderson et al. 2006; Gregory et al. 2007). In contrast, the population trends of the five long-distance migrants in our species pool were less negative than those of short-distance migrants and residents. It is therefore unlikely that the overall population declines are driven by problems in the tropical wintering and staging areas. Interestingly, the pattern is similar in European farmland species, where short-distance migrants have faced stronger declines than long-distance migrants in recent years (Voříšek et al. 2010).

In Lehikoinen et al. (2014) we listed a number of local factors that may have contributed to the declines. They include warmer and rainier summers (the beginning of the millennium was unusually warm and wet), uphill shifts of the tree-line, expanded distribution of insect pests, mismatch in food-web phenology, as well as changes in forest composition, grazing pressure, rodent abundance and hunting pressure. However, no firm conclusions could be drawn (for a more exhaustive discussion, see Lehikoinen et al. 2014). It should also be noted that periods of general population declines, followed by general increases, have occurred at least in the Swedish part of the Scandes during the last 50 years (Enemar et al. 2004, Svensson & Andersson 2013). Svensson & Andersson (2013) actually concluded that birds on the Swedish tundra in general showed positive population trends during the last 40 years.

Thirteen-year long time series are still somewhat short to draw strong ecological conclusions. At this stage, we therefore find it just as important that we actually can calculate a robust bird indicator for a whole mountain range, in this case the Scandes. There are several reasons why this is now possible.

Since the first generic bird monitoring schemes in all three countries were free-choice schemes, very few routes were located in the remote and often inaccessible mountains. In 1996, Sören Svensson started a new scheme in Sweden with pre-defined routes in a systematic grid, covering all of Sweden. Since the Swedish part of the Scandes make up about 14 % of the total land area of Sweden, accordingly, 14 % of the routes were located in the Scandes. The task was now to get people to count these remote routes. Some money was supplied by the Swedish Environmental Protection Agency, which made it possible to

pay a few surveyors and their travel costs. A small number of montane routes could therefore be monitored every year. In 2003, another important step was taken when the regional county boards of Västerbotten and Dalarna, two of four counties with routes in the Scandes, decided to use the national scheme as their regional scheme, and helped recruiting and paying for surveyors. The other two counties soon joined, and in addition, priority was put on surveying the routes located in the Scandes. Since 2007, between 58 and 78 montane routes in Sweden (out of 104) were surveyed per year.

In 2006, Norway and Finland launched their new schemes. Both schemes are variants of the Swedish scheme. They both have a systematic grid of routes, although the methodological details have been somewhat adjusted. Although censuses of Finnish routes is based on voluntaries, the scheme has received annual funds from the Ministry of Environment. These funds are mainly used to support routes in the northern part of the country including montane routes.

The direct comparability of the sampling schemes between countries has greatly simplified our joint analysis. No geographical or habitat-related weighing was needed, since the countries and their major habitats are covered in a representative way. Nor was correction for national population sizes needed, since we could analyse all routes together, as if they were from one country.

Another important factor for making the production of the indicator fairly simple was that we could build on the indicator concept outlined by Gregory et al. (2005), and used within the Pan-European Common Bird Monitoring Scheme (PECBMS) ever since. In addition, the very idea to make a montane indicator for the Scandes was first raised when some of us met at the PECBMS meeting in Mikulov, Czech Republic, in February 2012.

The fact that there is long tradition of cooperation between the Nordic countries at many different societal levels also facilitated our joint work. We have since produced joint trends for boreal and arctic-breeding waders (Lindström et al. submitted) and a study on Nordic mire birds is well under way.

In Finland and Norway all montane routes have not yet been surveyed twice and they are therefore not included in the trend analysis (the white dots in Fig. 1). When all routes have been surveyed twice, there will be 33 and 267 fixed montane routes in these countries, respectively. Together with the 104 routes in Sweden this will make a total of 404 Fennoscandian montane routes (420 when including the 6 + 10 routes from the additional schemes in Finland and Norway, respectively).

When the schemes are running full strength we will most certainly be able to add some more species to our indicator. These new species may be species that in Fennoscandia are exclusively found in the Scandes, such as Long-tailed Duck, Dotterel, Red-necked Phalarope and Ring Ouzel, or species that are typical for the Scandes although they also occur in other habitats, such as Rough-legged Buzzard, Merlin, Ringed Plover, Redshank, Dunlin and Cuckoo.

The Fennoscandian montane bird indicator gives basic information about population changes in one of the most extreme climatic environments of Europe (cf. Gregory et al. 2009), covering both tundra and birch forest. As such, this indicator can fill an important gap among the already existing continental-wide bird indicators for farmland, forest, and climate change (Gregory et al. 2005, 2007, 2009), and the many regional European bird indicators produced by the European Bird Census Council (www.ebcc.info). As far as we know, this may be the first large-scale indicator for alpine birds in the World, but we hope that similar indicators soon can be produced also for other montane regions of Europe and elsewhere. Maybe there is also room for a common European montane bird indicator.

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Atlas of German Breeding Birds: 4,000 volunteers from 16 federal states recorded 80 million pairs of breeding birds

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Abstract. The Atlas of German Breeding Birds (Atlas Deutscher Brutvogelarten: ADEBAR) represents the first systematic and uniform approach to the recording of Germany's breeding birds. Mapping began in 2005 and continued until 2009. There were 280 bird species breeding in Germany in the mapping period. Of these, 248 native and 20 non-native species occurred as regular breeding birds in the majority of the mapping years. For a further 12 species (7 native, 5 non-native) records of breeding were obtained only for a single year or for a few years only. This paper gives an overview on the content of each Atlas chapter.

Introduction

A previously published German-wide Atlas (Rheinwald 1993) presented merely a compilation from various sources. Therefore, the Atlas of German Breeding Birds (Atlas Deutscher Brutvogelarten: ADEBAR) represents the first systematic and uniform approach to the recording of Germany's breeding birds (Gedeon et al. 2014). The ADEBAR project ran from 2005 to 2009 and involved more than 4,000 people who together worked over 500,000 hours, mainly on a voluntary basis, to record the breeding bird species which occur from the island of Sylt in the North to the Allgäu Alps in the South and from the Lower Rhine in the West to Upper Lusatia in the East. Without this fantastic support ADEBAR would not have been possible. The original idea for a German breeding bird atlas using a common methodology for the whole country was born in 1998. At the time, however, it was not possible to obtain the necessary financial support. In 2003, the establishing of the Bird Monitoring Foundation Germany (the former Stiftung Vogelmonitoring Deutschland, since 2015 Stiftung Vogelwelt Deutschland: SVD) and the start of the research and development project "Monitoring of bird species in Germany" provided a new impulse for the atlas. The green light for ADEBAR was given in Dessau on 18 September 2004 at the first ADEBAR conference to which the SVD, the Federation of German Avifaunists (Dachverband Deutscher Avifaunisten: DDA), the Federal Association of Ornithological Authorities (Länderarbeitsgemeinschaft der Vogelschutzwarten) and the Federal Nature Protection Authority (Bundesamt für Naturschutz) invited numerous representatives of regional ornithological societies and nature protection authorities (Gedeon et al. 2004a). Mapping fieldwork began in 2005 and continued until 2009, in Saxony from 2004 to 2007. The regional coordinators then scrutinised the data and entered it into a database. From 2010 onwards all the information for the whole country was then collated and evaluated, the maps were created and the texts written. The drafts of the maps and species chapters were made available online, thus enabling the wider public to participate in the data evaluation process. Several thousand suggestions were received which helped to improve the quality of the maps and texts. The data on numbers, distribution and changes in distribution were used for the national report on the implementation of the Conservation of Wild Birds Directive in Germany which was submitted to the European Union at the end of 2013. The ADEBAR data will also be used for the next European Breeding Bird Atlas (EBBA2).

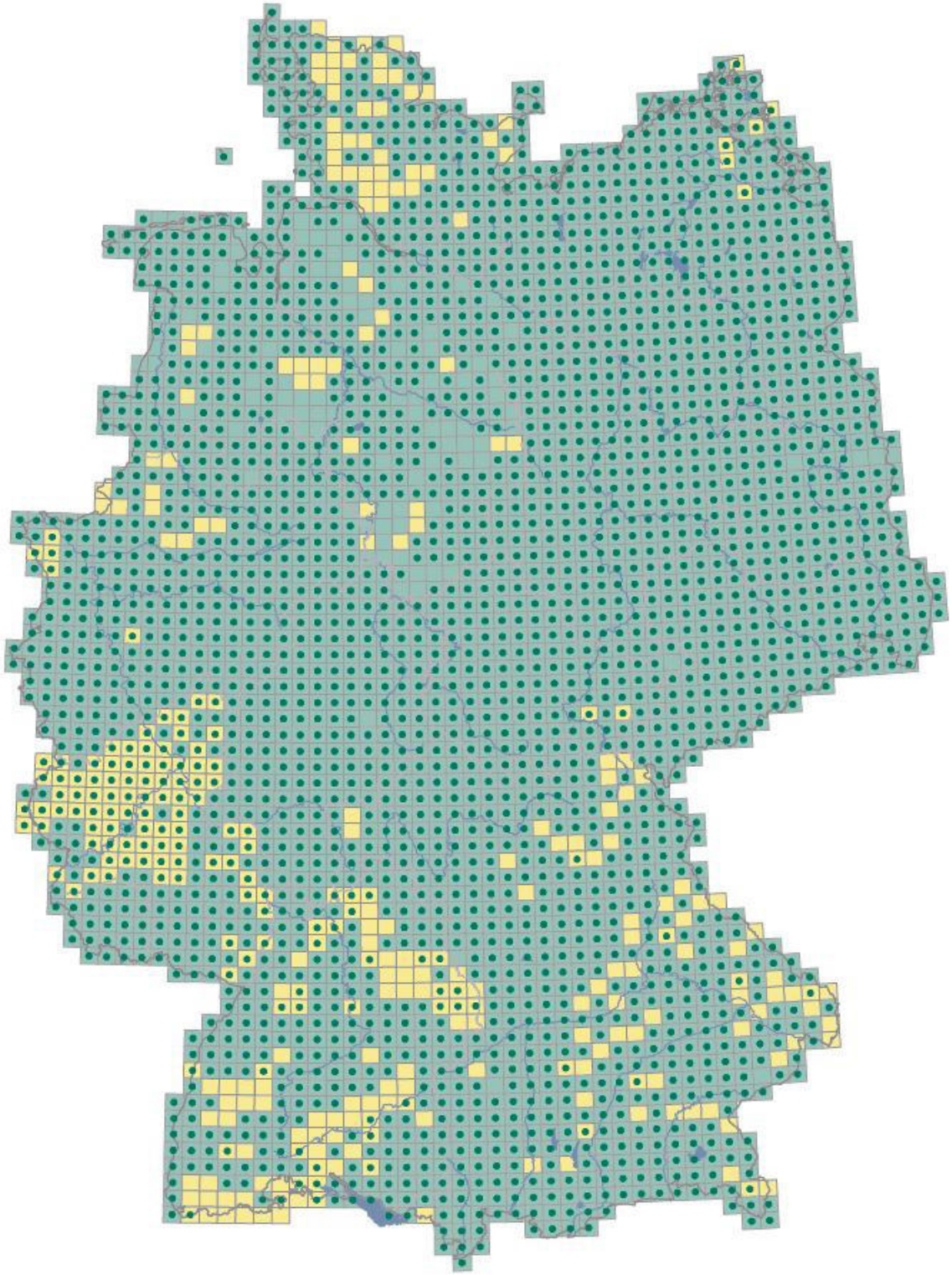


Figure 1. Coverage of 2,966 TK (squares) and estimated completeness of the survey results (green = mapped, yellow = data research, point = species spectrum fully covered).

Landscape structure in Germany

Germany has a wide diversity of landscapes which are characterised by their geology, climate and anthropogenic use. The climate in the West is influenced by the Atlantic, but becomes increasingly continental towards the East, where the winters are colder and the summers hotter. The principal land-use in Germany is agriculture (almost 53%). Forests, predominantly coniferous, cover about 30% of the country's land area. North Germany is low-lying and stretches from the coast to the

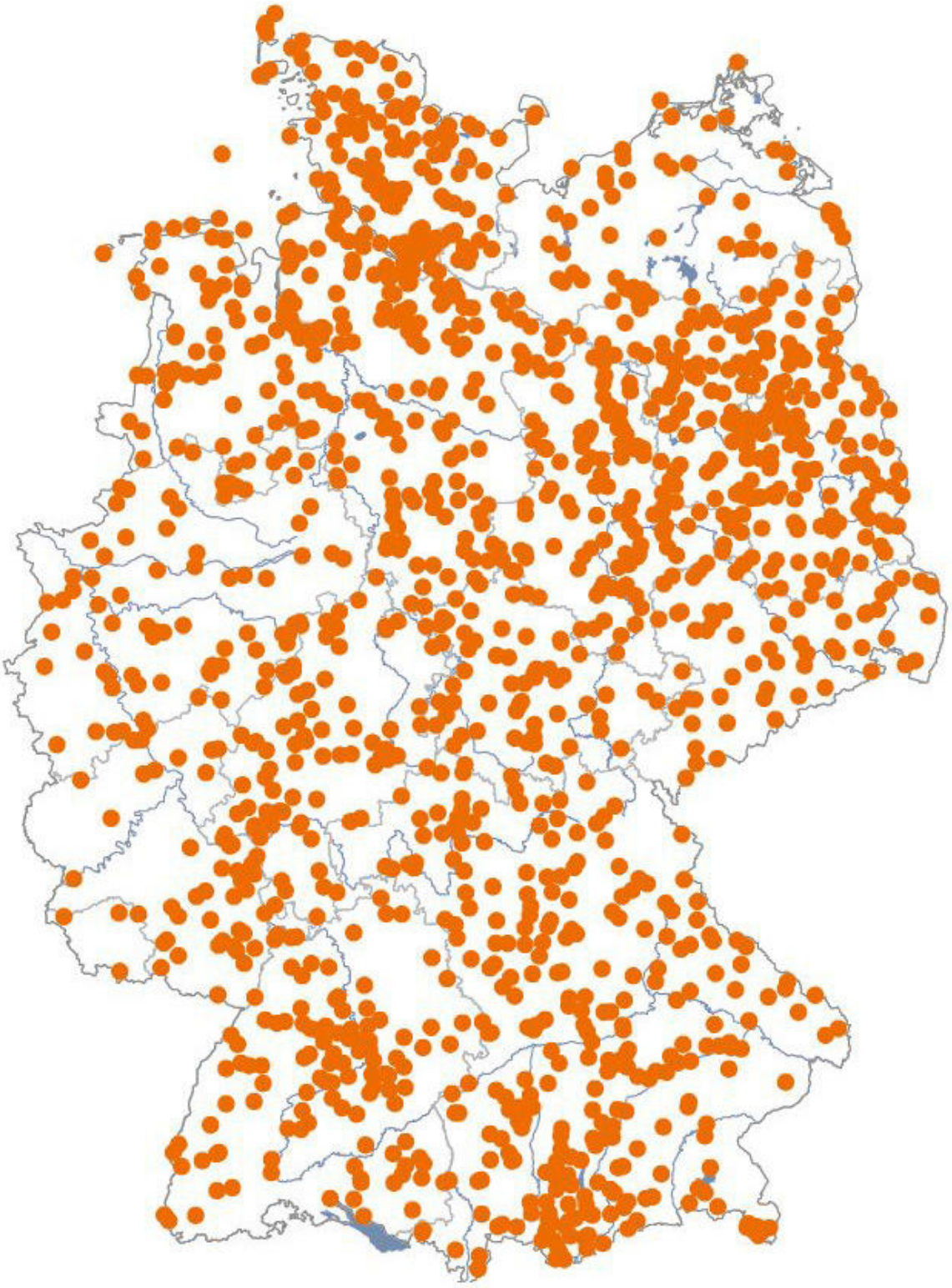


Figure 2. Location of the 1,446 sites within the Common Breeding Bird Survey. During the ADEBAR period (2005–2009) 1,233 persons took part in the program.

central uplands. The landscape were shaped by glaciation, creating one of the most water-rich regions in the North-east German low-lands. A loess belt (known as "Börde") extends along the edge of the uplands and is used for intensive arable farming. The uplands are characterised by high plateau-like areas, stratified ridges or landscapes, and volcanic elevations, and are dissected by the deep valleys of larger rivers. The highest precipitation is found on the summits while there is less

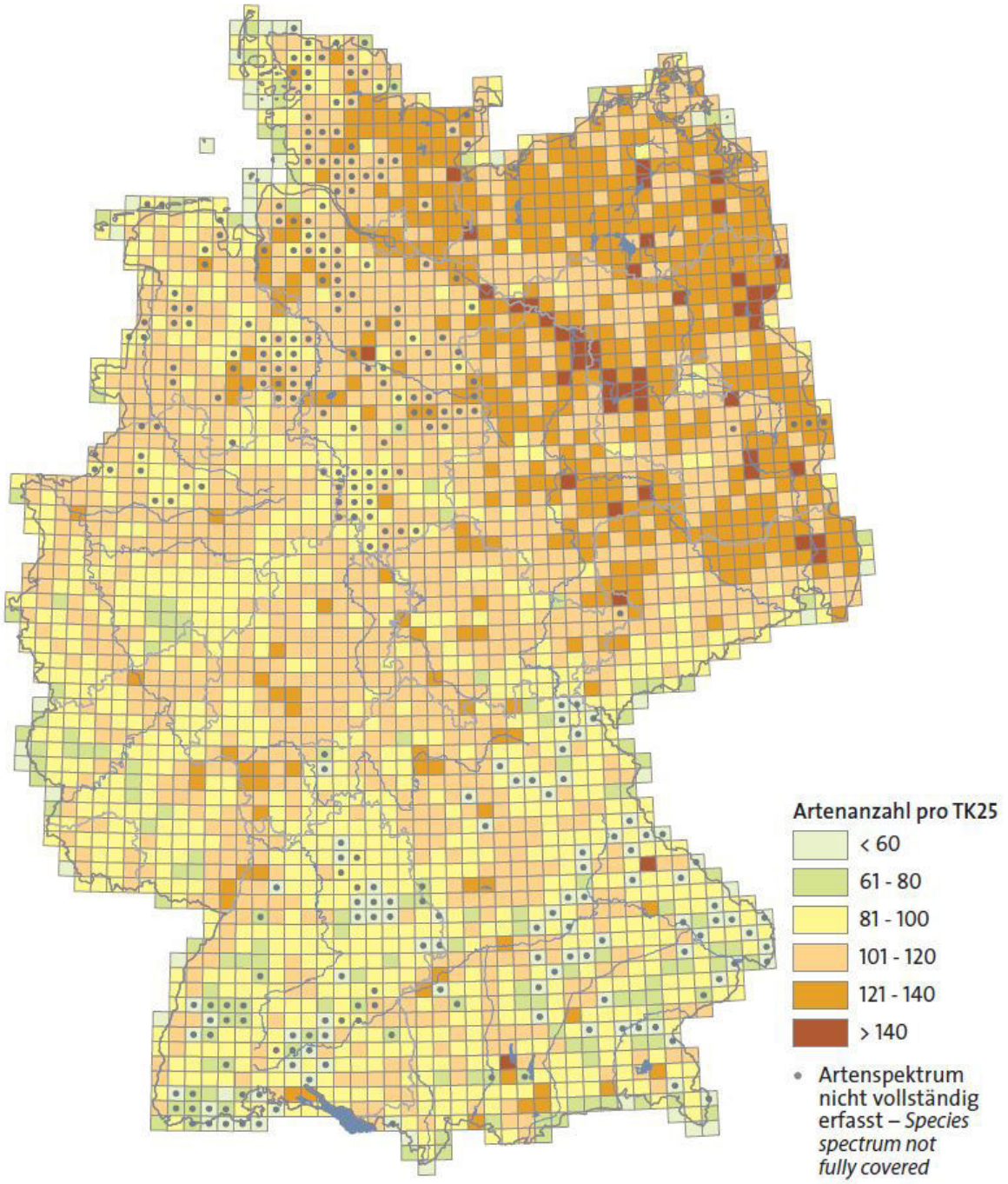


Figure 3. Number of breeding bird species per square (2005–2009).

precipitation in the basin areas. Large parts of the uplands are wooded, with a structurally diverse landscape and a wide variety of small-scale land-uses, particularly in the south-western uplands region. The foothills of the Alps were formed by erosional material from the Alps and by the advancing Alpine glaciers. Large numbers of lakes and other still water bodies are also typical of this region. The Alps, Germany's only high mountain range, are in the very south of the country. The highest peak is the Zugspitze (2,962 m a.s.l.).

Germany-wide breeding bird monitoring programs

Various organisations are involved in the survey of the different species groups (Sudfeldt et al. 2012). The DDA organises the Common Breeding Bird

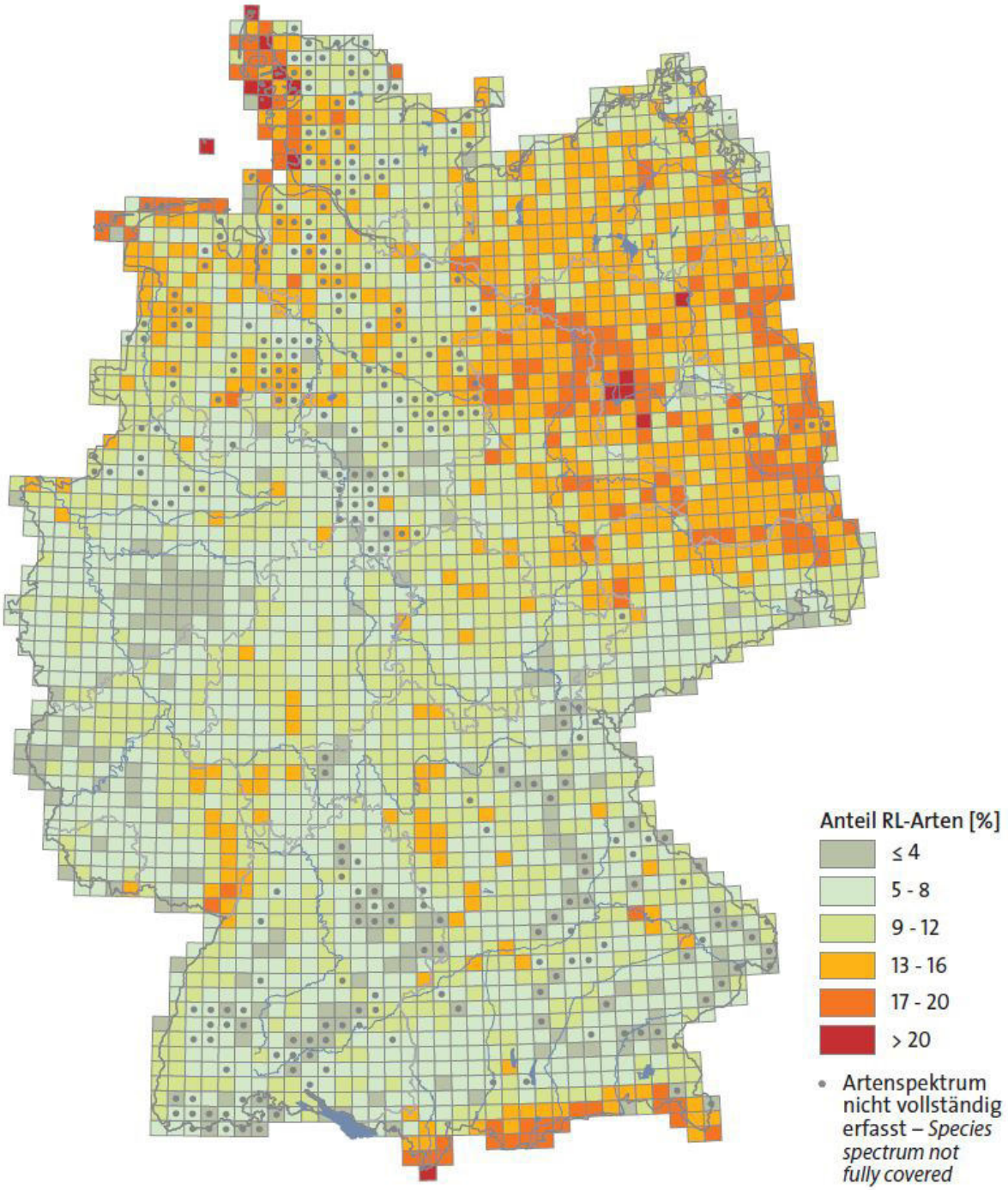


Figure 4. Percentage of rare and endangered breeding bird species (Red List species) per square (2005–2009).

Survey (MhB) and the Rare Breeding Bird Survey (MsB) programmes. The "Förderverein für Ökologie und Monitoring von Greifvogel- und Eulenarten" coordinates the survey of raptor and owl species in the Monitoring of European Raptors and Owls programme (MEROS). The three ornithological institutions at Heligoland, Hiddensee and Rafolfzell run the Integrated Monitoring of Songbird populations (IMS) programme to assess trends in numbers, breeding success and survival rates of the various songbird species. The Invasive Species Specialist Group is responsible for information on and verification of non-native species. The results of the monitoring programs are an integral part of ADEBAR.

Common, semi-frequent and rare species: The methodological approach

The network of 1:25,000 topographical maps formed the basis for the ADEBAR project within the borders of Germany. Each map square (TK) represents a length of ca. 11 × 11 km and a mean area of 126 km² (Figure 1). In many federal states, mapping was based on TK-quarters and thus even smaller areas of ca. 32 km². Where possible, mapping was conducted in each TK in at least two years between 2005 and 2009. To make use of synergies with existing survey programmes and to avoid over-burdening the volunteer mappers, the species were divided up into three groups: a) Common species, b) semi-frequent species, and c) Rare species and colonial breeders (Gedeon et al. 2004b).

Common species. The distribution and abundance of the species classified as common on a national scale were modelled based on the data from the Common Breeding Bird Survey (Figure 2). The only information required from the mappers was which of the common species occurred per TK. The MhB records the breeding birds in randomly spaced 1 km² sampling areas along ca. 3 km routes throughout Germany. Over 390,000 records made between 2005 and 2009 in 1,446 sampling areas were included in the model analyses. The models took account of information on land use and surrounding landscape uses, climatic factors (precipitation, temperature), elevation and geographical position. Distribution models, which were based on a "presence/available design", and abundance models, based on estimates calculated by using Distance Sampling, were obtained using generalized linear models (GLM). With the help of these models, two maps, a species occurrence probability map and a species abundance map, were generated for each species. Both maps were combined in such a way that map pixels of the abundance map were ignored when their occurrence probability was lower than or equal to one minus the prevalence of the species (i.e. frequency of study plots that contain the species) as the presence of the species is very unlikely in these areas. The model results are presented in the species chapters as density maps, and, aggregated per TK, as model maps. In a second step, the common species data collected by the mappers were added to the model results for each TK in a so-called "combi map" so as to achieve the best possible representation of distribution and frequency. For each map square all presence/absence data available from the record sheet, as well as any frequency estimates, were added. If there were no estimates, the model results were retained or if no presence was modelled — the TKs were marked as occupied.

Semi-frequent species. The semi-frequent species presented the real challenge to the mapping process: they were too rare to be recorded through the Common Breeding Bird Survey but too common for observers to be aware of each individual breeding spot and so to be able to record them through the Rare Breeding Bird Survey. Thus a compromise had to be found between the desired highest possible level of accuracy and the available time. Mapping was carried out from March to June, although additional dates were needed for some species. Recording took place along freely chosen routes and all available habitats in the study area were investigated. In the final evaluation, all the breeding bird species noted in the TK were marked on the record sheet taking into account species-specific minimum criteria and evaluation periods. Based on the recorded territories recorded, numbers within a TK were then estimated for all mapped species using the following categories: 1, 2–3, 4–7, 8–20, 21–50, 51–150, 151–400, 401–1 000, 1 001–3 000, 3 001–8 000, >8 000. Of the 2,966 TKs within the atlas area, 2,633 (88 %) were mapped in the course of the ADEBAR project. Thanks to research and estimates made by people with good local knowledge, it was still possible to obtain data on species diversity and distribution for some of the unmapped TKs. Overall, the species spectrum is considered complete for 2,680 TKs (90%); details were incomplete for a further 237 TKs (8%), and for 49 there was no information.

Rare species and colony breeders. Comprehensive distribution and frequency data was available for rare and colonial breeding species, due to specialised species surveys within the individual federal states. It was thus not necessary for mappers to conduct extensive searches for these species. However, although no additional time had to be invested in recording the spatial distribution of these species, all occurrences noted in the course of work on the Atlas had to be entered on the record sheet.

Table 1. Population estimates (2005–2009) of breeding bird species with more than 1 million territories and their proportion of the total number of breeding birds in Germany.

English name	Scientific name	Population min.	Population max.	Proportion [%]
Common Chaffinch	*Fringilla coelebs*	7 400 000	8 900 000	10
Common Blackbird	*Turdus merula*	7 350 000	8 900 000	9,9
Great Tit	*Parus major*	5 200 000	6 450 000	7,1
House Sparrow	*Passer domesticus*	3 500 000	5 100 000	5,2
Eurasian Blackcap	*Sylvia atricapilla*	3 300 000	4 350 000	4,7
European Robin	*Erithacus rubecula*	3 200 000	4 100 000	4,5
Eurasian Blue Tit	*Parus caeruleus*	2 850 000	4 250 000	4,3
Common Starling	*Sturnus vulgaris*	2 950 000	4 050 000	4,3
Common Chiffchaff	*Phylloscopus collybita*	2 600 000	3 550 000	3,7
Common Wood Pigeon	*Columba palumbus*	2 600 000	3 100 000	3,5
Eurasian Wren	*Troglodytes troglodytes*	2 600 000	3 100 000	3,5
European Greenfinch	*Carduelis chloris*	1 650 000	2 360 000	2,4
Eurasian Skylark	*Alauda arvensis*	1 300 000	2 000 000	2
Song Thrush	*Turdus philomelos*	1 400 000	1 750 000	1,9
Dunnock	*Prunella modularis*	1 350 000	1 800 000	1,9
Common Firecrest	*Regulus ignicapilla*	1 250 000	1 850 000	1,9
Yellowhammer	*Emberiza citrinella*	1 250 000	1 850 000	1,9
Coal Tit	*Parus ater*	1 250 000	1 800 000	1,8
Goldcrest	*Regulus regulus*	1 100 000	1 650 000	1,7
Eurasian Nuthatch	*Sitta europaea*	1 000 000	1 400 000	1,5
Willow Warbler	*Phylloscopus trochilus*	900 000	1 400 000	1,4
Garden Warbler	*Sylvia borin*	930 000	1 350 000	1,4

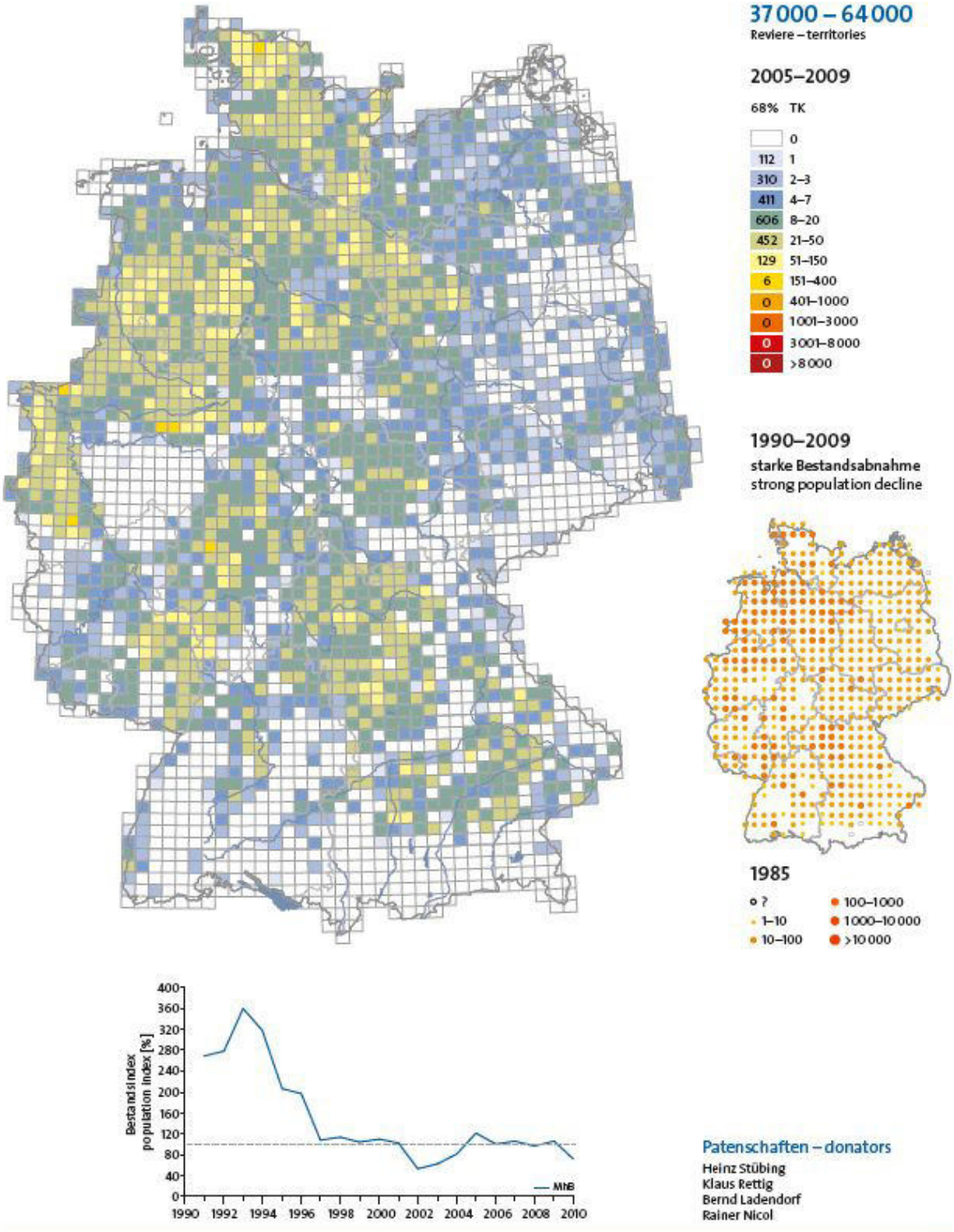
The organization of the atlas work in the federal states

The circumstances and conditions for the Atlas work varied considerably from region to region. Work was organised on a federal state basis by the relevant ornithological associations or authorities and supported by the SVD and the DDA. Coordinators were appointed for each state in order to recruit and support the mappers and to check and enter the data. The evaluations of the ADEBAR mapping programme have already been published for a number of federal states. Breeding bird atlases based predominantly on the ADEBAR programme — and often on the TK-quadrant grid — are currently available for the following states: Bavaria, Brandenburg and Berlin, Lower Saxony and Bremen, Hamburg, Hesse, North Rhine-Westphalia, Saxony and Schleswig-Holstein. Atlases for Mecklenburg-Western Pomerania and Thuringia are planned. In Rhineland-Palatinate and Saxony-Anhalt the results of the ADEBAR work are being incorporated into regional avifauna books currently in production.

Distribution and abundance of breeding birds in Germany

The classification, taxonomy and nomenclature for ADEBAR followed the then current official list produced by the German Bird Species List Commission (Kommission Artenliste der Vögel Deutschlands) and prepared by the German Ornithological Society (Barthel & Helbig 2005). The English names are based on the IOC World Bird List, v 4.2 (Gill & Donsker 2014). There were 280 breeding bird species in Germany in the 2005–2009 mapping period. Of these, 248 native and 20 non-native species occurred as regular breeding birds in the majority of the mapping years. For a further 12 species (7 native, 5 non-native) records of breeding were obtained only for a single year or for a few years only.

The East German lowland region was particularly rich in species. Up to 155 breeding bird species per square (TK) were recorded in some areas (Figure 3). Figure 4 shows the percentage of rare and endangered breeding bird species (Red List species) per square. Here too, the East German



The Grey Partridge breeds in heterogeneous, small fields where crop rotation is practised and which have wide field margins offering food and cover throughout the year. The species also colonises grasslands, opencast mining areas, industrial waste land and clear-felled areas. The species is widely distributed in the Northwest German Plain from North Frisia to the Lower Rhine region. In the upland regions, the species is mainly found in floodplains, basin landscapes and in the mountain forelands. The German breeding population is estimated to encompass 37,000–64,000 territories. With the increase of land-use since at least the first half of the 20th century, the population has sharply declined. This negative trend has continued until today. Both the long-term and the short-term (1985–2009) population trends are negative.

Figure 5. Grey Partridge (*Perdix perdix*) atlas page. With the intensification of land-use since at least the first half of the 20th century, the German population has sharply declined. This negative trend has continued until today.

Figure 6. Grey Partridge (*Perdix perdix*). ADEBAR illustration by Paschalis Dougalis.

lowlands stand out clearly. In addition, the proportion of threatened species is particularly high along the North Sea coast and in the Alps.

It is encouraging to note that three species, the Rock Partridge, the White-winged Tern and Baillon's Crake, which were considered at the beginning of the programme to be extinct, are now breeding regularly again in Germany. The European Scops Owl, which is primarily found in the Mediterranean region, is now also considered a regular breeder in Germany. The 280 breeding bird species consisted of 70 to 100 million bird pairs. However, just a few species make up a large proportion of this huge number. The most common by far are the Common Chaffinch and the Blackbird, each with a mean of over 8 million ter-

ritories, followed by the Great Tit with more than 5 million territories. Together with a further 19 species, each of which number more than 1 million pairs or territories, these make up 80% of all breeding birds (Table 1). These species are not only very common but also widely distributed. A fifth of all current native breeding bird species occurred in at least nine out of ten TKs. Many of these are common species, such as the Common Wood Pigeon, the Eurasian Blackcap or the Common Chiffchaff. On the other hand, approximately twice as many species, i.e. almost 100, bred in less than one out of ten map squares. Many of these species are highly endangered. These included the Eurasian Golden Plover, the Woodchat Shrike and the Aquatic Warbler, which have shown a sharp decline in numbers and face extinction if protection measures are not improved.

Species chapters

221 bird species are represented, each on an Atlas double page, or in the case of the 45 commonest species on two double pages; 45 more (occasionally breeding or extinct species) are covered in short texts. There is an English abstract for each species account. A "How to read the species chapters" also given in English. Figure 5 shows the Grey Partridge atlas page as an example for the presentation of maps and population trends. All the species accounts have high quality illustrations by the well-known bird painter Paschalis Dougalis, such as the Grey Partridges shown in Figure 6.

More information — including notes on delivery options — can be found at www.dda-web.de/atlas-germanbirds

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Atlas Deutscher Brutvogelarten — Atlas of German Breeding Birds.
Format 24,5 × 32,5 cm, hardcover, comprehensive information on the breeding distribution and population trends for 311 German breeding bird species, illustrations by Paschalis Dougalis, 800 pages.
In German with English summaries.

ISBN-13: 9783981554335

Price: 98,00 €.

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EUROPEAN ATLAS NEWS

Ongoing EBBA2: a first pilot data provision of 50 × 50 km data

Promoted and organised by the European Bird Census Council

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Abstract. Pilot data for the European Breeding Bird Atlas 2 (EBBA2) have been requested in autumn 2014. Almost all national coordinators across Europe have provided 50×50 km data following the methodological standards of the project. Thanks to this excellent international collaboration preliminary maps could be prepared showing up-to-date distribution for five breeding bird species: Eurasian Oystercatcher, Common Black-headed Gull, Northern Harrier, European Bee-eater and Northern Wheatear. Lessons learned will be used in further work on the Atlas.

Introduction

The European Bird Census Council (EBCC) is working on a new European bird atlas to document the distribution of breeding birds around thirty years after the production of the first atlas (Keller 2013). The complete data from the national projects will be delivered to the European Breeding Bird Atlas (EBBA2) after the end of the fieldwork period (2013–2017). However, a prompt start of the process of data exchange between national and European coordinators represents a very important step for a smooth cooperation during the forthcoming years. An experience as such actually covers many of the issues of this huge project, from field data gathering at national level to map production at a continental scale.

In 2014, after the two first breeding seasons of the project, the EBBA2 coordination team started a pilot data request by asking national coordinators to provide breeding bird data for 50×50 km squares. The three main aims of this first pilot data provision were: 1) to define and test the data flow process with national coordinators, 2) to identify potential gaps in coverage and capacity for further development and capacity building, and 3) to generate the first provisional maps, which can be used for project promotion both at European and national scales. In this short article we briefly present how this cooperation worked and show preliminary results.

The data provision

In this first data collection we concentrated on the 50×50 km grid and asked data for five breeding bird species: Eurasian Oystercatcher *Haematopus ostralegus,* Common Black-headed Gull *Larus ridibundus,* Northern Harrier *Circus cyaneus,* European Bee-eater *Merops apiaster* and Northern Wheatear *Oenanthe oenanthe*. The species were selected with the main following objectives: 1) to ensure that all European countries could contribute to this first data provision with at least some data, 2) to incorporate datasets potentially com-

Table 1. Example of pilot data provision. Fields of information correspond to those required in the EBBA2 methodology (Herrando et al. 2014).

50×50 square	Years	Survey completeness	EBBA2 species code	Species scientific name	Highest atlas code	Expert breeding assessment	Breeding status	Population type	Abundance code	Precise abundance	Abundance method
31TCF2	2013-2014	5	4500	Haematopus ostralegus	16	C	Rg	Wi	B	17	Dc
31TCG2	2013-2014	5	5820	Larus ridibundus	16	C	Rg	Wi	C	200-250	Dc
31TDG1	2013-2014	4	2610	Circus cyaneus	1	A	Rg	Wi	A	1	Dc
31TBE3	2013-2014	1	8400	Merops apiaster	1	A	Rg	Wi	C		Ea
31TDG3	2013-2014	3	11460	Oenanthe oenanthe	1	C	Rg	Wi	B	40-70	Si

Box 1

The cooperation of the international on-line portals

One of the most relevant inputs we received during the data provision was the contribution of data from European international on-line portals. BirdTrack, Observation.org and Ornitho developers agreed to contribute their data to the EBBA2 project. Data provided by these portals were sent to national coordinators expected to use them within the context of EBBA2.

Box 2

The key role of foreign observers

Getting data on bird distribution and abundance is difficult in some countries and regions and the cooperation of foreign observers is crucial for EBBA2. The pilot data provision has already been a nice opportunity to see the value of such international cooperation. In some countries, data from foreign observers represented a substantial part of available information.

ing from different survey strategies depending on biology and ecology of the species, and 3) to try to get a first insight into possible changes in the distribution.

On 9 September 2014 a total of 92 national coordinators and collaborators were kindly asked to participate in this first data provision by sending available information on breeding data for the largest possible number of 50×50 km squares in their country. We attached an excel form with an example (Table 1) and instructions on how to fill in each field of information.

National coordinators showed a high interest in this data provision and, despite the usual constraints (time, available data, etc.), virtually all of them sent data to the EBBA2 coordinators. It is particularly relevant to highlight the great contribution by countries which have not done any atlas work so far (basically in Eastern and Southeastern Europe). National coordinators from these countries made a really good job processing available datasets to satisfy the requirements of the pilot data request (Table 1).

National datasets were transferred to the EBBA2 database by means of a transfer tool that automatically checks for a series of potential sources of errors. The progress of data delivery by countries was presented on the EBBA2 Facebook page on a weekly basis (https://www.facebook.com/EBBA2.info).

A total of 4,041 species records from a total of 1,739 50×50 km squares were gathered from 49 countries, the great majority compiled and sent by the national coordinators (Figure 1). The majority of the data corresponded to observations entirely made within the EBBA2 period (2013–2014) but in some countries the reported information originated from earlier atlas surveys (Figure 1). The latter is certainly not the best case but hopefully this situation will be improved in the forthcoming data provisions thanks to the availability of updated data (e.g. on-line portals).

The reported fields of information were more or less complete depending on each country. Many national coordinators provided information for every requested field (Table 1), but information on the breeding likelihood or abundance estimations was not always available (Annex 1). Building the most comprehensive possible datasets, with information for every requested field, will be one

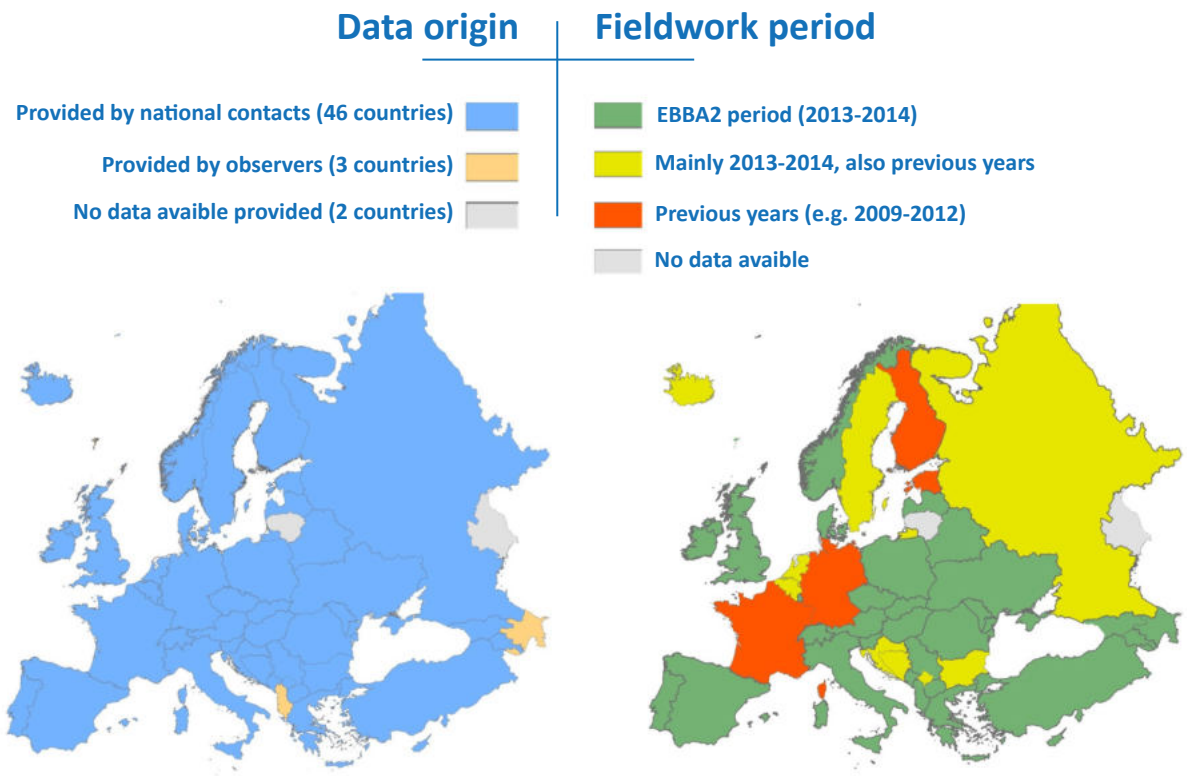

Figure 1. Countries covered within the framework of the EBBA2 50×50 km pilot data provision. The map on the left shows countries for which the data were provided by national coordinators or directly by observers. The map on the right indicates the years for which data were provided.

of the main challenges in the near future. This experience has been very helpful to identify in which fields the most of the problems to provide the data are.

Map production

A total of three maps for each species were generated (see Annex 1) and sent to national coordinators on 29 January 2015. A first map showed the squares where the species was reported as a breeder (possible, probable or confirmed, plus those reported in some cases just as "breeders"); on this map we also incorporated information on the distribution from the first European Breeding Bird Atlas (Hagemeijer & Blair 1997). Despite the lack of information on the completeness of coverage the provisional maps allow a rough comparison between the two time periods. A second map was produced to show information of the breeding assessment (possible, probable and confirmed) reported for each square. Depending on the national dataset, this information came from the highest atlas code or the expert breeding assessment. Finally, a third type of map shows abundance patterns.

The maps reflect different approaches across Europe. This is particularly visible where the information provided by neighbouring countries differs and the maps seem to present country boundaries rather than gradual changes which would seem to be biologically more relevant. Further standardisation in the data delivery and the clear distinction between real data and expert assessments will be necessary.

Further steps

This first data provision has shown the great opportunities of collaboration in the framework of EBBA2. Fruitful discussions among national and European coordinators have been very helpful for further progress. At national and European levels the pilot data delivery has shown where processes have to be improved and where the geographical gaps are most obvious. We hope this experience provides additional motivation for the next breeding seasons.

In addition to the data collection at 50×50 km which was the focus of the first data delivery, EBBA2 data are collected at smaller scales (Herrando et al. 2013). Getting pilot data from these surveys is planned for 2015, with the aim of generating the first modelled maps at the level of 10x10 km for a number of bird species.

Acknowledgements

We thank the community of European ornithologists and birdwatchers that made this step in EBBA2 possible. We would like to mention here the national contacts who reported data on behalf of many persons and organisations: Clara Pladevall (Andorra), Karen Aghababyan (Armenia), Norbert Teufelbauer (Austria), Semion Levy (Belarus), Anny Anselin and Jean-Yves Paquet (Belgium), Drazen Kotrosan (Bosnia-Herzegovina), Svetoslav Spasov (Bulgaria), Vlatka Dumbović Mazal (Croatia), Martin Hellicar (Cyprus), Karel Stastny, Vladimir Bejcek and Zdeněk Vermouzek (Czech Republic), Irina Levinsky (Denmark), Jaanus Elts (Estonia), Aleksi Lehikoinen (Finland), Nidal Issa (France), Guille Mayor (Georgia), Bettina Gerlach and Christoph Grüneberg (Germany), Danae Portolou (Greece), Nagy Zsolt (Hungary), Guðmundur Guðmundsson (Iceland), Roberto Lardelli (Italy), Viesturs Kerus (Latvia), Mikis Bastian (Luxembourg), Metodija Velevski (Macedonia), Joe Sultana (Malta), Larisa Bogdea (Moldova), Mihailo Jovicevic (Montenegro), Dirk Zoetebier (Netherlands), Paul Shimmings (Norway), Tomasz Chodkiewicz (Poland), Carlos Godinho (Portugal), Judit Veres-Szászka (Romania), Olga Voltzit (Russia), Dimitrije Radisic (Serbia and Kosovo), Jozef Ridzoň (Slovakia), Tomaz Mihelic (Slovenia), Juan Carlos del Moral and Martí Franch (Spain), Åke Lindström (Sweden), Peter Knaus and Georg Willi (Switzerland and Liechtenstein), Kerem Ali Boyla (Turkey), Andy Musgrove and Brian Caffrey (United Kingdom and Irish Republic) and Igor Gorban (Ukraine). We thank our colleagues in the Atlas Steering Committee, Hans-Günther Bauer, Lluís Brotons, Ian Burfield, Mark Eaton, Ruud Foppen, Mikhail Kalyakin, Aleksi Lehikoinen, David Noble and Iván Ramírez for all the fruitful discussions and continuous support. Dani Villero provided key work in the EBBA2 database structuring, without which this first exercise of compilation would have been very difficult.

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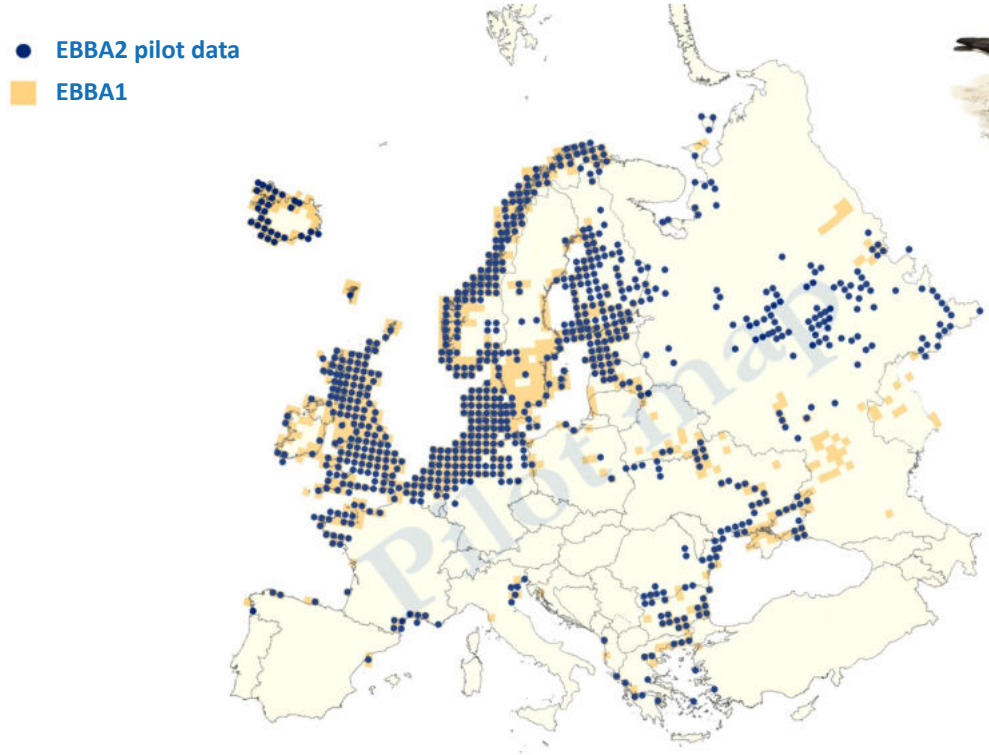
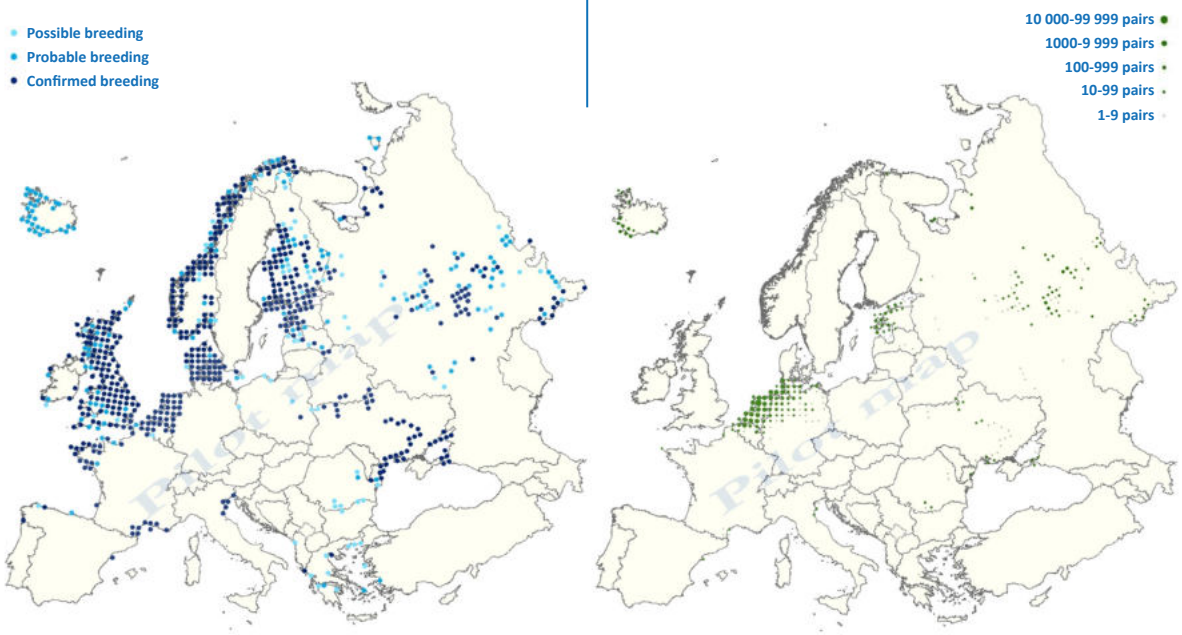
Annex 1. Maps from the 50×50 km pilot data provision for EBBA2 (occurrence, breeding category and abundance). The occurrence map (top) also provides information on the squares in which the species was found during the first European breeding bird Atlas (EBBA1). For squares located across borders of two or more countries, the highest breeding category and abundance code were selected.

Eurasian Oystercatcher *Haematopus ostralegus*

Occurrence data



Breeding category | ***Abundance code***

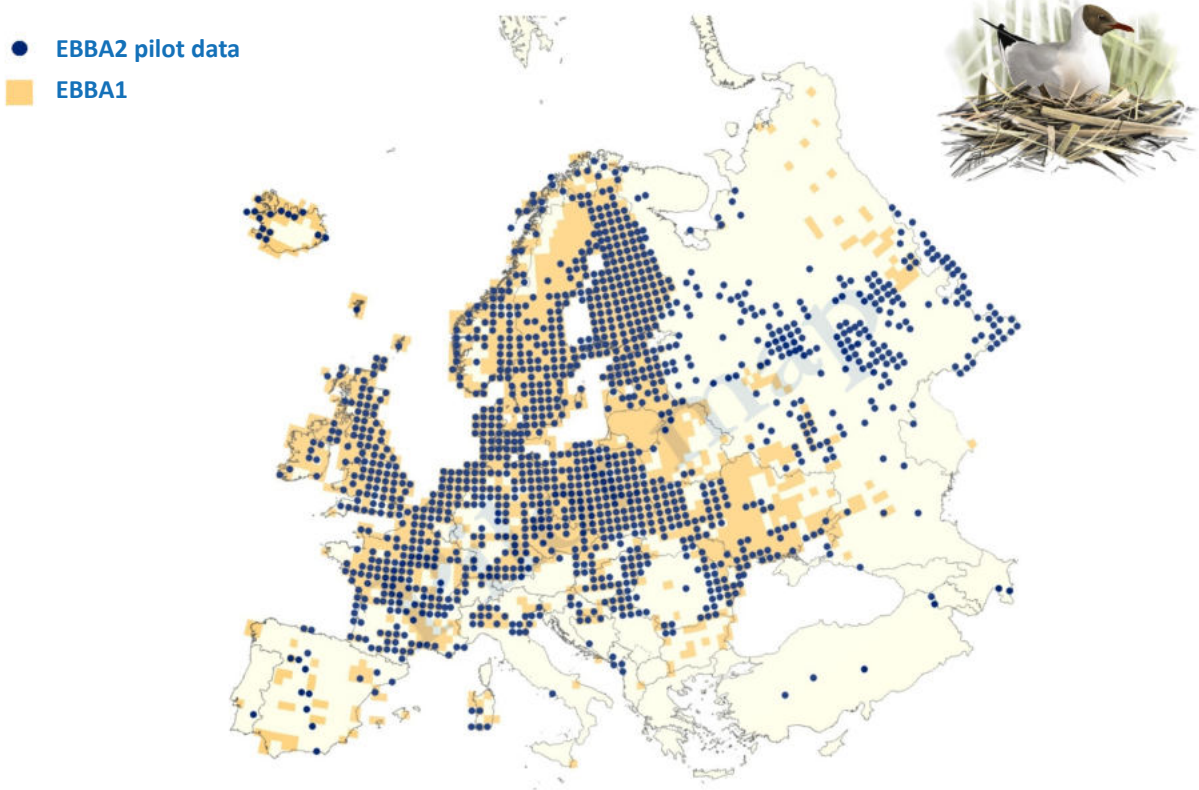


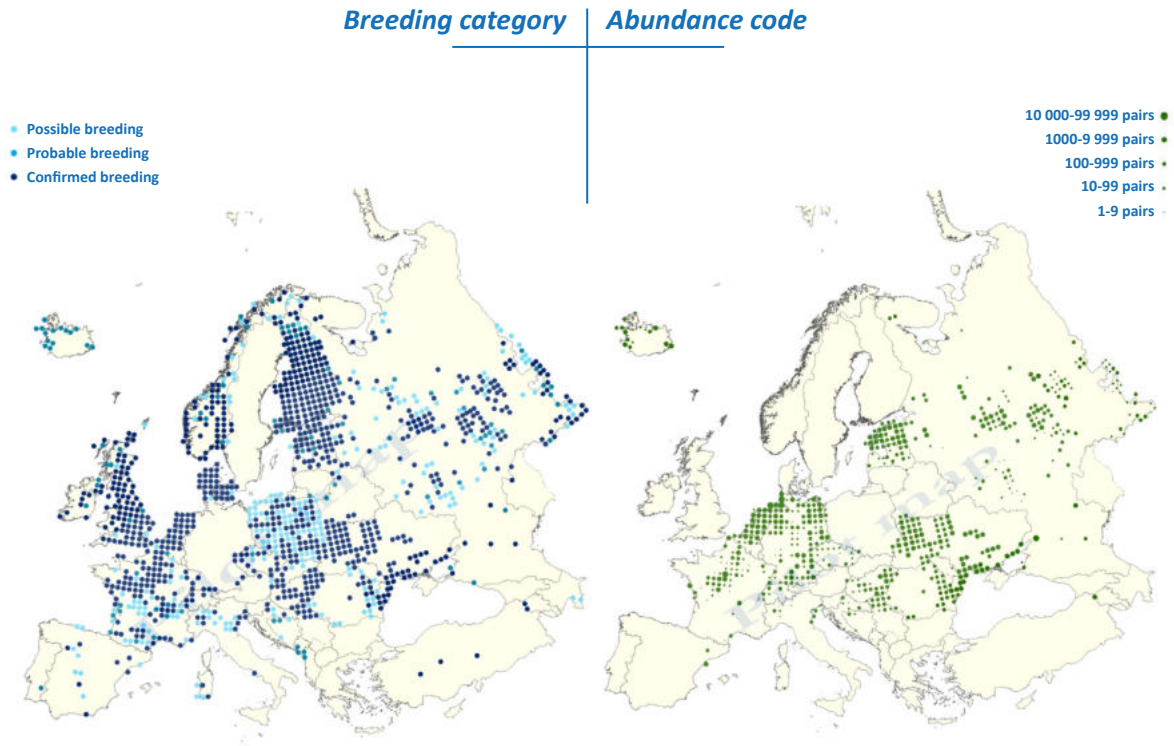
EBBA2
European Breeding Bird Atlas

EBCC
European Bird Census Council
every bird counts

Common Black-headed Gull *Larus ridibundus*

Occurrence data





EBBA2
European Breeding Bird Atlas

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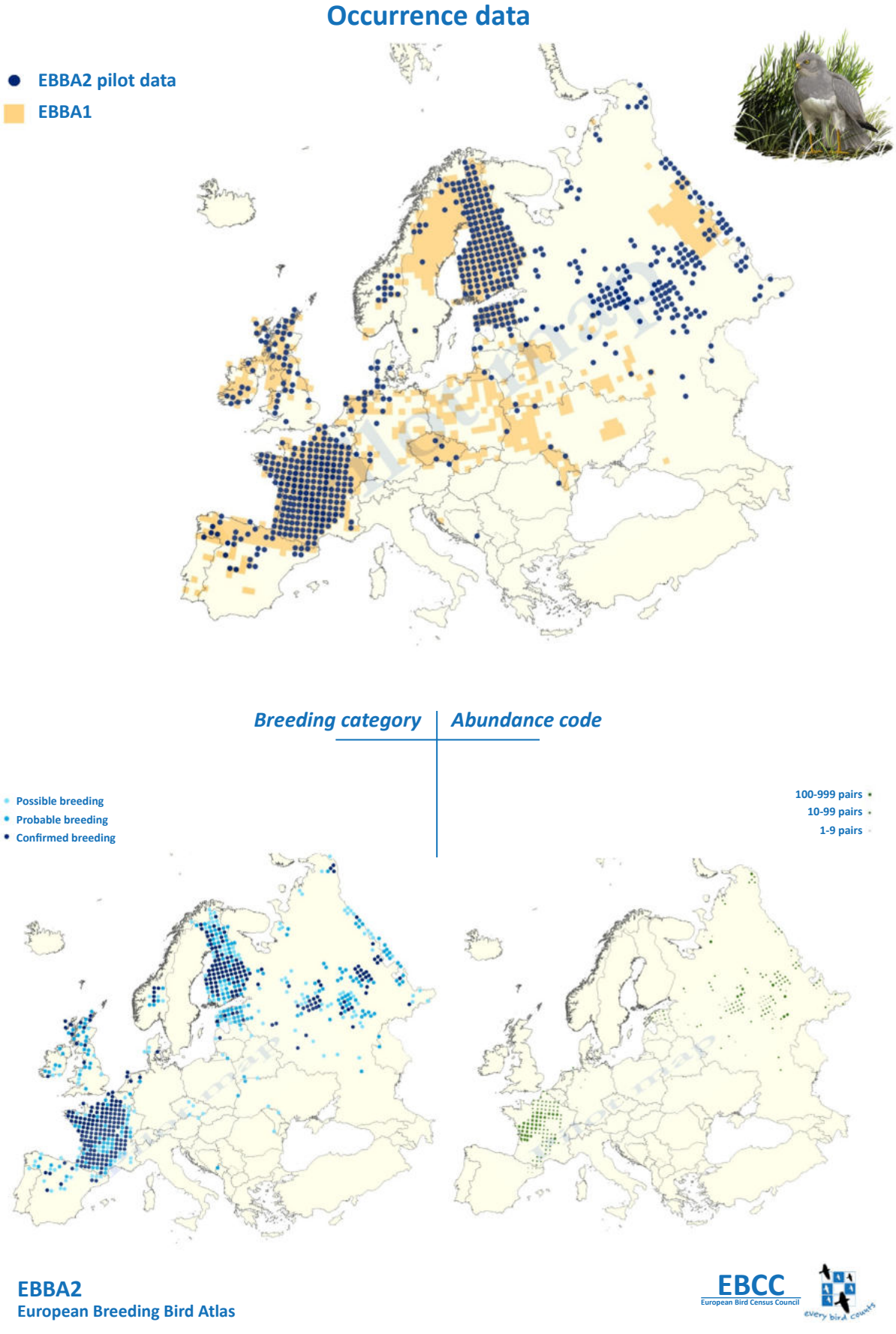
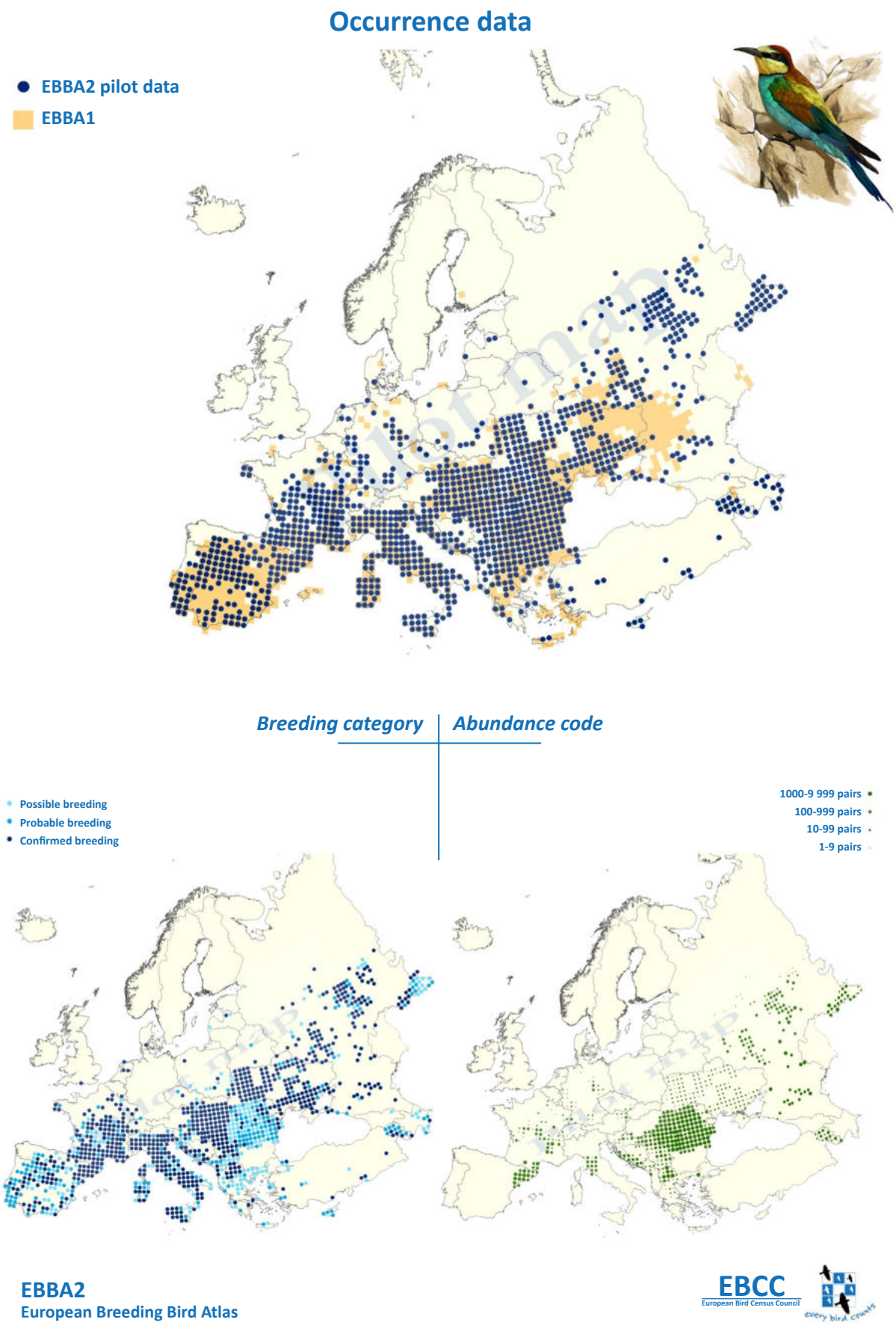
Northern Harrier *Circus cyaneus*

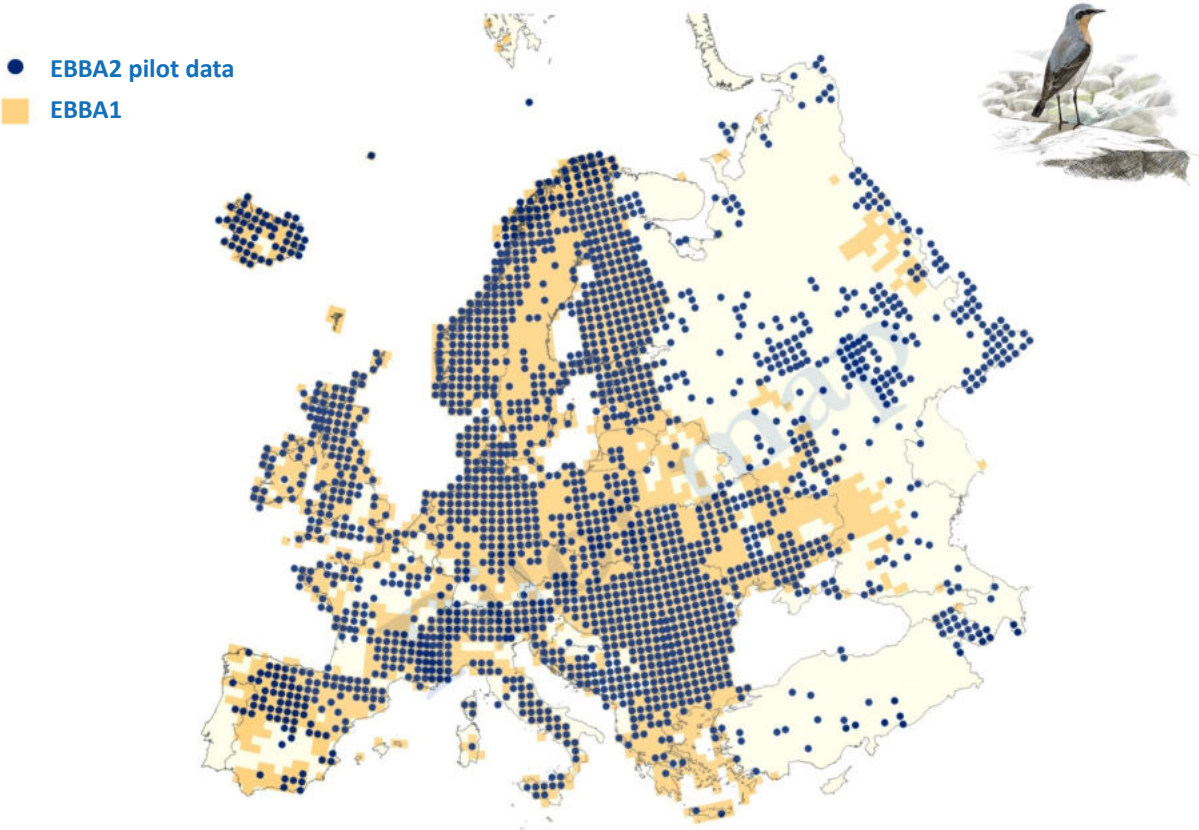


European Bee-eater *Merops apiaster*

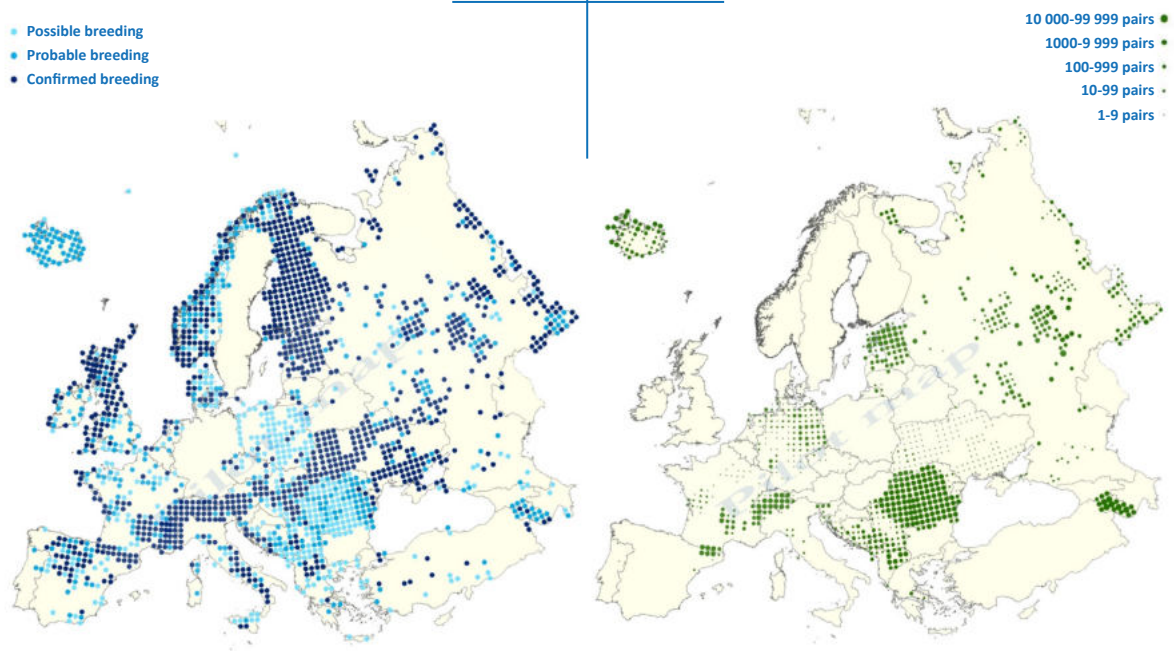


Northern Wheatear *Oenanthe oenanthe*

Occurrence data



Breeding category | *Abundance code*



EBBA2
European Breeding Bird Atlas

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SHORT NOTES

Status for Denmark's Important Bird Areas (IBA's) 1960–2012

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Abstract. The Danish IBA Caretaker Project has been running from 2003–2013. Data from about half of the Danish IBAs (56) are used in this analysis, which was carried out in summer 2013. Each IBA has received a status score that was calculated using BirdLife International's scoring system. The article presents the results for the various score types comparing breeding/staging, different habitat types and ownership.

Introduction

The Danish IBA Caretaker Project has been running from 2003–2013 and was financed by the Aage V. Jensen Charity Foundation. The project will result in a final report in 2015. In Denmark, there are 130 IBAs scattered all over the country (see Figure 1). The total area of the IBAs are 363,05 km², of which 319,74 km² are marine, while 43,31 km² are terrestrial.

Methodology and analysis

The data we used in this preliminary analysis have been collected by both IBA caretakers and the authorities. Only data from about half of the Danish IBAs are used in this analysis, which was carried out in summer 2013.
Each IBA has received a status score that was calculated using BirdLife International's scoring system (Birdlife International 2006). The IBAs have been divided into four categories (good, moderate, poor and very poor) according to the number of so called "trigger species" (= species where the site was designated for) with a positive population status in the area. The category "Good" means that more than 90 % of the species are thriving, "moderate" 70–9 0%, "poor" 40–70 %, and "very poor" less than 40 %.

Figure 1. IBAs in Denmark
Map from:
http://www.birdlife.org/datazone/country/denmark/ibas

For the use of this preliminary analysis we used only 56 IBA's in Denmark. We first analysed the difference in scores between IBA's that have been designated for staging species and the ones for breeding bird species. Furthermore, we compared IBA's on basis of land use-major habitat type (woodland, bog/grassland, polders, heathland, marine and freshwater) and on ownership type (private, state or combined state and private).

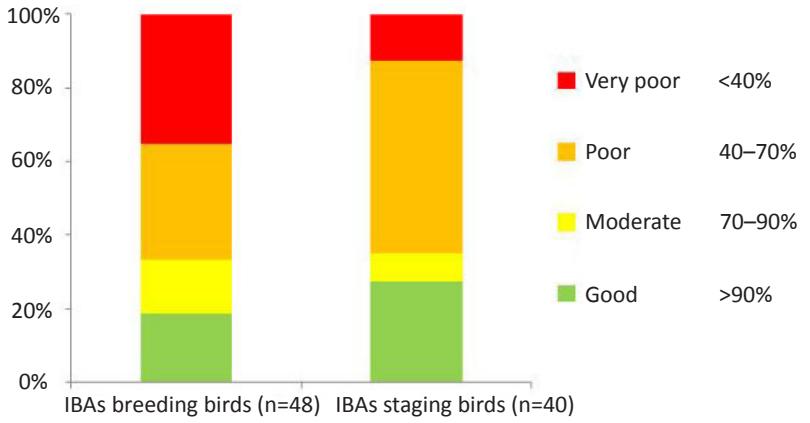

Figure 2. Staging and breeding birds divided into four categories

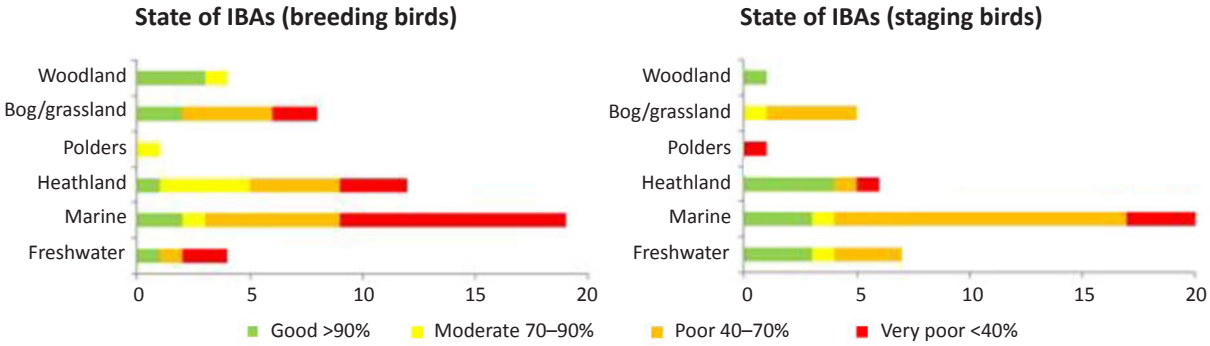

Figure 3. Land types divided into the four categories

Results

Figure 2 shows that the IBA's for staging birds are doing better than IBAs for breeding bird species. Comparing the columns for staging and breeding birds, respectively, it is obvious that the amount of IBA's doing well (the green colour) is higher and the amount of IBAs not doing well (the red colour) among the IBAs for staging birds. Figure 3 shows that aquatic IBAs (bogs, marine and freshwater) are doing better for staging than for breeding bird species.

Figure 4 shows the ownership of the IBAs for breeding birds and staging birds, respectively.

According to the graphs, IBAs with private owners are doing much better in both categories than the state owned IBAs and the IBAs owned both by state and privates. It is noteworthy that the column showing privately owned IBAs for staging birds does not include any "very poor" IBAs!

Conclusion

At the moment it is still difficult to understand why IBAs for staging birds are doing better than IBAs for breeding birds. However, this could maybe partly be explained by the fact that the Danish environmental administration from the start in the early 1970'ies and until recently has been concentrating its conservation efforts much more on the aquatic environment then on the terrestrial IBA's, and consequently some better results have been obtained in the letter type of IBA's.

As to the performance difference between publicly and privately owned IBAs, a contribution to the explanation of this preliminary result could be, that quite a few of the private IBAs in the analysis are owned by the very nature friendly Aage V. Jensen Charity Foundation.

This short contribution has been presented as a poster at the EBCC Conference in Cluj, Romania, 2013.

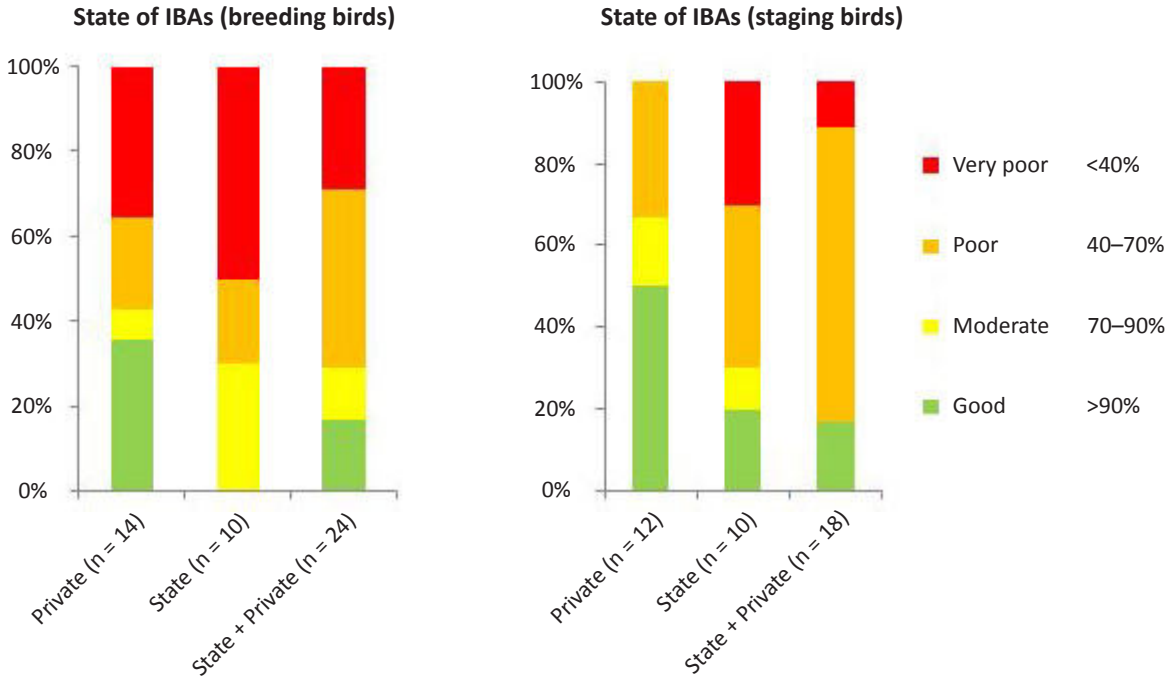

Figure 4. Ownership of the IBAs

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EVENTS

20th International Conference of the EBCC

The next international conference of the European Bird Census Council (EBCC) **Bird Numbers 2016** will be held from Sept 5–10, 2016, at the University of Halle (Saale) in Germany, hosted by Dachverband Deutscher Avifaunisten (DDA). The conference is themed "**Birds in a changing world**".

The conference website *www.birdnumbers2016.de* will be available for session proposals on the 1st of September 2015. Registration for participation and for oral presentations / posters will be open from 15 November 2015 onwards.

Ruud P.B. Foppen — scientific programming committee of EBCC

Kai Gedeon — national organising committee

Joint workshops of the Pan-European Common Bird Monitoring Scheme (PECBMS) and the 2nd European Breeding Bird Atlas (EBBA2) projects

The coordinators of national common bird monitoring schemes and country atlases as well as the other PECBMS and EBBA2 co-workers are invited to participate at 5th PECBMS workshop and 2nd EBBA2 workshop.

Both workshops will be organised back to back in the week between 2 November and 6 November 2015, in Mikulov, the Czech Republic.

The details of registration, the agenda and practical information will be provided in July 2015.

The events are organised by the Czech Society for Ornithology, where the PECBMS and EBBA2 coordinators are based.

The PECBMS and EBBA2 coordinators are looking forward to meeting you for fruitful discussions at the workshops.

Do not forget to visit the EBBA2 Facebook Page!

https://www.facebook.com/EBBA2.info?fref=ts

Your text in the next issue?

Bird Census is meant as a forum for everybody involved in bird census, monitoring and atlas studies. Therefore we invite you to use it for publishing articles and short reviews on your own activities within this field such as (preliminary) results of a regional or national atlas or a monitoring scheme, species-specific inventories, reviews or activity news of your country (as a delegate: see also below).

Instructions to authors

– Text in MS-Word.
– Author name should be with full first name. Add address and email address.
– Add short abstract (max 100 words).
– Figures, pictures and tables should not be incorporated in the text but attached as separate files.
– Provide illustrations and figures both in colour.
– The length of the papers is not fixed but should preferably not exceed more than 15 pages A4 (including tables and figures), font size 12 pt, line spacing single (figures and tables included).
– Authors will receive proofs that must be corrected and returned as soon as possible.
– Authors will receive a pdf-file of their paper.
– References in the text: Aunins (2009), Barova (1990a, 2003), Gregory & Foppen (1999), Flade et al. (2006), (Chylarecki 2008), (Buckland, Anderson & Laake 2001).
– References in the list: Gregory, R.D. & Greenwood, J.J.D. (2008). Counting common birds. In: A Best Practice Guide for Wild Bird Monitoring Schemes (eds. P. Voříšek, A. Klvaňová, S. Wotton & R.D. Gregory), CSO/RSPB, Czech Republic; Herrando, S., Brotons, L., Estrada, J. & V, Pedrocchi, V. 2008. The Catalan Common bird survey (SOCC): a tool to estimate species population numbers. Revista Catalana d'Ornitología, 24: 138–146.

Send contributions in digital format by email to: anny.anselin@inbo.be

National delegates are also invited to send a summary of the status of monitoring and atlas work for publication on the website of EBCC, see www.ebcc.info/country.html.
Contact: **David Noble**, British Trust for Ornithology, The Nunnery, Thetford, Norfolk IP24 2PU, United Kingdom, tel: +44 1842 750050, email: david.noble@bto.org

Please send short national news for the Delegates Newsletter to EBCC's Delegates Officer:
Oskars Keišs, Laboratory of Ornithology, Institute of Biology University of Latvia, Miera iela 3, LV-2169 Salaspils, Latvia, tel: +371 6794 5393, email: oskars.keiss@lu.lv