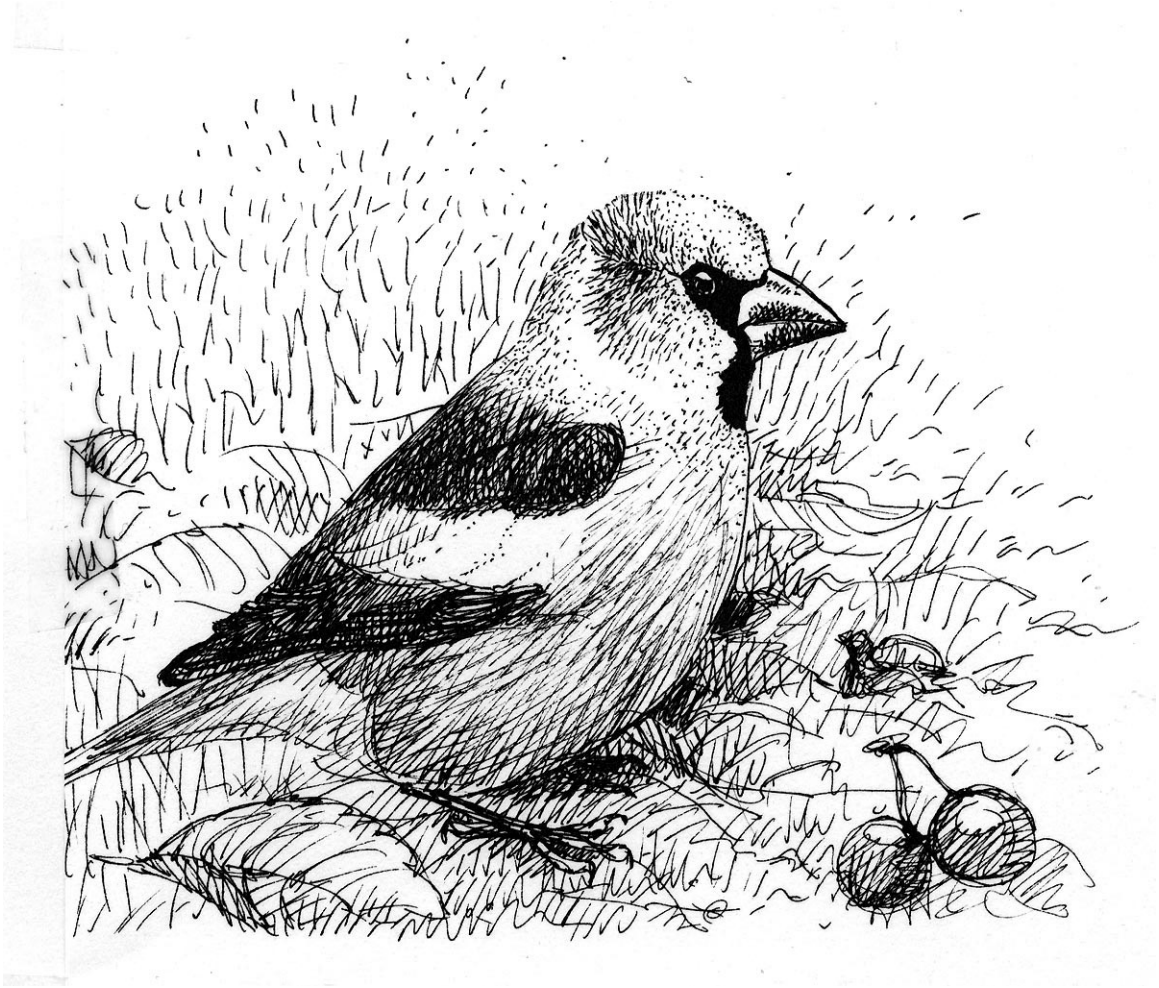
Bird Census News

Newsletter of the European Bird Census Council

www.ebcc.info



2006
Volume 19 n°2

Bird Census News
2006, volume 19 n°2

Download pdf from www.ebcc.info

Bird Census News is the Newsletter 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.

EDITOR:

Anny Anselin
Research Institute for Nature and Forest, INBO
Kliniekstraat 25, B-1070 Brussels, Belgium.

home: E. Poetoustraat 13, B-9030 Mariakerke, Belgium

email: anny.anselin@inbo.be

Illustrations: Cover, pag.45: Bruno Callebaut

Subscription: 2 issues/year: May-June and November-December
Standard rate: 1 year- 2 issues: + individuals: 10 Euro + organisations: 15 Euro
Special offer: 3 years- 6 issues: + individuals: 25 Euro + organisations: 40 Euro

Bank Transfer into **IBAN n° NL14 PSTB 0004 2356 70** Postbank Leeuwarden, The Netherlands, **BIC code PSTBNL21** of **EBCC Treasurer** for 'Bird Census News'. Please indicate for which volume (s) you contribute.

Bird Census News is financially supported by the:
Research Institute for Nature and Forest, INBO
Kliniekstraat 25, B-1070 Brussels, Belgium.
The INBO is a scientific institution of the Flemish Community

Bird Census News

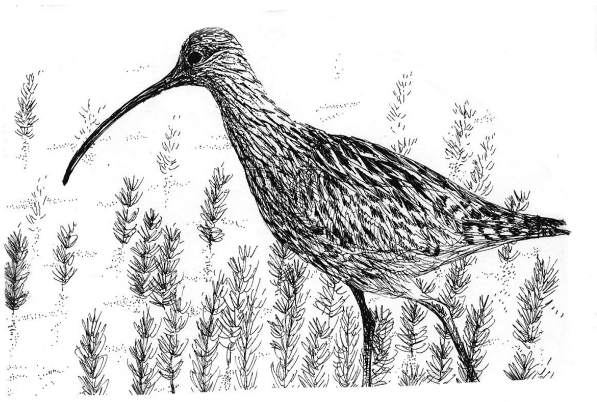
Volume 19 n°2, February 2007

Preface

Only a few weeks before our major EBCC event, the Bird Numbers Conference in Italy, this issue shows again that monitoring and atlas studies are doing well and new initiatives and possibilities are arising. Contributions on the IBA caretaker project in Denmark, census methods for Tawny owl and Corncrake monitoring in European Russia leave no doubt about the wide range of applications in this field. Recently, one 'third generation' (Czech Republic) and one 'second generation (city of Naples) atlas have seen light, and one "first ever" in Bulgaria is forthcoming. You can now help bird conservation in this country by sponsoring the atlas!
Very positive monitoring news comes from the east. At the end of 2006 bird conservation NGOs from Belarus, Macedonia, Lithuania, Poland, Romania, Turkey and Bulgaria started a project to improve their capacity to run successful national Common Bird Monitoring Schemes (CBM). The project is the first of the so called Strategic projects of the Global Environmental Facility (GEF) and co-financed by the RSBP. It is expected to bring essential results for the countries as well as for the participating organisations. Outcomes are shared experience and improved knowledge for establishing and running a CBM scheme as a citizen science based initiative that can produce meaningful biodiversity impact indicators. At the same time it will also strengthen the organisations involved.

Enjoy this issue of BCN,

Anny Anselin
BCN Editor
anny.anselin@inbo.be



Bird Census News 2006: 19/2

The third Atlas of Breeding Birds in the Czech Republic

Karel Stastny[1], Vladimir Bejcek[1], Karel Hudec[2]

[1]Faculty of Forestry and Environment, Czech University of Agriculture in Prague, Kamycka 129, 165 21 Prague 6 - Suchdol, Czech Republic; stastny@fle.czu.cz; bejcek@fle.czu.cz
[2]Hluboka 5, 639 00 Brno, Czech Republic; karelhudec@seznam.cz

The first Atlas of Breeding Birds in the Czech Republic (then part of Czechoslovakia) was published in 1987 (Šťastný *et al.,* 1987). The mapping was undertaken by 913 collaborators in a network of 846 squares measuring 10 by 10 km. The breeding of 188 species was confirmed, while feral pigeons (*Columba livia* f. *domestica*) were not taken into account, the Reeves's Pheasant (*Syrmaticus reevesii*) was not included as an introduced species and the Ruddy Shelduck (*Tadorna ferruginea*) was not included as it was considered an escapee from captivity. In 14 further species, "probable" or "possible" breeding was registered. The results were indicated in the maps in three categories (the same system was used in all three subsequent mappings): breeding possible (small dots - international codes 1-2), probable (medium-sized dots - codes 3-9) and confirmed (large dots - codes 10-16).

The second Atlas of Breeding Birds in the Czech Republic was published in 1996 (Šťastný *et al.*, 1996), while the fieldwork was carried out in 1985-1989 with 750 participating co-workers. In this period (following the format first used in the Atlas of Wintering Birds in the Czech Republic - Bejček *et al.,* 1995), squares measuring 10´ of longitude and 6´ of latitude were used, which in the conditions of the Czech Republic means squares of roughly 12 by 11.1 km (i.e. an area of 133.2 km^2). The territory of the Czech Republic is covered by 675 squares. In the final data processing, squares overlapping by more than half outside the boundaries of the country were not included, or more exactly, their results were assigned to their adjoining squares. Thus the final Atlas included 628 squares. This approach was also necessitated by the fact that access to many of such borderline squares was strictly forbidden. The change in the size of squares was necessary in order to follow the standard used for mapping of other animal and plant species. The results are comparable despite the different number of squares used (628 versus 846). For comparison, the total number was used, but also the total number of possible, probable and confirmed breeding cases in the total number of occupied squares – both in absolute and relative (%) terms. As a total there were 199 breeding species registered in the mapping of 1985-1989, not including the introduced Reeves's Pheasant and the Monk Parakeet (*Myiopsitta*

monachus), which bred after escape from captivity. In 13 species probable or possible, but not confirmed, breeding was recorded. In comparison to the mapping of 1973-1977, there were 12 newly breeding species in the Czech Republic (*Phalacrocorax carbo, Egretta garzetta, Platalea leucorodia, Haliaeetus albicilla, Grus grus, Charadrius morinellus, Tringa ochropus, Larus canus, Larus melanocephalus, Strix uralensis, Luscinia luscinia, Luscinia svecica*), while 4 species ceased to breed there (*Anas acuta, Falco vespertinus, Monticola saxatilis, Lanius minor*).

The field work for the third Atlas of Breeding Birds in the Czech Republic was carried out in 2001-2003. The same squares as in the second mapping in 1985-1989 were used. The period of field work was cut down to three years, which was possible thanks to the growing number of members of the Czech Society for Ornithology, who have undertaken most of the field work in all mapping periods, and also the experience gained in the previous periods made such shortening feasible. There was also an assumption that there will be enough good quality data from three years of work. This came up to expectations (see Figures 1 and 2).

Just as in previous mapping actions, the organizers attempted to acquire quantitative data on the avifauna of individual squares as well. The quantity was expressed in the following intervals of geometric progression: 1-5, 6-25, 26-125, 126-625, 626-3125 and more than 3125 pairs per square. As the quantitative data were submitted by only half of all co-workers, there was not enough data to do a proper quantitative analysis. Yet the quantitative data elaborated in cooperation with numerous ornithologists and population

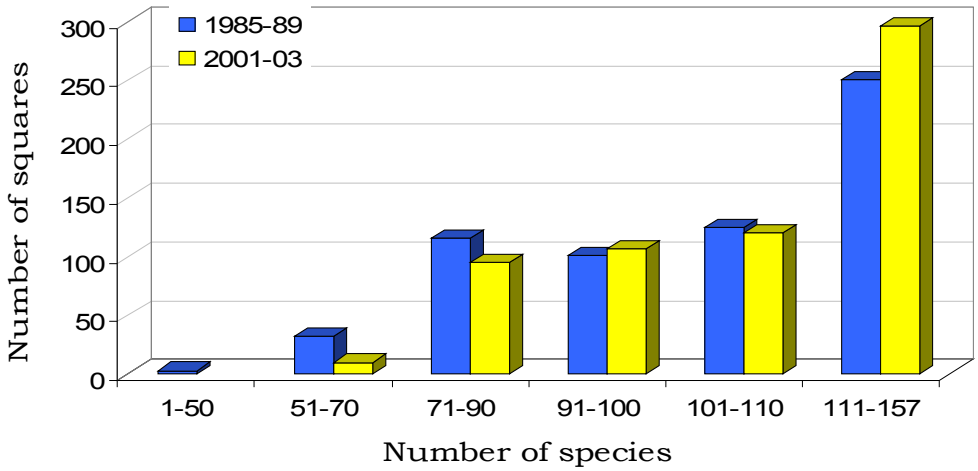


Fig. 1: Number of squares (in absolute numbers) sorted by the number of recorded species in categories possible, probable, and confirmed breeding periods of 2001-2003 and 1985-1989 compared.

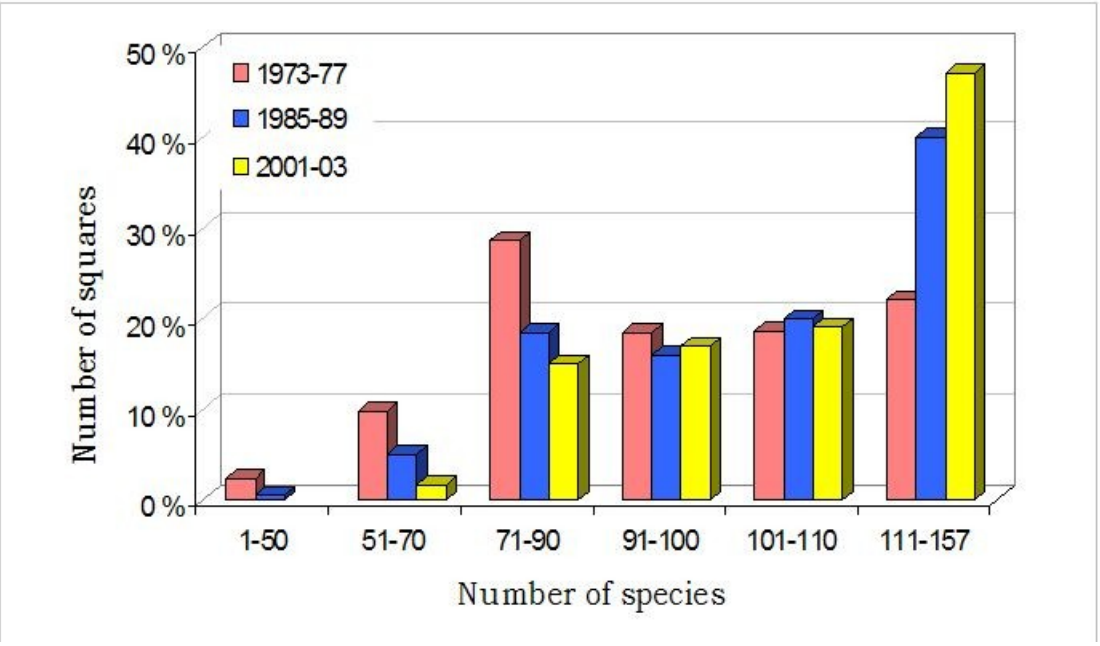


Fig. 2: Number of squares (in %) sorted by the number of recorded species in categories possible, probable, and confirmed breeding – periods of three mappings compared.

and range trends were set (population trends were generated from the results of the Breeding Bird Monitoring Programme in the Czech Republic). The evaluation is based on indices of population changes. In 58 species a graph shows the development of relative abundance (so-called index) in the years 1982 to 2003, while in the first year of the time series, the value of the index is set at 100 %. Further mentioned is the number of localities where the species was recorded at least in one year of the mapping period, and the so-called population trends. It means an average yearly percentual change of abundance in the period of 1982-2003. In the graphs of 58 species, the bold line indicates the index of change of abundance and the dotted lines indicate the upper and lower limits of the 95 % confidence interval. Only trends that were considered reliable were published, species with insufficient entry data were excluded.

Based on the current breeding distribution in the Czech Republic, a coefficient of ornithological importance of individual squares was derived. First a coefficient of scarcity of each species was derived by the following formula: K = 1 - p/100, where p = percentage of square occupancy by the relevant species in (Bejček *et al.,* 1996), based on data from the latest mapping in 2001-2003. Values of this coefficient vary within the interval of 0-1. In the most abundant species it is close to 0; in the rarest ones it is nearing 1. The coefficient of ornithological importance of individual squares is then a sum of coefficients of scarcity of all species present in the square (expressed in the map).

The most important part of the text comments the distribution maps (1973-1977, 1985-1989 and 2001-2003), describing the areas and altitudes of distribution of the species. In most species the highest–and in some species also the lowest–altitudes of distribution are given. Then data on breeding density in typical habitats follow. This part of the text also deals with changes in distribution and numbers, especially in comparison to previous mapping actions, and long-term changes discovered by the Breeding Bird Monitoring Programme; the results of the programme collected by 2001 were already published (Šťastný *et al.,* 2004). In the final part, the text gives information on classification of the species on the Red List of the Czech Republic (Šťastný & Bejček, 2003) based on Guidelines for Application of IUCN Red List Criteria at Regional Levels (IUCN, 2003, Gärdenforse *et al.*, 2001).
At the end of each species chapter, there is a table indicating the number of squares occupied by the species and percentage of squares occupied in the last mapping in 2001-2003, and for comparison also in the previous mapping actions of 1985-1989 and 1973-1977 (a bar graph is included for clarity). The table also gives information on the number and percentage of squares where breeding was confirmed, probable and possible, again comparing all three mapping actions.
A total of 535 co-workers contributed to the mapping, covering all 628 squares. In 2001-2003 there were 199 bird species with confirmed breeding; again not including the introduced Reeves's Pheasant. In 15 species (listed at the end of the Atlas) breeding was not proven, but it was possible or probable. In comparison to the Atlas of 1985-1989 there were 8 newly breeding species (*Anas acuta, Tadorna tadorna, Aquila heliaca, Recurvirostra avosetta, Himantopus himantopus, Larus cachinnans, Chlidonias hybridus, Phylloscopus trochiloides*) and 7 species that vanished (*Aythya nyroca, Aquila pomarina, Otis tarda, Burhinus oedicnemus, Coracias garrulus, Luscinia luscinia, Lanius senator*).
It is possible to compare the three mappings in Figure 2, albeit in relative numbers only, since the first mapping in 1973-1977 used a different square size. The results show that in most squares (98.4 %) more than 70 species were recorded in 2001-2003 and in more than 66 % squares over 100 species were recorded. These figures alone show that the results of this last mapping action are better than the results of the previous two actions even though it took only three years. The worst results were obtained in 1973-1977: 71-90 species were recorded in almost one third of squares (29 %). Back then, the mapping was insufficiently performed (less than 71 species) in 12.1 % squares, while in the second mapping it was less than 5.6 % and in the third only 1.6 %.
The results show that the most widely distributed bird species of the Czech Republic are the White Wagtail, Great Tit, Chaffinch, European Greenfinch and Yellowhammer, which were recorded in all squares in 2001-2003. The majority of the widely distributed species are songbirds, with only three non-

passerines fitting into this category: the Great Spotted Woodpecker, Common Buzzard and Common Woodpigeon.
The least abundant species of all three mappings are the newly breeding species (8 species in 2001-2003; 9 species in 1985-1989) and species extremely rare in the Czech Republic in general.
When we compare the two last mapping actions in 1985-1989 and in 2001-2003 the greatest increase in distribution expressed by the number of occupied squares was recorded in the Common Raven (an increase by almost 45 %). A similar increase in the distribution of the same species (42.5 %) was also recorded between the first and the second mappings. Several other species increased their distribution apparently in connection to the changes in agricultural management, which became less intensive with a higher proportion of derelict land: the Corncrake, Common Quail and Corn Bunting. The Corncrake was registered as a decreasing species in both previous mapping actions (by -6.6 and -14.8 % respectively). Another species steadily increasing since the 1970s is the Grey Heron (23.4 and 26.6 %). The same applies to the Marsh Harrier (19.6 and 36.9 %), Black Stork (16.6 a 35.4 %) and Bluethroat (12.7 and 7 %). Long term increase in the distribution of two owl species, the Eurasian Pygmy Owl (19.0 and 11.4 %) and Boreal Owl (14.0 and 13.4 %) is not surprising either (all in tables).
There is a big difference in the list of 20 species with the highest population increase between 1985-1989 and 2001-2003, i.e. the increase in the number of breeding pairs (in %). Quite surprisingly, the biggest population increase was recorded in the Syrian Woodpecker – by almost 1200 %. Other increases are by an order or two lower: 9 species increased by hundreds of per cents and 10 species by tens of per cents. Only species whose breeding populations in 1985-1989 were larger than 50 pairs were included in this analysis (in order to be able to make the same comparison for decreasing species – see further). This way several species with an exceptionally high population increase were excluded: the Ural Owl - 1600 %, European Bee-eater - 900 %, Common Crane - 890 %, Mediterranean Gull - 730 %, Green Sandpiper - 533 %, Montagu's Harrier - 300 %, Little Crake - 275 %, White-tailed Eagle - 229 %, Spotted Crake - 100 % (all in tables).
No less interesting is the list of species that experienced the highest decrease in their distribution areas between 1985-1989 and 2001-2003. The biggest decrease was recorded in the Little Owl, a species whose occupied territory shrank by more than 41 %. It is not surprising that another synanthropic owl species, the Barn Owl experienced a similar decline. Notable declines in territory size were also recorded in the Crested Lark, Eurasian Jackdaw (although in this species the decline halted in the past few years), Northern Wheatear, Grey Partridge and Black Grouse. Included are also three waders and several water bird species. In the majority of species with decreasing territories (13) there was a decrease already in the period between the first two mapping actions: the largest in the European Nightjar (-11.4 %), Crested Lark (-11.1 %), Barn Owl (-8.1 %), Grey Partridge (-7.7 %), Eurasian Teal

(-7.6 %), Black Grouse (-7.1 %), Eurasian Jackdaw (-7.0 %) and Northern Wheatear (-6.3 %). On the contrary, the Black-headed Gull and Eurasian Penduline Tit were increasing species back then (14.2 and 25.9 % respectively) - all in tables.

Among the 20 species that experienced the largest population decline between 1985-1989 and 2001-2003 there are 13 species that also experienced the largest decrease in occupied territory, most of them on the top of the table. Again, this is not surprising in waders (Northern Lapwing, Black-tailed Godwit, Common Snipe), both synanthropic owl species and the Black Grouse; but it is surprising in a species so numerous in the past, the Common Pheasant and in other species (all in tables).

Another useful tool is the overview of squares with their minimal, maximal, and average altitudes (in the Annex and a map on the plastic foil sheet) and species breeding there. A selection of species breeding in the highest and the lowest altitudes is also presented in tables. The species nesting at the lowest altitude is the Imperial Eagle together with other lowland, pond and wetland species. Birds breeding at the highest altitudes include the Eurasian Dotterel, the Red-spotted subspecies of the Bluethroat (Krkonoše Mountains) and other alpine species.

The introductory chapters are accompanied by maps showing total numbers of species in individual squares (51-157 species per square; average number of species per square in categories of possible, probable, and confirmed breeding 109, in categories probable and confirmed breeding 94), the total numbers of species classified as endangered and critically endangered on the new Red List of the Czech Republic (0-31 species), the total numbers of species listed in the regulation of the Ministry of Environment of the Czech Republic nr. 395/1992 Sb. in categories of critically endangered and severely endangered species (0-40 species), total numbers of species included in Annex I to the Directive on the conservation of the wild birds (1-24 species), and total numbers of records obtained from each square (51-1,200 records per square). Another map shows the ornithological importance of each square based on the sum of coefficients of importance of all recorded species (see above) in a given square (a sum of 3-54 per square).

Plastic overlays included in this Atlas provide maps of the exact same scale as the distribution maps, showing the percentual representation of habitat types in each square. These describe the representation of land use as categorized in ZABAGED®, specifically: forested land (forested land with trees, bushes and dwarf pine), meadows and pastures, arable land (arable land and other unspecified areas, hop gardens, and vineyards), bodies of water (bodies of water, settling reservoirs, and sludge storing lagoons), urban areas (human settlements, industrial areas, power plants, rail roads, parking lots, airports, lift stations) and natural biotopes included in the network of NATURA 2000. Also included is a map showing large-scale protected areas in the territory of the Czech Republic (based on Act No. 114/1992 Coll.) and Special Protection Areas (based on the Council Directive 79/409/EEC on the

conservation of wild birds) and a map showing the average altitude of each square. By positioning these maps over the distribution maps of individual bird species, a reader will acquire even more precise information.

The third Atlas was published in 2006 in the publishing house Aventinum, Prague (in Czech with English summary in each species and with general summary concerning contains 463 pages (two pages per one species including colour photograph of the bird species) and plastic overlays with eight maps. The price of this Atlas is 70 Euro, postage included. It is possible to order it on the e-mail addresses of the first two authors.

References

Bejček, V., Šálek, M., Šťastný, K., (1996). in Petříček, V., Plesník, J. (eds.): Tanks and Thyme, Biodiversity in former soviet military areas in Central Europe. 1. Czech Republic, 1-42. IUCN European Programme Environmental Research Series 10, Gland, Switzerland and Cambridge U.K., 136 pp.

Bejček, V., Šťastný, K., Hudec, K., (1995). Atlas zimního rozšíření ptáků v České republice 1982-1985. H & H, MŽP ČR, Praha (in Czech with English summary).

Gärdenforse, U., Hilton-Taylor, C., Mace, G.M., Rodrigues, J.P., (2001). The application of IUCN Red List criteria at regional level.. Conserv. Biol. 15: 1206-1212.

IUCN, (2003). The IUCN Red List of Threatened Species. URL: http: www.redlist.org.

Šťastný, K., Bejček, V., (2003). Červený seznam ptáků v České republice. In: Plesník, J., Hanzal, J., Brejšková, L. (eds.): Červený seznam obratlovců České republiky. Příroda 22, Praha: 95-120 (in Czech with English and German summary).

Šťastný, K., Bejček, V., Hudec, K., (1996). Atlas hnízdního rozšíření ptáků v České republice 1985-1989. H & H Praha (in Czech with English summary).

Šťastný, K., Bejček, V., Voříšek, P., Flousek, J., (2004). Populační trendy ptáků lesní a zemědělské krajiny v České republice v letech 1982-2001 a jejich využití jako indikátorů. Sylvia 40: 27-48 (in Czech with English summary).

Šťastný, K., Randík, A., Hudec, K., (1987). Atlas hnízdního rozšíření ptáků v ČSSR 1973/77. Academia, Praha (in Czech with English summary).

Bird Census News 2006: 19/2

The Danish IBA Caretaker Project

Thomas Vikström

DOF/BirdLife Denmark, Vesterbrogade 138-140,
DK-1620 Copenhagen V, Denmark
Thomas.vikstroem@dof.dk , tel. +45 3331 4404
(Presented at the 16th International Conference of the European Bird Census Council, Kayseri, Turkey sept. 2004)

Introduction

Denmark is among the countries of the world, where we have the largest knowledge about the numbers, state, distribution and habitats of our birds. Knowledge about the birds and their habitats often provides evidence about the over-all condition of our nature and environment. Today, we possess this knowledge because since 1960 thousands of members of DOF (BirdLife Denmark) have collected new knowledge about the birds of Denmark. This we have been doing by monitoring the common breeding birds as well as the rare and vulnerable species. Today, our knowledge is an indispensable tool in the management of the Danish nature.

In 2003, DOF (BirdLife Denmark) has launched its so far most ambitious monitoring project, directed at our 200 most important bird sites. We call it our Caretaker Project, as in the next 5 years groups of volunteers all over the country will take care of updated knowledge, optimal conservation, and broad external information about the important sites being covered by the project. All due to a million grant from the private Aage V. Jensen Charity Foundation.

The project is monitored, and the project co-ordinator advised, by a project reference group, consisting of representatives from e.g. the Ministry of the Environment, Copenhagen Business College, a large private estate, and the local branches of DOF. Moreover, local co-ordinators have been appointed in each of the 14 regions of Denmark to assist the project on a voluntary basis.

It is important to stress the social element of the project, which to a large degree will depend on teamwork

Two times three legs

The IBA Caretaker Project fits as the third leg in the so-called three-legged monitoring strategy of DOF, which already encompasses a Common Birds Point

Counts Census and an Endangered and Rare Breeding Birds Programme. These two projects have been running since 1976 and 1998, respectively.

Another set of three legs forms the inner foundation of the project:

- **Monitoring** selected bird populations of Important Bird Areas (IBA's)
- Improved **conservation** of the IBA's in cooperation with landowners and authorities
- Public **information** about the birds of the IBA's through websites, excursions etc.

The most important category of sites in the project is consisting of the 127 Danish IBA's already designated by BirdLife International in 2000.
However, the project includes two other site categories:

1) Candidate IBA's fulfilling the criteria of BirdLife, but discovered only recently e.g. through this project, and
2) Bird sites not necessarily of large importance, but especially amenable to public information as e.g. sites situated near big towns or recently restored wetlands.

The most important birds in the projects are:

1) Roosting water birds, when 1 % or more of the Danish population regularly is using the IBA
2) Roosting water birds, when 20 000 or more individuals of any species are roosting at a site

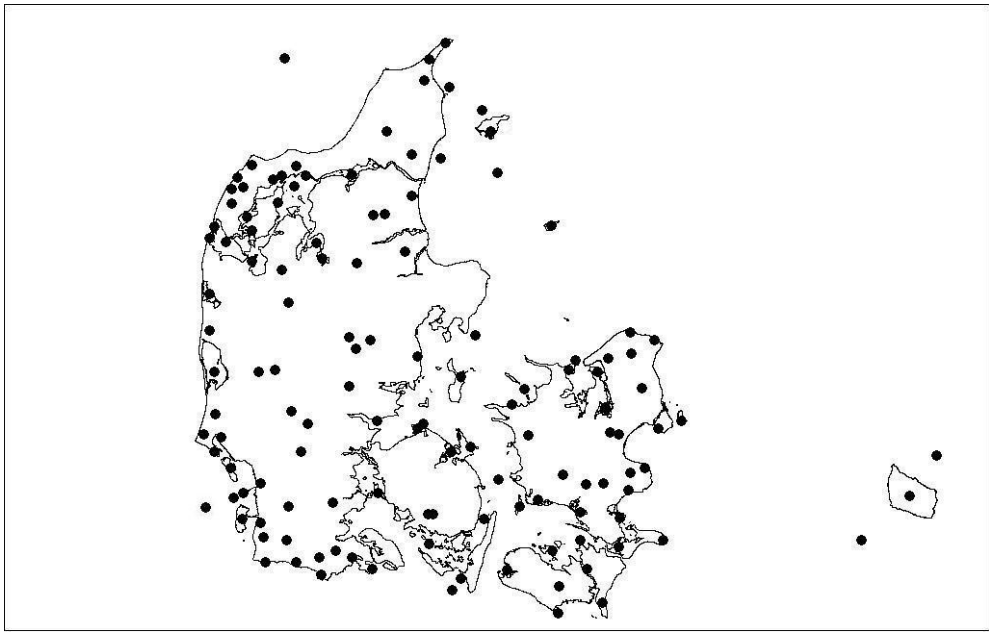


Fig. 1: Map showing the situation of the 127 IBA's of Denmark

3) Breeding bird populations of European significance following the criteria of BirdLife International
4) Migrating raptors and cranes where they pass "bottleneck" sites in numbers exceeding 3 000 per season

Examples of Danish IBA's of category A, international IBA's

Lake Fiilsö in Western Jutland is a highly important roosting site as it houses regularly more than 20 000 water birds, among which more than 1 % of the Danish populations of Bewick's Swan, Whooper Swan, Pink-footed Goose, Greylag Goose, and Pintail. Thus, these species are counted in the project. Of the breeding birds in the area Marsh Harrier, Bittern, Barnacle Goose, Montagu's Harrier, Wood Sandpiper, Nightjar, and Red-backed Shrike will be counted, among others.

The Little Belt between the island of Funen and Jutland, incl. its islands are of great importance for both roosting migrants and breeding birds. In cold winters, more than 24 000 water birds are roosting here, especially Eiders, but also Whooper Swans, Tufted Ducks, Scaups, Velvet Scoters, Goldeneyes, and Red-breasted Mergansers.

The forest **Almindingen** at the island of Bornholm in the Baltic is the 3rd largest forest of Denmark and houses a large number of protection demanding species of breeding birds, among which the Black Woodpecker, which is breeding with 7-10 pairs. Thus, Almindingen is one of the most important breeding sites in Denmark for this species.

What does DOF offer the caretakers?

The day-to-day support of the caretakers from DOF is carried out through a mail group and by a quarterly newsletter, among other means. Moreover, each caretaker group is offered a draft manual of care taking their site, including advice in monitoring specific bird species, maintaining a homepage etc.

During the project, the participants are offered training in bird monitoring, PR, dealing with authorities, and other relevant subjects. In March 2004 the three monitoring projects together held a seminar on public information and nature policy, which attracted about 120 participants. The first training course of the Caretaker Project will be held in November 2004, dealing with monitoring of wintering water birds.

Each IBA gets its own website from DOF with a standard layout and information about area size, threats, conservation etc. Among much other information,

the IBA websites show recent bird observations from the IBA's. Automatically, relevant observations from an IBA are downloaded from this database and presented on the IBA website in question. From the website there are links to the relevant species in DOF's web-based "handbook" about the birds of Denmark

What does DOF expect from the caretakers?

The caretakers themselves administer and maintain their websites, and they enter their observations into DOF's web-based database, "DOFbasen", which is a crucial point in the Caretaker Project. By now, Danish ornithologists upload more than 1 000 observations per day to DOFbasen, and since its start in May 2002, 1.4 mill. observations have been entered into the base.

If the caretakers have got the necessary time and energy, DOF would like them to make use of their local knowledge to make other kind of PR for their site. As well, thy are encouraged to work for better conservation and management of their site in cooperation with landowners and authorities. Moreover, the caretakers are expected to supplement the site manual offered by DOF with their specific, local knowledge of conditions regarding access, recognition of landowner interests, viewpoints for counting etc.

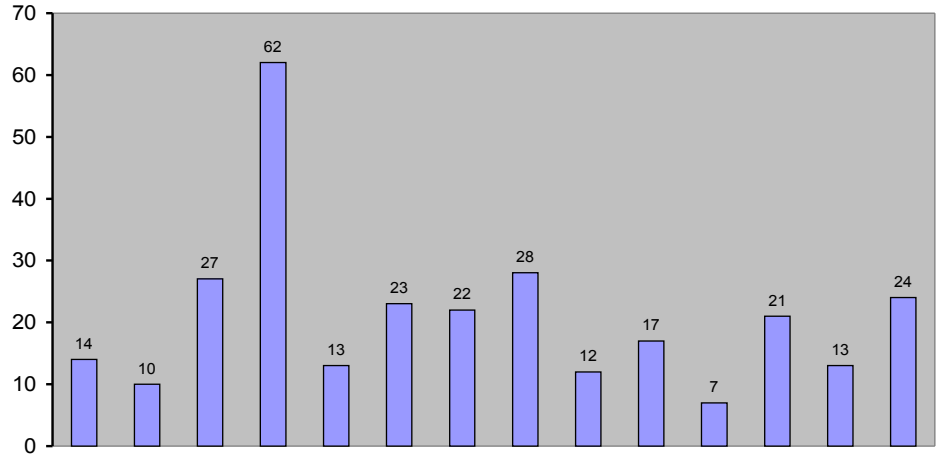


Fig. 2: Distribution by region of the 244 participants (by September 2004) in the Danish Caretaker Project

Assisting the authorities

By monitoring these birds, DOF at the same time will be lending a hand to the Danish nature conservation authorities. Thus, in 2004 the Danish authorities have introduced a new monitoring program in order to fulfil the obligations of the EU Bird Directive. In DOF we expect that this new program will to a large degree be dependent on the data of our Caretaker Project.

Time scale

By September 2004, already 244 ornithologists have offered themselves for covering about 108 sites totally or partly in the project. Of these, 83 are international IBA's. For the present, the project is planned to run until 2008. The project will be concluded by a publication summarizing the main development trends of the Danish IBA's.

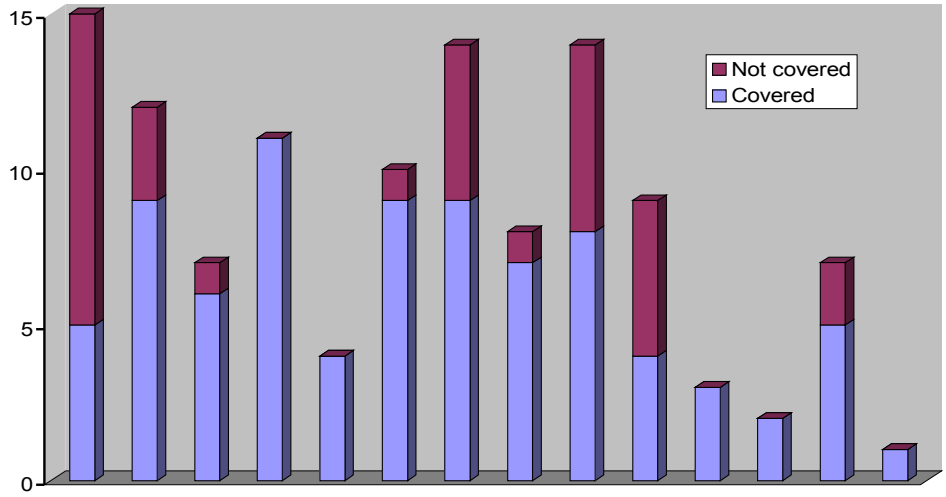


Fig. 3: Distribution by region of the 83 of 117 international IBA's covered (by September 2004) in the Danish Caretaker Project

The Danish Caretaker Project is in line with the IBA strategy of BirdLife International to improve the conditions of important bird sites worldwide through voluntary work of so-called site support groups (SSG's). Therefore, among other reasons, during 2004 the project coordinator and other members of the DOF staff have visited Vogelbescherming (BirdLife Netherlands) to hear, among other subjects, about their experiences with a similar Caretaker Project. Moreover, this year DOF staff has been teaching in bird monitoring at a workshop in Kuala Selangor held by Persatuan Pencinta Alam Malaysia (BirdLife Malaysia).

Bird Census News 2006: 19/2

On the censusing of Tawny owls *Strix aluco*

Stephen N. Freeman, Dawn E. Balmer and Humphrey Q.P. Crick

British Trust for Ornithology, The Nunnery, Thetford, Norfolk, IP24 2PU, UK.
Corresponding Author: steve.freeman@bto.org

Introduction

As part of a major investigation into the distribution, abundance and ecology of Tawny Owls *Strix aluco* in Great Britain, in late 2005 we carried out a tape-playback programme at a number of sites known to host the species.

Numbers of most common terrestrial birds in the UK have been well-monitored since the 1960s via the Common Birds Census (Marchant *et al.*, 1990) and, later, the Breeding Bird Survey (Raven *et al.*, 2006) either individually or together (Freeman *et al.*, 2007). Their timing during the day is such however that these multi-species surveys do not well accommodate nocturnal species, of which the Tawny Owl is the most common. For all its public familiarity and popularity, changes in the distribution and population of the Tawny Owl are poorly known. Evidence from the Breeding Bird Survey suggests something of a decline since 1994 (Baillie *et al.*, 2006) and the atlas surveys of birds in Britain and Ireland (Gibbons *et al.*, 1993) suggest an 11 % reduction in range between 1968-'72 and 1988-'91. In 2005 the BTO organised a National Survey of Tawny Owls, that was the largest and most comprehensive for the species ever undertaken, and full results will be published separately. As the survey was carried out by volunteers listening after dark for calling territorial owls, the likelihood of detection by this means is crucial, and is the subject of the present note.

It is well-known that Tawny Owls are highly territorial and very responsive to perceived rivals, and will respond to recordings of other birds, or even human impersonations (Redpath, 1994; Galleotti and Pavan, 1993; Zuberogoitia and Campos, 1998). Though birds call throughout the year, in an earlier survey (Percival, 1990) vocal activity was found to be greatest in the autumn months, when the birds are forming pairs, setting up territories, and when dispersing young Tawny Owls are most likely to intrude into an established territory. As a result, Percival (1990) organised a national survey in the autumn of 1989 and the format was repeated in the 2005 survey (the results will be published elsewhere). As part of an investigation into the efficiency of listening point surveys in the autumn period, we carried out a

series of trials in which observers undertook two such surveys (on separate nights) at each site, once with and once without a standardised tape playback protocol. When used, the tape broadcast repeated hoots of the same owl, with more distant *ke-wick* calls via a Phillips 2-way loudspeaker system.

Habitat and Methods

In October and November 2005 four fieldworkers embarked upon a series of night-time visits to locations in Norfolk and Suffolk where Tawny Owls were known to be present from prior observation. Twenty-nine locations were identified, which we divided into eight groups of between two and four locations such that the birds in any group could all be conveniently visited in the same evening by a single observer. These covered a wide range of habitats (despite the restricted geographical area), from mature pine plantation in remote areas of Thetford Forest to urban parkland in the centre of Bury St. Edmunds. Each group was surveyed twice by the same observer, on calm evenings at least three (and usually more than seven) days apart. On one visit of the two the tape was played as outlined below, but on the other occasion the observers simply listened in silence for the birds' far-reaching calls for a period of 30 minutes. The first or second visit to each site was selected at random for the use of the tape.

The playback procedure was based upon a timing regime proposed by Redpath (1994): a point near to the location of a calling bird was selected and the tape played, alternating one minute of call playback and five minutes of silence for a period of 30 minutes, or until a response was received.

Results

When the tape was used, only one of the sites failed to produce a response, either in the form of hooting or the *ke-wick* call – a success rate (even excluding two sites at which the bird was already calling as the fieldworker arrived) of 96 % (exact binomial 95 % confidence limits 81-100 %). This figure therefore approximately replicates the 94 % found by Redpath (1994) in Cambridgeshire woodland. Frequently, playing the tape led to a response within only a few minutes (Figure 1). Without the tape, however, only twelve visits (41 %, exact binomial 95 % confidence limits 24-61 %) resulted in detection of the owl, a significant reduction (Table 1). Where the bird was encountered on at least one visit, the waiting time was generally much reduced by the use of the tape (Table 1); excluding the birds calling on arrival, bird 27 (which never responded) and bird 6 (a "tie"), in 23 out of 25 cases the bird

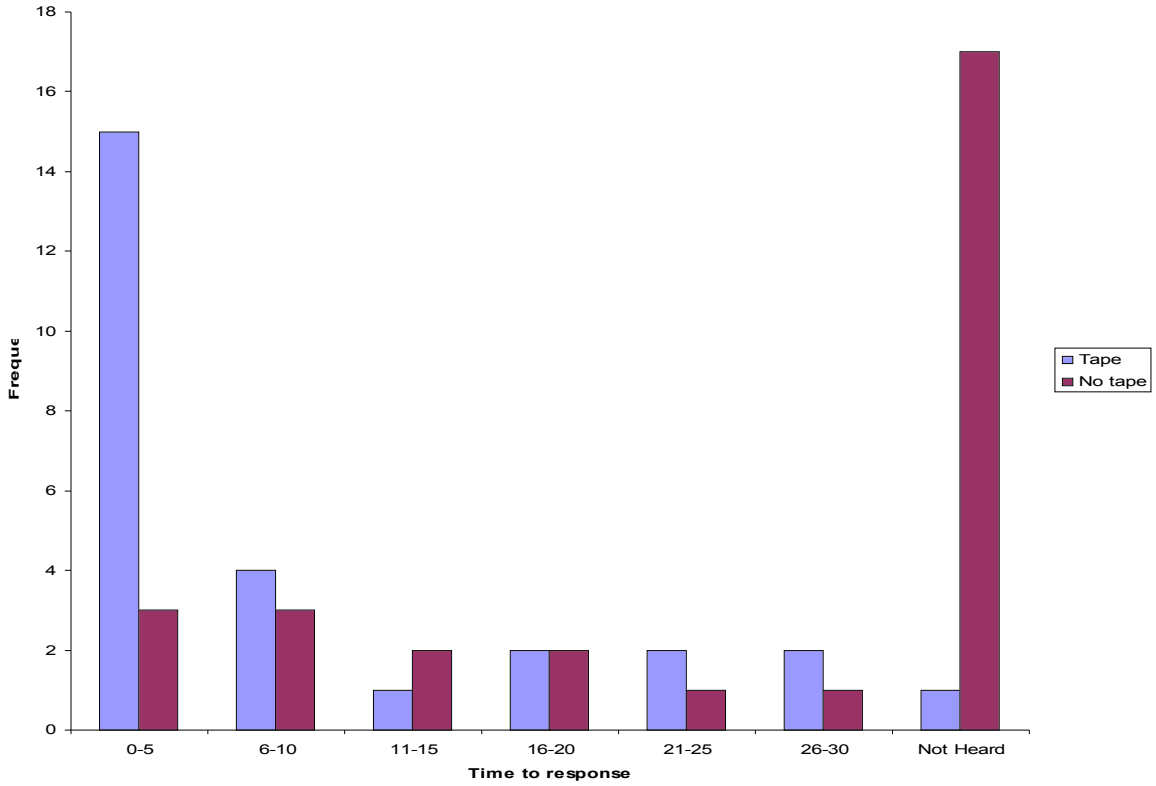


Fig. 1: Frequency distribution of times to first response or call from Tawny Owls with and without the use of a tape-lure. Two scheduled visits with the tape are omitted as birds were calling already on arrival.

was located less quickly (or not at all) without playback and the normal approximation to a formal sign test (Zar, 1999 pp. 538) confirms the obvious significance of this difference ($Z = 4.20$, $p < 0.001$). Note that these statistics and Table 1 include two recorded calls that the experienced fieldworkers considered may have been the same individual as was located at the separate site visited immediately beforehand. Omission of either, or both, has no effect of consequence upon the results.

Discussion

The results reinforce the view of Redpath (1994) that a 30-minute survey with some form of artificial call is probably sufficient to detect almost all territorial birds at least. Clearly, however, the implication is that any survey of modest duration based simply upon listening for the birds is prone to under-recording. We found, in our example, that many known birds had yet to be detected well beyond the 10-minute period proposed by Percival (1992).

In practice, national or large-scale surveys of the Tawny Owl using call-playback are not practical, because of difficulties in standardising sound quality and volume that may affect owl responsiveness. The results presented do give however a crude means of quantifying the shortfall that will have occurred in the repeat national survey in 2005 and will enable us to calibrate our estimates of the species' distribution and population. The results also have significance for atlas-type data (e.g. Gibbons *et al.,* 1993): these also need to be considered in the light of the potential for missed birds – fieldwork for a revised British breeding atlas to be carried out between 2007 and 2012 will need to take this into account.

Acknowledgements

Fieldwork was carried out by John Marchant, Rachel Coombes, Kate Risely and Sue Adams. We are grateful also to Geoff Sample for providing the recordings and the local birdwatchers who provided information on localities with calling owls.

References

Baillie, S.R., Marchant, J.H., Crick, H.Q.P., Noble, D.G., Balmer, D.E., Coombes, R.H., Downie, I.S., Freeman, S.N., Joys, A.C., Leech, D.I., Raven, M.J., Robinson, R.A, and Thewlis, R.M. (2006) Breeding Birds in the Wider Countryside: their conservation status 2005. BTO Research Report No. 435. BTO, Thetford. (http://www.bto.org/birdtrends)

Freeman, S.N., Noble, D.G., Newson, S.E. and Baillie, S.R. (2007) Modelling population changes using data from different surveys: The Common Birds Census and the Breeding Bird Survey. *Bird Study, 54, 1, 000-000.*

Galleotti, P. and Pavan, G. (1993) Differential responses of territorial Tawny Owls *Strix aluco* to the hooting of neighbours and strangers. *Ibis, 135, 300-304.*

Gibbons, D.W., Reid, J.B. and Chapman, R.A. (1993) The New Atlas of Breeding Birds in Britain and Ireland: 1988-1991. T. & A.D. Poyser, London.

Marchant, J.H., Hudson, R., Carter, S.P. and Whittington, P.A. (1990) Population trends in British breeding birds. British Trust for Ornithology, Tring.

Percival, S.M. (1990) Population trends in British Barn Owls, *Tyto alba*, and Tawny Owls, *Strix aluco*, in relation to environmental change. BTO Research Report 57, British Trust for Ornithology, Tring.

Raven, M.J. and Noble, D.G. (2006) The Breeding Bird Survey 2005. BTO Research Report 439. British Trust for Ornithology, Thetford.

REDPATH, S.M. (1994) Censusing Tawny Owls *Strix aluco* by the use of imitation calls. *Bird Study, 41, 192-198.*

ZAR, J.H. (1999) Biostatistical Analysis, 4th edition. Prentice-Hall, New Jersey.

ZUBEROGOITIA, I. AND CAMPOS, L.F. (1998) Censusing owls in large areas: a comparison between methods. *Ardeola, 45, 1, 47-53.*

Table 1: Full summary of times-to-response for 58 visits to 29 known Tawny Owl territories, autumn 2005.
*** calling on arrival; Tape used only where indicated**

	Visit 1		Visit 2	
Territory	**(date: dd/mm/yy) - owl heard: Y/N**	**Time to response (mins)**	**(date: dd/mm/yy) - owl heard: Y/N**	**Time to response (mins)**
1	20/10/05 - Y (tape)	0 *	29/10/05 - N	
2	20/10/05 - Y (tape)	24	29/10/05 - N	
3	20/10/05 - N		29/10/05 - Y (tape)	22
4	20/10/05 - N		29/10/05 - Y (tape)	11
5	22/10/05 - Y (tape)	20	30/10/05 - N	
6	22/10/05 - Y (tape)	2	30/10/05 - Y	2
7	22/10/05 - Y	7	30/10/05 - Y (tape)	5
8	22/10/05 - Y	1	30/10/05 - Y (tape)	7
9	23/10/05 - Y	18	7/11/05 - Y (tape)	3
10	23/10/05 - Y	19	7/11/05 - Y (tape)	8
11	23/10/05 - Y (tape)	2	7/11/05 - Y	12
12	23/10/05 - Y (tape)	4	7/11/05 - N	
13	26/10/05 - Y	4	9/11/05 - Y (tape)	10
14	26/10/05 - N		9/11/05 - Y (tape)	9
15	26/10/05 - Y (tape)	3	9/11/05 - Y	24
16	26/10/05 - Y (tape)	3	9/11/05 - N	
17	31/10/05 - N		7/11/05 - Y (tape)	18
18	31/10/05 - Y (tape)	1	7/11/05 - N	
19	31/01/05 - Y (tape)	4	7/11/05 - N	
20	31/10/05 - N		7/11/05 - Y (tape)	3
21	9/11/05 - Y (tape)	5	12/11/05 - Y	26
22	9/11/05 - N		12/11/05 - Y (tape)	5
23	9/11/05 - Y	10	12/11/05 - Y (tape)	5
24	9/11/05 - Y (tape)	28	12/11/05 - N	
25	24/10/05 - N		10/11/05 - Y (tape)	28
26	24/10/05 - N		10/11/05 - Y (tape)	0 *
27	24/10/05 - N		10/11/05 - N (tape)	
28	27/10/05 - Y (tape)	5	13/11/05 - Y	10
29	27/10/05 - Y	15	13/11/05 - Y (tape)	3

Bird Census News 2006: 19/2

Corncrake monitoring in European Russia

Alexander Mischenko & Olga Sukhanova

Russian Bird Conservation Union, Shosse Entuziastov, 60, bld.1, Moscow 111123, Russia, almovs@mail.ru

Introduction

The mayor part of the range of the Corncrake *Crex crex* and the larger portion of its world population is in Russia (Mischenko & Sukhanova, 2002). In many non-afforested areas Corncrake is the most abundant non-passerine bird. The main reasons of its abundance are peculiarities of the Russian agriculture. Farming was mainly extensive in the second half of the XXth century. In the middle 1980s started a prolonged agricultural crisis, which is still continuing now. Farming intensity has substantially decreased. Large meadow areas have been abandoned and are now irregularly mown if not at all. In meadows and grasslands used for agriculture late hay mowing takes place usually after 10 July. Such situation is very favorable for Corncrake.

It is possible that in the future intensification of farming will develop in some regions. In other regions meadows abandonment will increase. It is therefore important to establish a long-term Corncrake monitoring in European Russia. Since 2002 the Russian Bird Conservation Union participates in the International Corncrake Monitoring Scheme (ICMS), organized by the RSPB jointly with BirdLife International (Schäffer & Mammen, 2001).

Methods

The Corncrake surveys in European Russia were based mainly on the voluntary participation in the monitoring. The Corncrake censuses were carried out in accordance to the ICMS. The ICMS is suggested in order to follow the population trend of Corncrakes affected by large-scale changes in land-use in Central and Eastern European Countries (Schäffer & Mammen, 2001). The basis of the monitoring is the annual census of Corncrake males in the same survey sites. Fieldworkers freely selected the survey sites in typical Corncrake habitats. After consultations with the national coordinator, each habitat in the site was referred to one of 11 standard habitat types, using the guidelines of the ICMS. Two surveys in every site were performed during nighttime between 20 May and 30 June, taking into account the regional phenological

differences. During each survey, calling corncrakes were mapped. Data of each survey night were assessed in a summary map with all locations of the calling males.

Trends for calling corncrakes were determinated using TRIM (Trends & Indices for Monitoring data), a program used for the analysis of time series of counts with missing observations (Pannekoek & van Strien, 1996).

Weather conditions

The spring of 2002 was extraordinary dry and warm in most of European Russia with practically no floods in the river valleys. The summer (except in the Ural District) was hot and dry with a lot of fires in forests, bogs and meadows, exactly like 30 years ago in 1972. Some meadows in the regions to the south from Moscow have become similar to dry steppes. The following years 2003 - 2005 were favorable for Corncrake across all European Russia. Plenty of snow in winter resulted in normal water levels and good growth of meadow vegetation.

Results

The censuses in 2002-2005 were conducted in 27 sites, located in 13 entities of the Russian Federation (regions and republics) in different parts of European Russia, including Central, North-West, Volga, Central-Chernozem and Ural economic-and-geographical districts (Fig. 1). Two sites among them were located in Sverdlovsk Region, located directly to the east from the Urals, formally in the Asian part of Russia. All census data are shown in Table 1. In addition to these 27 survey sites, one site was in the valley of the river Moskva in the park Kolomenskoye (no. 16 in Tab. 1), located within the limits of the city of Moscow. The survey sites were located in the different Corncrake habitats: flood plain and dry meadows, perennial crops (ley) and abandoned farmlands. The size strongly varied: from 3.3 up to 1500 hectares. The distance between the extreme western and eastern sites was 1850 kilometers, the distance between extreme northern and southern sites 960 km. The total area of all surveyed sites in 2002-2005 was 70.36 km^2. The number of participants and survey sites varied a little over the years. In total 34 persons (25 amateur ornithologists and 9 professionals) have taken part in the monitoring for four years.

In addition to the results of voluntary based monitoring we also include in the analysis data of 1995-2001 from 3 sites, surveyed during other Corncrake studies. Censuses in one of them (no. 15 in Tab. 1) were carried

out only in 1995-1997; in other two sites (no. 17 and 18) censuses were continued in 2002-2005.

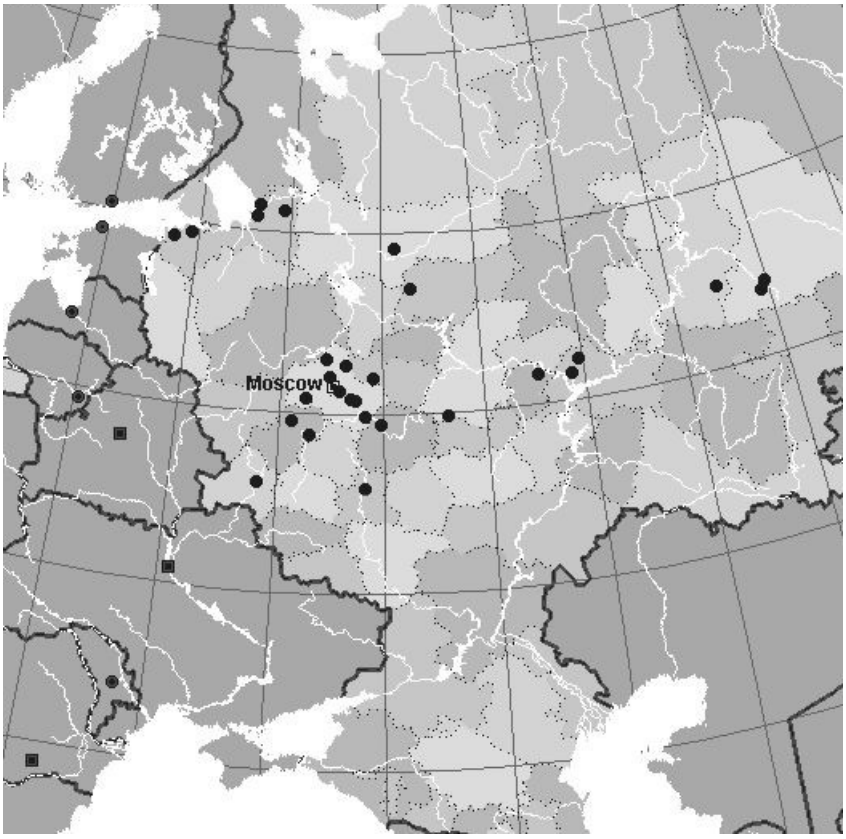


Fig. 1: Location of the Corncrake survey sites in Russia.

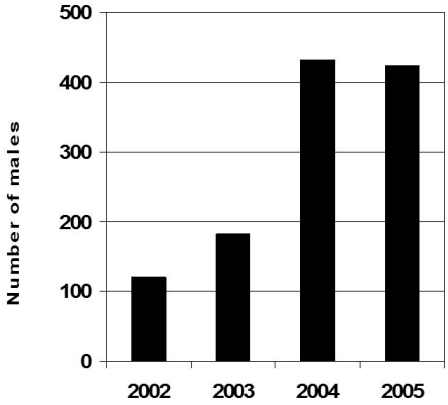


Fig. 2: Trends of the calling Corncrake males in 14 sites counted each year in 2002-2005 (the total area is 36.7 sq. km, plus the route 15 km).

Trends of the Corncrake males for 14 sites counted in 2002-2005 each year without missing, are shown in Figure 2. Numbers in 2004 and 2005 are approximately 3.5 times higher than in 2001. The TRIM analysis of all census data from Table 1 shows a significant increase in numbers in 2002-2005. The overall slope is 1.47, which implies a 15 % increase per year during this period. But 2002 was abnormally dry with a low breeding success (Mischenko, in press). Numbers of corncrakes in 2002 in some sites located in the Central (no. 8-21), Central-Chernozem (no. 22) and Volga (no. 23-26) districts were lower than in normal years. Taking 2002 as a reference year to calculate population growth results in an abnormal high value of the population increase. This is confirmed by the surveys of Corncrake numbers in sites Klyazma and Solotcha since 1998 to 2005. The TRIM analysis for Central Russia (sites no. 8-21 in Tab. 1) shows a significant increase of numbers in the period 1995-2005 (the overall slope is 1.16). However, due to a lot of missing values this result is disputable.
The highest Corncrake population density (up to 60.6 and 72.2 calling males/km^2) was observed on small meadows in a mosaic forest landscape in Sverdlovsk and Vologda regions (taiga zone). The lowest density (0.13-0.26 males/km^2) was observed in extensive monotonous farmland of the Lipetsk Region (forest-steppe zone). It is interesting to trace the Corncrake trends on a small meadow located in the city park Kolomenskoye inside the huge city Moscow (no. 16 in Tab. 1). Despite the high recreation pressure and periodical hay harvesting in several sites for park management (using motor lawn mowers), Corncrake numbers remained stable in 2003-2005, with fairly high densities (13.2 calling males/km^2).

Discussion and conclusion

Corncrake monitoring European Russia was only started recently, but the data from 4 years have already confirmed the assumption of population growth of this species. The favourable situation for Corncrake in Russia has resulted from the reduction in intensity of use of the huge farmland areas. A good example of the Corncrake trend in a completely abandoned farmland is the Vinogradovo flood plain in the Moscow Region (sites no. 13 and 14 in Tab. 1). There are only two from all surveyed sites where farming was completely stopped at the beginning of the 1990s (other sites are located in used farmlands). The halting of hay mowing and grazing has led to the fast growth of Corncrake numbers during 1995-2005.
However it is extremely difficult to give long-time predictions of agricultural trends in Russia. The most probable script for the nearest decades is an intensification in the most populated and accessible territories (as in Western Europe) and simultaneously – progressing abandonment of the removed and remote farmlands, due to their unprofitable use. Both

processes will lead to significant decrease in numbers of Corncrake in the future. Abandoned land will be eventually overgrown by bushes and thus become unsuitable for the Corncrake.
The monitoring results show that numbers of the Corncrake males strongly through the years. Especially strong fluctuations of numbers (up to 14 times) are observed in flood-plain areas used in farming, where the humidity in different years varies most.
The Corncrake range in Russia is so extensive, and climatic and agricultural features in different regions are so essentially different, that for a reliable estimation of trends it is necessary to perform long-term monitoring in large areas including the Asian part of the country.

Acknowledgements

We are very grateful to Anton Mezhnev, Sergey Fokin and all other Russian monitoring participants. In particular, we would like to express our appreciation to Dr. Arco J. van Strien for the valuable help with the TRIM analysis. In addition, we express sincere gratitude to the RSPB (The Royal Society for the Protection of Birds, the BirdLife Partner in the UK) for the financial support to these surveys.

References

Mischenko, A. (in press). Results of the voluntary based Corncrake monitoring in European Russia, 2002-2003. Bird Census News 20/1

Mischenko, A. & Sukhanova, O. (2000). Results of the two-years project "Corncrake survey in European Russia". In: Corncrake in European Russia: numbers and distribution (ed. A.L. Mischenko), RBCU Moscow, Russia, 147-169.

Pannekoek, J. & van Strien, A.J. (1996). TRIM – Trends & Indices for Monitoring Data. Research Paper No. 96324, Statistics Netherland, Voorburg.

Schäffer, N. & Mammen, U. (2001). International Corncrake Monitoring. www.corncrake.net.

Site	Area (ha)	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
1	83								3	4	5	4
2	95								6	5	10	5
3	696									35	117	75
4	312								8	9	10	10
5	547									20	39	42
6	route 15 km								9	10	16	18
7	9.7								7	6		3
8	50									7		5
9	220								6	1	7	6
10	60								0	5	9	12
11	743								4	4	5	6
12	53								6	2	2	0
13	369	6	24						33	34	67	104
14	152	7	4	1					8	20	32	43
15	1670	156	233	140								
16	38									5	5	5
17	329		28		70		80	62	10	30	48	61
18	1095				109	197	168	167	14	47	200	146
19	100								11	12	15	6
20	106									21	24	
21	60								3	0	6	3
22	1500								0	2	4	
23	144								5	6	8	
24	38.5								7	15	12	
25	100								4	1		1
26	30								2	4		1
27	78								16	6		12
28	24.3								5	6	6	
29	3.3								2	1		

Table 1: Results of the Corncrake census in 29 sites in European Russia during 1995-2005.

Bird Census News 2006: 19/2

Atlas of the Breeding and Wintering Birds in Naples City, 2001 - 2005

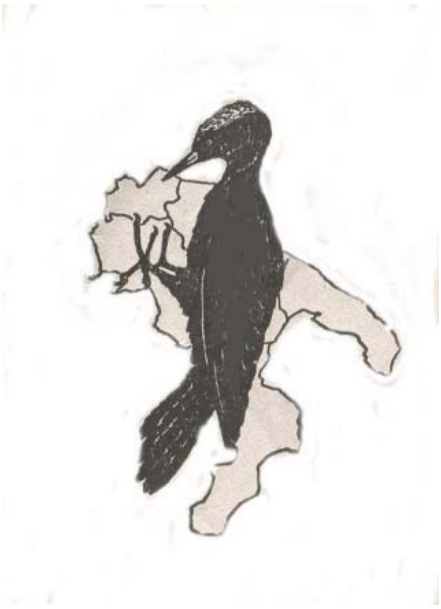
Maurizio Fraissinet

Associazione Studi Ornitologici Italia Meridionale – ASOIM Onlus, c.p. 253, 80046 San Giorgio a Cremano (Napoli) - Italy

Between 1990 and 1994, an atlas of the breeding and wintering birds in the city of Naples was completed and published in a book included in a series of monographs by the Associazione Studi Ornitologici Italia Meridionale – A.S.O.I.M. (Fraissinet, 1995). Ten years later, the project was repeated with the same modalities in order to study possible variations the number, composition, and distribution of species. The project is now complete, and here we present the initial results and compare them to those of the previous atlas. The analysis of a territory, ten years later, though the use of distribution maps, avian community list, and population studies based on standardised methodologies, such as an ornithological atlas, is an important occasion to study variations that took place over time and their impact on their environment. These analyses become all the more interesting due to the fact that they have been undertaken in a densely populated urban environment subject to rapid, radical change, which needs to constantly monitor the quality of urban life in order to ensure the well-being of its citizens.

The city of Naples, located at 40°51' N and 14°15' E, covers 117.3 square kilometres, which are completely urbanised except for a few residual agricultural areas and city parks. Altitude ranges from sea level to 457 meters on Camaldoli hill. The city is located on a natural amphitheatre, and covers about 8 km of the north-eastern border of one of the largest gulfs on the Tyrrhenian Sea. The city lies exclusively on volcanic rocks, especially pyroclastic rocks (AA.VV., 1967). The climate is typical of the Mediterranean coast, with a few variations, such as a higher temperature, arising out of intense urbanisation; it falls within the meso-Mediterranean (accentuated) bio-climatic zone (La Valva & De Natale, 1993-94). This is confirmed by a floristic analysis of the urban area: 35 % of total species are terophitic (a typical characteristic of the Mediterranean flora), and 34 % of total species are Mediterranean (s. l.) in chorological terms. From a vegetational point of view, the urban area falls within the Mediterranean subset of the sub-Mediterranean evergreen sclerophylous plant community. In the few remaining areas that have not been built-up, there are groves of Holm Oak (*Quercus ilex*), sometimes mixed with Downy Oak (*Q.pubescens*), Black

Locust (*Robinia peseudoacacia*), Manna Ash (*Fraxinus ornus*), and Strawberry Tree (*Arbutus unedo*). Along the immediate coast, there are a few areas with thermophilous and xerophilous Mediterranean scrub, typical of the Oleo – Ceratonion Alliance (s. l.). There is an abundance of ornamental flora, as well as rock-loving plants typical of the Tyrrhenian coast. Finally, orchards and vegetable gardens complete the picture (La Valva in Fraissinet, 1995). Changes in the urban landscape that occurred since the previous atlas include the abandonment of several industrial areas on the western and eastern outskirts of the city, the demolition of the large steel factory in Bagnoli, and the creation of numerous small neighbourhood parks. Ecosystems that can be found in the city include built-up and natural coastal areas, pre-war and post-war built-up area, the historical centre, agricultural areas, large parks (larger than 1 hectare), small parks and gardens (less than 1 hectare), which include old and new parks, uncultivated land, industrial areas, an airport, rail yards, and cemeteries.



Two-thirds of the city's territory is made up of low hills of volcanic origin, while the remaining one-third is made up floodplains. The coast is characterised by the presence of a promontory – Posillipo -, and an island – Nisida – which is mostly uninhabited and covered with Mediterranean scrub.

We followed the guidelines of the working group on "Italian urban ornithological atlases" (Dinetti *et al.*, 1995; Dinetti *et al.*, 1996; Dinetti & Fraissinet, 1998; Dinetti & Fraissinet, 2001) and divided the city into 142 blocks (1 km per side) during the breeding season, and 145 blocks (1 km per side) during the wintering season. The blocks are derived from the UTM system. The different number of blocks during the breeding and wintering seasons is due to the fact that several coastal blocks in the harbour area were visited only during the wintering season, as the habitat there is suitable for wintering but not for breeding. Compared to the previous atlas, there were two fewer blocks for both the wintering and breeding seasons. Data for the breeding season was collected between April 1 and June 30, while data for the wintering season was collected between December 1 and February 28. For breeding data, we used the 16 categories proposed by the European Ornithological Atlas Committee (EOAC), discriminating between possible, probable, and confirmed breeding. For wintering data, we only looked at presence/absence; where possible, we estimated numerical abundance through a base-10 logarithmic scale subdivided into five

abundance classes: 1 – 9 individuals, 10 – 99, 100 – 999, 1.000 – 9 999, 10 000 and above. A total of 33 observers took part in gathering the data, with an average of 14 observers per season. We collected a total of 938 data forms, with a total of 9 158 data points, of which 2 092 were used for the breeding season, and 2 515 were used for the wintering season. Data was gathered mostly to conduct qualitative analyses, although a quantitative approach was attempted for some species, both in the wintering and breeding seasons. The species for which a complete census was made were the rarest ones and/or the easiest ones to census

We recorded 64 breeding species and 76 wintering species. We recorded two more breeding species compared to 1990 – 1994, while the number of wintering species remained the same. The average number of breeding species per block was 14.6, while during the previous atlas it was 12.3. The average number of wintering species per block was 17.3, while during the previous atlas it was 15.7. Breeding species recorded during the previous atlas and not recorded in the current one include *Coturnix coturnix*, *Alauda arvensis*, *Anthus campestris*, *Sylvia cantillans*, *Parus ater*, *Sitta europaea*, *Emberiza citrinella*, *Miliaria calandra*, while wintering species recorded during the previous atlas and not recorded in the current one include *Aythya ferina*, *Gallinago gallinago*, *Larus minutus*, *Larus canus*, *Lullula arborea*, *Turdus iliacus*, *Sitta europaea*.

In the last ten years, 12 new species began to breed in the city of Naples, while 8 became extirpated. The latter include two species (*Anthus campestris* and *Emberiza citrinella*) whose breeding was never confirmed, while the remaining 6 were confirmed but highly localised breeders, sometimes confined to a single locality. *Parus ater* no longer breeds but continues to be found in winter. Of the 12 new species, two, *Accipiter nisus* and *Corvus corax*, are only possible or probable breeders. Four of the remaining ten species are waterbirds, which is quite interesting given than the city only has small, usually artificial wetlands. The list of wintering species also shows some differences from the previous atlas. Species that have not been observed since the previous atlas include *Sitta europaea*, which is thus extirpated as a wintering species as well. In any case, *Sitta europaea*, along with the other species that have not been observed since the previous atlas, had a highly localised distribution within the city. Of the 8 new wintering species, 4 are waterbirds, whose presence in the city is due to the fact that they winter on the sea right along the coast. Only one exotic species, *Psittacula krameri*, colonised the city during this period; it is present all year round. Finally, Eurasian Golden Oriole (*Oriolus oriolus*) should not be considered extirpated: its status as a breeder was considered doubtful in the previous atlas, and the current atlas confirmed that this species is present in the city only as a migrant.

The text for each single species includes the Order and Family that the species belongs to, its chorological category, its phenology in Naples, the percentage of occupied atlas blocks, the difference in the percentage of occupied blocks between the first and second atlases, and the distribution map (or maps in case the species is present both as a breeder and a winterer). The text also states whether the species is monotypic or polytypic, and briefly describes its breeding and wintering range, with particular emphasis on its status in the Western Palaearctic. The text then describes its distribution and status in Italy both in winter and during the breeding season, its diet, and its status in urban areas both in Italy and abroad. Finally, the text describes the species' distribution in Campania, and presents the data on its distribution and status in the city of Naples according to the data gathered for the atlas.
The final part of the book includes a comparison with the results of the previous atlas (including a map for the period 1990-1994), and with those of other Italian cities for which an ornithological atlas has been published. Finally, we provide a brief description of each species' conservation status, with reference to the various international conservation status codes.
Distribution maps for the breeding season (Fig. 1) show red dots, while those for the wintering season show blue squares (Fig. 2).
The red dots come in three sizes, and indicate the breeding status of each species: possible , probable and confirmed. The size of the blue square indicates the population estimate for each block, on a base-ten logarithmic scale: 1 – 9 individuals; 10 – 99; 100 – 999; 1000 – 9999; 10 000 and above.

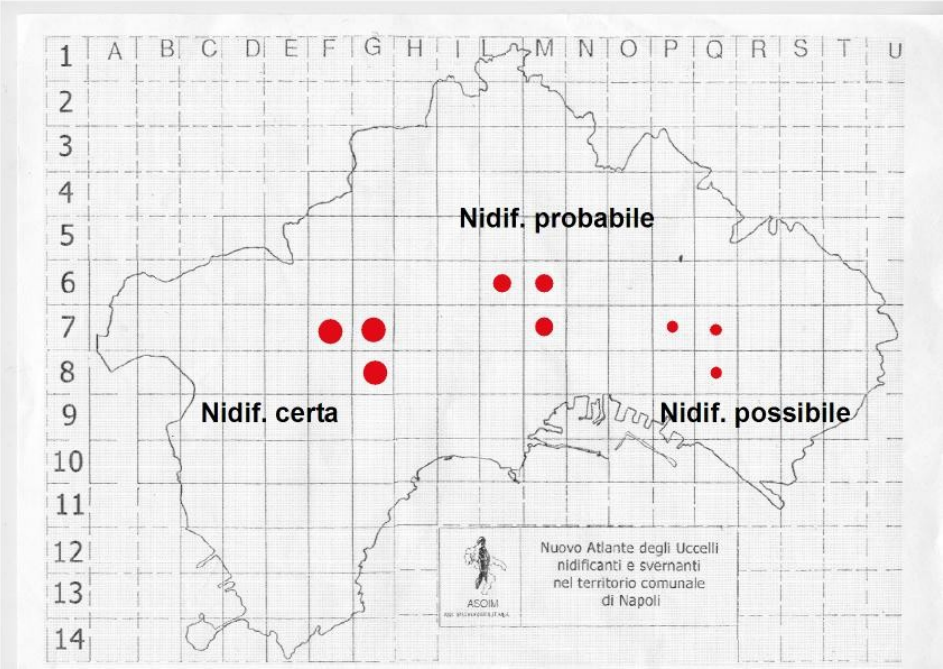


Fig. 1: Map showing the symbols used for indicating breeding status (possibile = possible, probabile = probable, certa = confirmed)

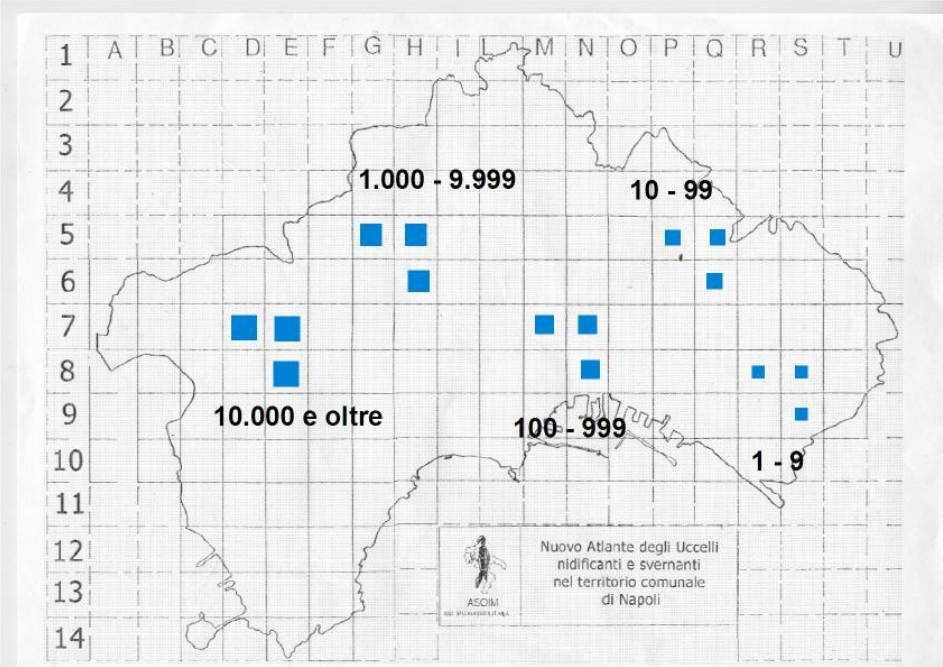


Fig. 2: Map showing the symbols used for indicating wintering status and abundance

For general information on distribution, habitat, diet, status in Italy, and subspecies present in Italy, we referred to the following publications (full citations are in the bibliography): Brichetti *et al.*, 1986; Brichetti *et al.*, 1992; Brichetti & Gariboldi, 1997; del Hoyo *et al.*, 1992 - 2005; Hagemeijer & Blair (Eds.), 1997, Snow & Perrins, 1998; Brichetti & Fracasso, 2003 – 2004; Spagnesi & Serra, 2003.
The linear sequence of our systematic list follows the CISO-COI list: www.ciso-coi.org (version 25.01.2005).
Information on status in Campania was drawn from: Fraissinet and Kalby, 1989; Scebba, 1993; Milone, 1999; Fraissinet *et al.*, 2001.
For information on urban avifaunas, we referred to: Dinetti and Fraissinet, 2001, Fraissinet, 2005 and unpublished information from Maurizio Fraissinet.
We used the previous urban atlas for Naples (Fraissinet, 1995) in order to make comparisons with the situation in 1990-1994. For other Italian cities, we refer to the following ornithological atlases:

- Trento, breeding: LIPU, 1998
- Turin, breeding and wintering: Maffei *et al.*, 2001
- Biella, breeding: Bordignon, 1999
- Brescia, breeding: Ballerio & Brichetti, 2003
- Pavia, breeding: Bernini *et al.*, 1998
- Cremona breeding and wintering: Groppali, 1994
- Crema, breeding: Mastrorilli, 2002

- Genova, breeding and wintering, Borgo *et al.*, 2005
- San Donà di Piave breeding and wintering: Nardo, 2003
- La Spezia, breeding: Dinetti, 1996
- Reggio Emilia: Gustin, 2002
- Florence, breeding: LIPU, 2002
- Pisa, breeding: Web site of the Municipality of Pisa
- Livorno, breeding: Dinetti, 1994
- Grosseto, breeding: Giovacchini, 2001
- Viterbo, breeding: Cignini *et al.*, 1994
- Rome, breeding: Cignini and Zapparoli, 1996
- Cagliari, breeding: Mocci Demartis & Gruppo ICNUSA, 1992

For foreign cities, we refer to the following ornithological atlases:

- London, breeding: Monter, 1977
- Warsaw, breeding and wintering: Luniak *et al.*, 2001; Nowicki, 2001
- Leszna (Poland), breeding: Kuzniak, 1996
- Prague, breeding: Fuchs *et al.*, 2002
- Berlin, breeding: Witt, 1984; Degen & Otto, 1988
- Brussels, breeding: Rabosée *et al.*, 1995
- Sofia, breeding: Iankov, 1992

European conservation status follows BirdLife International (2004), while we adopted the latest version of the Italian Red List by LIPU & WWF (1999). For risk status at the European level, we use the SPEC (Species of European Conservation Concern) categories coined by BirdLife International.
The three categories include:
SPEC1 which refers to species of global conservation concern.
SPEC2 species have an unfavourable conservation status in Europe, and their distribution is concentrated in Europe.
SPEC3 have an unfavourable concentration status in Europe, but are not concentrated in Europe.

Another paragraph lists the species that were observed during the study period, but which neither breed nor winter in the city; they are probably late or early migrants. They are nevertheless included because they have been observed in the city over protracted periods, which suggests that they may breed or winter at some point in the future.

The chapter titled Analisi dei risultati (Analysis of results) includes a quantitative analysis of Naples' avifauna. We evaluate the numerical status of each species during the breeding and wintering seasons (Table 1 and 2). From Table 2 it is clear that *Falco tinnunculus is* the most common of the Non-Passerines.

species	breeding season in 2001 - 2005	breeding season in 1990 - 1994	notes
Tachybaptus ruficollis	0,7		
Ixobrychus minutus	0,7		
Accipiter nisus	2,1		
Buteo buteo	9,1		
Falco tinnunculus	45,7	13,1	
Falco peregrinus	9,1	4,8	
Coturnix coturnix		3,4	extinction
Gallinula chloropus	1,4	2	
Fulica atra	0,7		new species
Charadrius dubius	1,4		new species
Larus michahellis	21,1	2	
Columba livia var.domestica	94,3	79,8	
Columba palumbus	2,1		new species
Streptopelia decaocto	40,8	7,6	
Psittacula krameri	3,5		new species
Tyto alba	9,8	6,2	
Otus scops	4,9	1,3	
Athene noctua	33,9	33,3	
Strix aluco	4,9	1,3	
Apus apus	19,7	13,8	
Apus melba	4,2	2	
Apus pallidus	0,7	0,6	
Merops apiaster	2,1		new species
Upupa epops	10,5		new species
Jynx torquilla	12,6	11,8	
Picoides major	31,6	10,4	
Calandrella brachydactyla	0,7	0,6	
Alauda arvensis		5,5	extinction
Hirundo rustica	7	6,2	
Delichon urbica	19,7	14,5	
Anthus campestris		0,6	extinction
Motacilla cinerea	1,4	5,5	
Motacilla alba	28,1	22,2	
Troglodytes troglodytes	35,9	45,1	
Erithacus rubecula	14,0	14,5	
Luscinia megarhynchos	4,9	13,1	
Saxicola torquata	14	22,9	
Monticola solitarius	17,6	3,4	
Turdus merula	93,6	86,8	
Cettia cetti	36,6	25,6	
Cisticola juncidis	23,9	34,7	
Acrocephalus scirpaceus	2,1	1,3	
Acrocephalus arundinaceus	0,7	0,6	
Sylvia cantillans		2	extinction
Sylvia melanocephala	43,6	47,2	
Sylvia communis	2,8	8,3	
Sylvia atricapilla	83	72,2	
Phylloscopus collybita	4,9	4,8	
Regulus ignicapillus	7,7	6,2	
Muscicapa striata	22,5	20,1	
Aegithalos caudatus	0,7	1,3	
Parus ater		2,7	extinction
Parus caeruleus	32,3	40,9	
Parus major	52,1	59	

species	breeding season in 2001 - 2005	breeding season in 1990 - 1994	notes
Sitta europaea		4,1	extinction
Certhia brachydactyla	12,6	11,8	
Lanius collurio	9,8	9,7	
Lanius senator	0,7	2	
Garrulus glandarius	7,7	1,3	
Pica pica	21,1	2,0	
Corvus monedula	32,3	17,3	
Corvus corone cornix	25,3		new species
Corvus corax	5,6		new species
Passer italiae	99,2	95,8	
Passer montanus	54,9	54,8	
Fringilla coelebs	38	49,3	
Serinus serinus	94,3	85,1	
Carduelis chloris	80,9	65,2	
Carduelis carduelis	48,4	49,3	
Emberiza citrinella		0,6	extinction
Emberiza cirlus	7	4,8	
Miliaria calandra		2,7	extinction

Table 1: % blocks covered in the breeding season

species	winter season in 2001 - 2005	winter season in 1990 - 1994	notes
Tachybaptus ruficollis	0,6	0,6	
Podiceps cristatus	3,4		new species
Podiceps nigricollis	2,7	1,3	
Morus bassanus	2,7	1,3	
Phalacrocorax carbo	10,3	3,4	
Ardea cinerea	3,4		new species
Aythya fuligula		0,6	extinction
Accipiter nisus	7,5		new species
Buteo buteo	31	7,4	
Falco tinnunculus	51,3	12,9	
Falco peregrinus	15,1	8,1	
Rallus aquaticus	0,6		new species
Gallinula chloropus	1,3	1,3	
Fulica atra	0,6		new species
Actitis hypoleucos	1,3	1,3	
Vanellus vanellus	3,4	0,6	
Scolopax rusticola	2,7		new species
Gallinago gallinago		0,6	extinction
Larus melanocephalus	7,5	3,4	
Larus minutus		3,4	extinction
Larus ridibundus	22,2	28,5	
Larus canus		1,3	extinction
Larus fuscus	0,6	2	
Larus michaellis	34,4	24,4	
Thalasseus sandvicensis	3,4	4,7	
Columba livia v. domestica	88,9	81,6	
Columba palumbus	1,3	2,7	
Streptopelia decaocto	26,2	6,1	
Psittacula krameri	2,7		new species
Tyto alba	10,3	3,4	

species	winter season in 2001 - 2005	winter season in 1990 - 1994	notes
Otus scops	1,3	4,8	
Athene noctua	28,9	25,1	
Strix aluco	5,5	0,6	
Asio otus	0,6	0,6	
Alcedo atthhis	4,8	4,0	
Jynx torquilla	1,3	2	
Picoides major	28,9	13,6	
Lullula arborea		0,6	extinction
Alauda arvensis	2	3,4	
Anthus pratensis	8,9	12,9	
Motacilla cinerea	20,6	22,4	
Motacilla alba	73,1	65,3	
Troglodytes troglodytes	42,7	42,8	
Prunella modularis	33,7	46,9	
Erithacus rubecula	91,7	90,4	
Phoenicurus ochruros	71	74,1	
Saxicola torquata	17,2	26,5	
Monticola solitarius	14,4	2,7	
Turdus merula	92,4	85,7	
Turdus philomelos	8,2	8,8	
Turdus iliacus		0,6	extinction
Cettia cetti	28,9	15,6	
Cisticola juncidis	6,2	10,8	
Sylvia melanocephala	45,5	46,9	
Sylvia atricapilla	67,5	56,4	
Phylloscopus collybita	56,6	76,1	
Regulus regulus	0,6	4	
Regulus ignicapillus	13,1	21	
Aegithalos caudatus	4,8	9,5	
Parus ater	1,3	1,3	
Parus caeruleus	44,8	36,7	
Parus major	53,7	54,4	
Sitta europaea		2	extinction
Certhia brachydactyla	10,3	8,1	
Remiz pendulinus	0,6	2,7	
Garrulus glandarius	4,3	1,3	
Pica pica	32,4	4,7	
Corvus monedula	35,1	25,8	
Corvus corone cornix	28,7	1,3	
Corvus corax	2,7		new species
Sturnus vulgaris	35,1	23,8	
Passer italiae	92,4	97,2	
Passer montanus	45,5	60,5	
Fringilla coelebs	53,1	58,5	
Serinus serinus	71,7	66,6	
Carduelis chloris	59,3	52,3	
Carduelis carduelis	44,1	48,9	
Carduelis spinus	2	17,9	
Carduelis cannabina	2,7	4	
Loxia curvirostra		1,3	extinction
Coccothr.coccothraustes	1,3	0,6	
Emberiza cirlus	0,6	4	
Emberiza schoeniclus	0,6	0,6	

Table 2: % blocks covered in the wintering season

Atlas results show that Naples hosts 43 resident species, 29 species that are present only in the winter, and 17 breeding species that do not occur in winter.
It is interesting to note that *Dendrocopos major* and *Parus caeruleus* both occupy 31.6 % of atlas blocks, and that *Phylloscopus collybita* and *Strix aluco* both occupy 4.9 % of atlas blocks. These species pairs use the same habitats, and the fact that they are found in the same atlas blocks highlights the extent of these habitats within the city, thus confirming the validity of birds as environmental indicators. Additionally, they confirm the validity of the methodology used during the atlas project.

There are 25 species of breeding Non-Passerines, or 39 % of all breeding species, and the relationship of Passerines to Non-Passerines– P/NP – is 1.56. There are 33 species of wintering Non-Passerines, or 43.4 % of all wintering species, and the relationship of Passerines to Non-Passerines– P/NP – is 1.30. The higher percentage of Non-Passerines in winter is explained in part by the presence of the sea, which hosts wintering Podicipediformes, Pelecaniformes, and Charadriiformes. Our analysis of chorological categories for both wintering and breeding species shows that Palaearctic species are the most numerous; interestingly, there is a high percentage of Palaearctic-Oriental species as well.

Another way to measure the quality of the avifauna is through the number of SPEC species. In Naples, there are two breeding SPEC2 species – *Otus scops* and *Lanius senator* – and 14 SPEC3 species, while there are four wintering SPEC2 species – *Vanellus vanellus*, *Sterna sandvicensis*, *Otus scops* and *Carduelis cannabina* – and 11 SPEC3 species. There are no SPEC1 species, and the number of SPEC2 species is quite small, since the species that breed in urban areas are generally common and widespread ones.
We should point out that BirdLife International does not recognise *Passer italiae* (Italian Sparrow) as a separate species, but rather as a subspecies of House Sparrow *P. domesticus*, whose risk category is SPEC3.

The most species-rich atlas blocks are those located in hilly areas: despite the fact that they are located in heavily built-up areas, they feature wooded areas, parks, cultivated land, and rocky areas that can host a fair number of species. An atlas block that features thermal canals also recorded a high number of species.
In winter, the species diversity in coastal blocks increases significantly due to the arrival of wintering species tied to coastal and marine habitats.

An analysis of trends shows that 39 breeding species occupy more blocks that they did during the previous atlas, 13 species occupy the same number of blocks, and 20 species occupy fewer blocks. With regards to wintering

species, 38 occupy more blocks than they did during the previous atlas, 10 species occupy the same number of blocks, and 35 species occupy fewer blocks.

A species-by-species analysis shows a number of interesting trends. Breeding species that show the most significant increases in terms of the percentage of occupied blocks include: *Falco tinnunculus*, *Larus micahellis*, *Streptopelia decaocto*, *Dendrocopos major*, *Monticala solitarius*, *Garrulus glandarius*, *Pica pica*. Those that show the most significant decreases include: *Motacilla cinerea*, *Troglodytes troglodytes*, *Saxicola torquata*, *Luscinia megarhynchos*, *Cisticola juncidis*, *Sylvia communis*, *Parus caeruleus*, *Fringilla coelebs*.
Species whose wintering populations have increased most significantly include: *Buteo buteo*, *Falco tinnunculus*, *Falco peregrinus*, *Streptopelia decaocto*, *Dendrocopos major*, *Monticola solitarius*, *Cettia cetti*, *Pica pica*, *Corvus corone cornix*. Those whose wintering populations have decreased most significantly include: *Prunella modularis*, *Saxicola torquata*, *Phylloscopus collybita*, *Regulus ignicapillus*, *Passer montanus*, *Carduelis spinus*.

Comparisons with other Italian and European cities for which an ornithological atlas has been published show that Naples hosts fewer breeding species than other large cities such as London, Berlin, Brussels, Warsaw, Prague, Sofia, Turin, Florence, and Rome. This is explained by the geographic and bio-geographic characteristics of the city, which is located along the Mediterranean coast and at the southern end of a peninsula, and which is not crossed by a large river – unlike the cities listed above – and thus does not enjoy the increases in biodiversity associated with riverine habitats.

References

AA.VV., (1967). Il sottosuolo di Napoli. Relazione della Commissione di Studio. Comune di Napoli ed.

Ballerio G. & Brichetti P., (2003). Atlante degli uccelli nidificanti nella città di Brescia 1994 – 1998. Natura Bresciana, 33: 133 – 167.

Bernini F., Dinetti M., Gariboldi A., Matessi G. & G. Rognoni, (1998). Atlante degli uccelli nidificanti a Pavia. Comune di Pavia e LIPU, Pavia.

BirdLife International, (2004). Birds in Europe: population estimates, trends and conservation status. BirdLife ed., Cambridge.

Brichetti P. & Gariboldi A., (1997). Manuale pratico di Ornitologia. Calderini ed. Bologna.

Brichetti P. & Fracasso G., (2003 – 2004). Ornitologia italiana. Voll. 1 e 2. Alberto Perdisa ed., Bologna.

Brichetti P., Cagnolaro L. & Spina F., (1986). Uccelli d'Italia. Giunti ed., Firenze.

Brichetti P., De Franceschi P. & Baccetti N., (1992). Uccelli. Volume 1. Fauna d'Italia. Calderini ed., Bologna

Bordignon L., (1999). Gli uccelli della Città di Biella. Comune di Biella ed., Biella

Borgo E., Galli L., Galluppo C., Maranini N. & Spanò S. (a cura di), (2005). Atlante ornitologico della città di Genova. Bollettino dei Musei e degli Istituti Biologici dell'Università di Genova, 69 – 70: 1 - 317. Genova

Cignini B. & M. Zapparoli (eds.), (1996). Atlante degli uccelli nidificanti a Roma. Fratelli Palombi, Roma.

Cignini B., Meschini A. & M. Zapparoli, (1994). Progetto Atlante degli uccelli nidificanti a Viterbo: prima stagione di rilevamento (1991). In: Baldaccini N.E., Mingozzi T. e C. Violani (eds.). Atti del VI Convegno Italiano di Ornitologia. Museo Regionale Scienze Naturali, Torino: 533-534.

Degen G. & Otto W., (1988). Atlas der Brutvogel von Berlin. Naturschutzarbeit in Berlin und Brandenburg, Berlino e Potsdam.

del Hoyo J., Elliott A. & Sargatal J., (1992 – 2005). Handboock of the Birds of the World. Voll.1 – 10. Lynx ed., Barcellona.

Dinetti M., (1994). Atlante degli uccelli nidificanti a Livorno. Quaderni dell'ambiente 5. Comune di Livorno ed., Livorno.

Dinetti M. (ed.), (1996). La conservazione della biodiversità nel comune di La Spezia. Comune della Spezia ed., La Spezia.

Dinetti M. & Fraissinet M., (1998). Gli Atlanti ornitologici urbani in Italia. In: Bologna M.A., Carpaneto G.M. and B. Cignini (eds.). Atti 1° Convegno Nazionale sulla Fauna Urbana, Roma, 12 aprile 1997. Fratelli Palombi Editori, Roma: 37-39.

Dinetti M. & Fraissinet M., (2001). Ornitologia urbana. Calderini ed., Bologna.

Dinetti M., Cignini B., Fraissinet M. & M. Zapparoli, (1995). Gruppo di lavoro "Atlanti ornitologici urbani italiani": standard per le ricerche sull'Avifauna di ambienti urbanizzati. Rivista italiana di Ornitologia 64 (2): 141-149.

Dinetti M., Cignini B., Fraissinet M. & Zapparoli M., (1996). Urban ornithological atlases in Italy. In: Caccamise D.F. & M. Luniak (eds.). Birds in Urban and suburban areas - selected contributions from the XXI International Ornithological Congress (Wienna, 1994). Acta Ornithologica 31 (1): 15-23.

Fraissinet M (ed.), (1995). Atlante degli uccelli nidificanti e svernanti nella città di Napoli. Monografia n.4 dell'ASOIM. Electa Napoli ed., Napoli

Fraissinet M., (2005). Avifauna dei capoluoghi di provincia italiani. Ecologia urbana, XVII: 7 – 8.

FRAISSINET M. & KALBY M., (1989). Atlante degli uccelli nidificanti in Campania (1983 – 1987). Monografia n.1 dell'ASOIM. Reg. Campania ed., Napoli

FRAISSINET M., CAVALIERE V., CONTI P., MILONE M., MOSCHETTI G., PICIOCCHI S. & SCEBBA S., (2001). Check-list degli uccelli della Campania. Riv. ital. Orn., 71: 9 – 25.

FUCHS R., SKOPEK J., JIRI FORMANEK E EXNEROVA A., (2002). Atlas hnizdniho roszireni ptaku Prahy. Ceska spolecnost ornitologicka ed., Praga

GIOVACCHINI P., (2001). Atlante degli uccelli nidificanti a Grosseto. Suppl. al num. 17 degli Atti del Museo di Storia Naturale della Maremma.

GROPPALI R., (1994). Gli uccelli nidificanti e svernanti nella città di Cremona. A.E.M. di Cremona e Museo Civ. St. Naturale eds., Cremona.

GUSTIN M., 2002 – Uccelli in città. Atlante degli uccelli nidificanti a Reggio Emilia. Comune di Reggio Emilia ed.

HAGEMEIJER E.J.M. & M.J. BLAIR (EDS.), (1997). The EBCC Atlas of European Breeding Birds: Their Distribution and Abundance. T & A D Poyser, London.

IANKOV P., (1992). Atlas of the breeding birds of Sofia. Bird Census News, 5: 1 – 40.

KUZNIAK S., (1996). Atlas ptakov legowych Leszna w latach 1990-1993. Bogucki Wydawnictwo Naukowe ed., Poznan

LA VALVA E., (1995). Aspetti floristici e vegetazionali della città di Napoli. In Fraissinet M (ed.), Atlante degli uccelli nidificanti e svernanti nella città di Napoli. Electa Napoli ed., Napoli

LA VALVA V. & DE NATALE A., (1993-94). Prime osservazioni sulla flora urbana di Napoli. Allionia, 32: 215 – 220.

LIPU, (1998). Atlante degli uccelli nidificanti nel comune di Trento. Natura alpina, 48: 1 – 207.

LIPU, (2002). Atlante degli uccelli nidificanti nel Comune di Firenze. LIPU, Comune di Firenze e BirlLife International eds.

LIPU & WWF (EDS), (1999). Nuova Lista Rossa degli Uccelli nidificanti in Italia. Riv. ital. Orn., 69: 3 – 43.

LUNIAK M., KOZLOWSKI P., NOWICKI W. & PLIT J., (2001). Ptaki Warszawy 1962 – 2000. Instytut Geografii i Przestrzennego Zagospodarowania PAN ed., Varsavia.

MAFFEI G., PULCHER C., ROLANDO A. & CARISIO L., (2001). L'avifauna della città di Torino: analisi ecologica e faunistica. Monografia XXXI del Museo Regionale di Scienze Naturali di Torino.

MASTRORILLI M., (2002). La comunità ornitica nidificante della città di Crema (CR) nel biennio 2000 – 2001. Riv. Ital. Orn., 72: 261 – 268.

MILONE M., (1999). Atlante degli uccelli svernanti. Monografia n.6 dell'ASOIM.

MOCCI DEMARTIS A. & GRUPPO I.C.N.U.S.A., (1992). Atlanti ornitologici urbani. Cagliari. Ecologia Urbana 4 (2-3): 22-23.

MONTIER D., (1977). Atlas of Breeding Birds of the London Area. Batsford, London.

NARDO A., (2003). Atlante degli uccelli nidificanti e svernanti a San Donà di Piave. Comune di San Donà di Piave e LIPU eds., Treviso.

NOWICKI W., (2001). Ptaki Srodmiescia Warszawi. Muzeum i Instytut Zoologii PAN ed., Varsavia

RABOSÉE D., DE WAWRIN H., TRICOT J. & VAN DER ELST D. (ED.), (1995). Oiseaux de Bruxelles. Aves ed., Liège.

SCEBBA S., (1993). Gli uccelli della Campania. Esselibri ed., Napoli.

SNOW D.W. & PERRINS C.M., (1998). The Birds of the Western Palearctic. Concise edition, 2 voll. Oxford University Press ed., Oxford.

SPAGNESI M. & SERRA L. (EDS.), (2003). Uccelli d'Italia. Guiformes, Charadriiformes, Pterocliformes, Columbiformes, Cuculiformes, Strigiformes, Caprimulgiformes, Apodiformes, Coraciiformes, Piciformes. Quaderni di conservazione della natura. Ministero dell'Ambiente e INFS eds.

WITT K., (1984). Brutvogelatlas. Berlin (West). Ornithologischer Bericht fur Berlin (West) ed., Berlino ovest.

New project helps to measure the progress towards halting the loss of biodiversity by using birds as indicators.

In September of 2006 bird conservation NGOs from Belarus, Macedonia, Lithuania, Poland, Romania, Turkey and Bulgaria started a project to improve their capacity to run successful national Common Bird Monitoring Schemes (CBM). These monitoring schemes are citizen science initiatives using data collected by volunteers to analyse how the populations of common and widespread birds change in response to environmental conditions. The results of this analysis are used to develop indexes for the quality of the natural habitats and the environment. For example the EU uses the Farmland Bird Index which is produced using these data as a measure of the effective implementation of its commitments set by the Convention of Biological Diversity to halt biodiversity loss by 2010. The project is the first of the so called Strategic projects of the Global Environmental Facility (GEF). It is co-financed by the Royal Society for the Protection of Birds, the BirdLife partner in UK.

The Common Bird Monitoring scheme is based on estimation of data, collected by a large number of reporters. The survey is designed to be a quick, simple and, most importantly, an enjoyable birdwatching exercise. Survey sites are randomly selected 1×1 km squares. Observers make just three visits per year to specially selected squares, the first to record habitat types and to set up a suitable survey route (only first year), and the second and third to record birds that are seen or heard while walking along the route. The CBM is based on the establishment and coordination of a network of volunteers who have to spent about 6 hours per year to count their plots. Organizations involved in this project are the Bulgarian Society for the Protection of Birds which is leading the project, Romanian Ornithological Society, Akhova Ptushak Batsakaushchyny in Belarus, Doğa Derneği in Turkey, Polish Society for the Protection of Birds and Lithuanian Ornithological Society which all are BirdLife partners, Macedonian Ecological Society and the Pan-European Common Bird Monitoring Scheme (PECBM) project, which is a joint initiative of the European Bird Census Council (EBCC) and BirdLife International.

The countries involved in the project have different levels of experience with CBM schemes and therefore groups are formed. Group 1 includes Belarus, Turkey and Macedonia without a CBM scheme operational yet; group 2 - Romania and Lithuania which have running CBM schemes but with limited species and habitat coverage and group 3 - Bulgaria and Poland which have full running CBM schemes but still have room for improvements, especially in knowledge of young and inexperienced fieldworkers.

The activities under the project and the expected outputs are focused on filling critical gaps in the CBM scheme's implementation, sharing experience and knowledge between partners and influencing relevant state institutions and politics for adopting Wild Bird Indicators. Thus close cooperation with decision makers is a key activity under the project, especially for the countries that have already started CBM schemes but where the results from these schemes are still not officially recognized on state level.
Among the main activities, planned to be implemented are capacity assessment of the countries to start and implement full CBM or international census plots, training workshops, and forums for decision makers, setting up a system to collect field ornithological data from the volunteers via Internet, production of information materials for participants such as simple bird guides on local languages and CD with bird songs, and awareness materials for policy and decision makers like annual reports with results from the CBM, species population trends and bird index and 'audits' of national policy & legislation use of CBM outputs.

The project is expected to bring a lot of essential results for the countries as well as for the participating organisations. One of the main outcomes is shared experience and improved knowledge across the countries for establishing and running a CBM scheme as a successful citizen science based initiative that can produce scientifically accurate and meaningful biodiversity impact indicators based on wild bird populations and in the same time strengthen the organisations involved.

For more information:
Sylvia Barova – Project coordinator, BSPB/BirdLife Bulgaria
+359 2 971 58 55 sylvia.andonova@bspb.org www.bspb.org

BSPB/BirdLife Bulgaria

Bulgarian Society for the Protection of Birds

Sponsorship opportunity to the success of bird conservation in Bulgaria

The first ever

Bulgarian Breeding Birds Atlas

Sponsored by:

THE BULGARIAN BREEDING BIRDS ATLAS

- This is the first ever Bulgarian Breeding Birds Atlas and the first systematic coverage of the bird distribution and numbers in Bulgaria;
- The Atlas was made on the standard methodology of the European Ornithological Atlas and the national atlases of most of the European countries;
- In total 1240 10×10 km UTM squares of the whole territory of Bulgaria have been surveyed;
- 274 bird species have been established as breeding in the country, all information was stored into the Bulgarian National Bird Database with BSPB;
- For each of the species 2 maps have been produced: a map of the breeding probability (possible, probable and confirmed) and a map of the approximate numbers of breeding pairs in each of the 1240 UTM squares;
- Species accounts include basic information and are centred around the detailed distribution and numbers maps, population numbers and trends;
- The Text of the Atlas will be in both Bulgarian and English;
- The Atlas will be the major conservation argument and a tool for bird conservation in Bulgaria during the next decades;
- The Dutch BirdLife Partner, Vogelbescherming NEDERLAND and the Dutch NATIONALE POSTCODE LOTERIJ has funded the editorial work and the publishing of the Atlas

BirdLife INTERNATIONAL

SPONSOR CONSERVATION ACTIONS FOR BIRDS IN BULGARIA

and

YOUR NAME and/or COMPANY'S LOGO will appear under the species account of your chosen species in the atlas.

Why you should sponsor a species in the atlas.

- Because NOW you have the opportunity to prevent the staring severe destruction of the Bulgarian bird fauna due to the increasing development of the country, intensification of its agriculture and of the use of natural resources;

- Because BSPB is the leading Nature conservation organisation in the country, successfully working for the last two decades for the preservation of bird species, sites and habitats;

How to sponsor a species?

By sending 100 GBP per species to the BSPB Bank Account:

RAIFFEISENBANK
18-20 N. Gogol Str.,
BG-1504 Sofia, BULGARIA

in GBP: IBAN BG82RZBB9155 156 010 73 11
in EURO: IBAN BG50RZBB9155 146 010 73 86

BIC code: RZBBBGSF

Please, make sure to:
- mention of which species you are sponsoring the conservation;
- mention your/your company's name, as you would like it to appear in the Atlas;
- send to BSPB a file with the logo you want to appear under the species account.

THANK YOU FOR YOUR HELP!

For more information, do not hesitate to contact:

Dr. Petar Iankov,
Chief Editor of the Atlas
BSPB/BirdLife Bulgaria
P.O. Box 50, Complex Musagenitza, bl. 104
BG-1111 Sofia
BULGARIA

phone: +359 2 971 58 55
fax: +359 2 971 58 56
E-mail: petar.iankov@bspb.org
www.bspb.org

We are short of original drawings to illustrate our Newsletter. Who can help us? We are looking for artists who are willing to send us their bird drawings for free.
Names of artists will always be mentioned at the inner cover.
They receive a free issue.
Thank you in advance!

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 news on your own activities within this field:

- you have (preliminary) results of your regional or national atlas,
- you have information on a monitoring campaign,
- you have made a species-specific inventory,
- you are a delegate and have some news on activities in your country,
- you are planning an inventory and want people to know this,
- you read a good (new) atlas or an article or report on census and you want to review it.

Do not hesitate to let us know this!

Send text (in MS-Word or OpenOffice), figures and tables (and illustrations!) by preference in digital format. Figures and tables in colour will be shown in colour in the pdf version on our EBCC website: www.ebcc.info.

* By preference by email to:
anny.anselin@inbo.be

* or by mail on CD to:
Anny Anselin,
Research Institute for Nature and Forest, Kliniekstraat 25,
B-1070 Brussels, Belgium

You will receive your article in pdf-format to use for reprints

Bird Census News
2006 Volume 19 number 2

Contents