

The second Estonian Atlas on breeding bird distribution

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The first atlas

From 1977 to 1982 365 field ornithologists collected over 62 296 records for the first Atlas of Breeding Birds in Estonia (Renno, 1993). The Atlas shows the distribution of 220 species in 567 10 × 10 km squares. Squares in which breeding was “possible”, “probable” or “confirmed” were distinguished, but not quantitative data were collected.

The new atlas

In 2003 the Estonian Ornithological Society has initiated the compiling of a new Estonian Breeding Bird Atlas to update the data collected for the previous breeding bird atlas considering the necessity for revealing the current distribution and numbers of breeding birds. Field work of the atlas will be carried out within the period 2004-2007, but most probably also in 2008.

The Atlas Working Group for the purpose was set up, with the following members: Jaanus Elts (co-ordinator), Riho Kinks, Lauri Klein, Andres Kuresoo, Andrus Kuus, Eerik Leibak, Agu Leivits and Kaja Peterson.

Collection of the data for the atlas is based on international 5 × 5km UTM-grid squares. The main objective of the work is to identify all species of breeding birds within the squares as well as provide estimates of the numbers of less abundant species within squares and record the observation data on the maps of the squares. The squares can be selected on the Internet homepage of the atlas www.eoy.ee/atlas. The aim of the Atlas project is a complete as possible coverage of 2093 atlas squares of 5 × 5 km, among these there are 602 incomplete squares on the sea coast and the shores of large lakes, on the outlying islands, near the border of the republic and on the 24th meridian.

For direct comparison between the previous and new atlases, the same methods were applied. Only the working units are 4 times more precise,

namely 5×5 km squares in the new atlas. Currently we are digitalizing the old atlas data as well to make the analysis on species distribution easier and more comprehensive.

Additional information will be collected to quantify the breeding populations. One of methods used is 120 randomly choose square-shape transects to make precise estimations of the breeding densities. As our experience from first years shows estimates given by volunteers are mostly very biased.

We provided each co-worker with two maps of the scale of 1 : 20 000 (1 cm = 200 m) and two forms to fill in. One set of materials was requested to send back to the atlas team and another set to be kept by observer. Observations of rare species should be confirmed by the Estonian Rarities Committee. Less common species were asked to be mapped precisely for later digitalisation (colonies, lecks etc.).

Results until now

Up to the end of 2006 a number of 81 123 records were registered by 616 observers, covering 1527 UTM squares (73 %, Fig. 1).

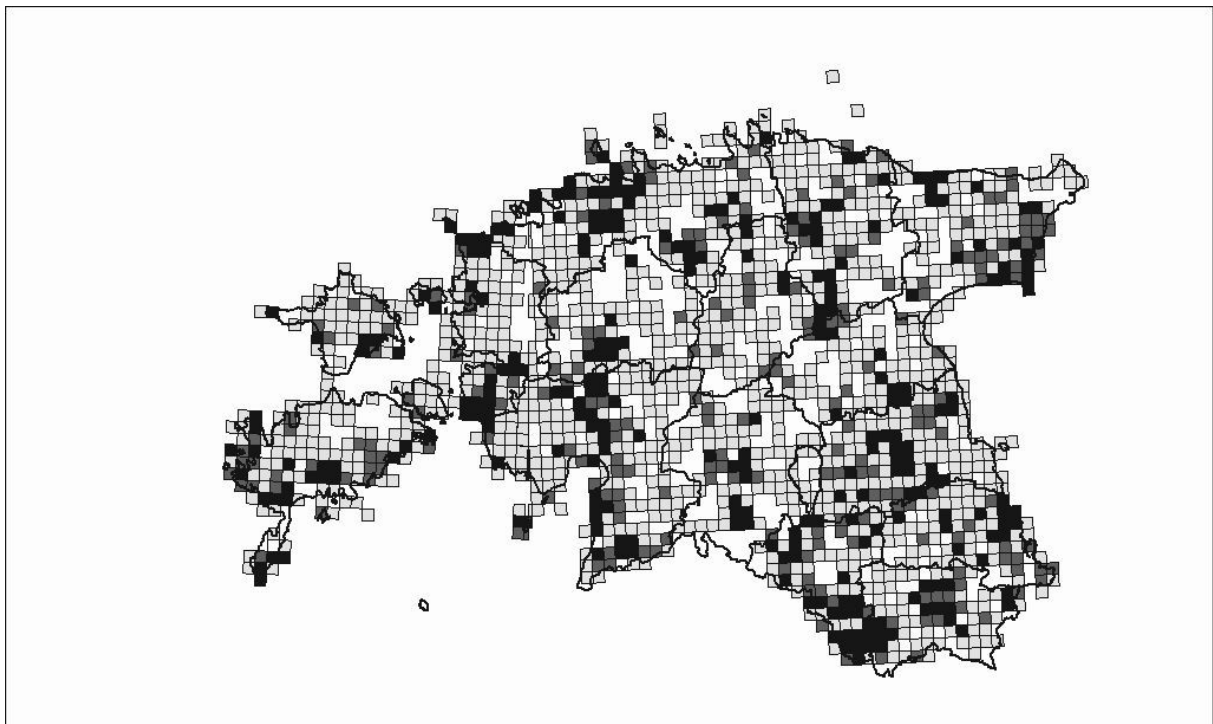


Fig. 1: Number of registered species per square up to the end of 2006 (light: 1-50 species, dark: 51-70 species, black: more than 71 species).

According to the latest list of Estonian birds we have 207 regular breeding bird species (Elts *et al.*, 2003). In atlas database there are registrations for 226 species, but six of them (*Milvus migrans*, *Falco peregrinus*, *Galerida cristata*, *Lanius minor*, *Bombycilla garrulus* and *Hippolais pallida*) are listed only as non-breeders.

No of breeding species	No of squares
0	566
1-50	1027
51-70	233
71-90	176
>90	91

Table 1: Number of species registered per atlas square.

Estonia, first atlas (Renno, 1993)	Estonia, a new atlas, by 31.12.2006	Latvia (Kerus & Račinskis, 2004)
1. <i>Motacilla alba</i>	1. <i>Fringilla coelebs</i>	1. <i>Fringilla coelebs</i>
2. <i>Alauda arvensis</i>	2. <i>Phylloscopus trochilus</i>	2. <i>Phylloscopus collybita</i>
3. <i>Sturnus vulgaris</i>	3. <i>Phylloscopus collybita</i>	3. <i>Turdus merula</i>
4. <i>Fringilla coelebs</i>	4. <i>Motacilla alba</i>	4. <i>Motacilla alba</i>
5. <i>Phylloscopus trochilus</i>	5. <i>Turdus merula</i>	5. <i>Emberiza citrinella</i>
6. <i>Corvus corone</i>	6. <i>Parus major</i>	6. <i>Parus major</i>
7. <i>Vanellus vanellus</i>	7. <i>Hirundo rustica</i>	7. <i>Alauda arvensis</i>
8. <i>Anas platyrhynchos</i>	8. <i>Alauda arvensis</i>	8. <i>Hirundo rustica</i>
9. <i>Parus major</i>	9. <i>Sylvia communis</i>	9. <i>Erithacus rubecula</i>
10. <i>Hirundo rustica</i>	10. <i>Anthus trivialis</i>	10. <i>Sylvia communis</i>

Table 2: Ten most widespread breeding birds in Estonia and Latvia (according to the number of registered squares).

Very soon it will be possible to query the atlas web-site to find out most up-to-date distribution maps or some overall maps, like the number of species registered per atlas square or how many observers are doing fieldwork in a certain square. These queries are available in Estonian already.

References

- ELTS, J., KURESOO, A., LEIBAK, E., LEITO, A., LILLELEHT, V., LUIGUJÕE, L., LÕHMUS, A., MÄGI, E. & OTS, M. (2003). Eesti lindude staatus, pesitsusaegne ja talvine arvukus 1998-2002. a. *Hirundo* 16: 58-83.
- KERUS, V. & RACINSKIS, E.: (2004). Atlants beidzies, darbs turpinas – pirmie rezultati pec pedejas sezonas. *Putni daba* 14.4: 1-9.
- RENNO, O. (ED.) (1993). Eesti haudelindude levikuatlas (Estonian Bird Atlas). Tallinn, Valgus (in Estonian, with English summary).