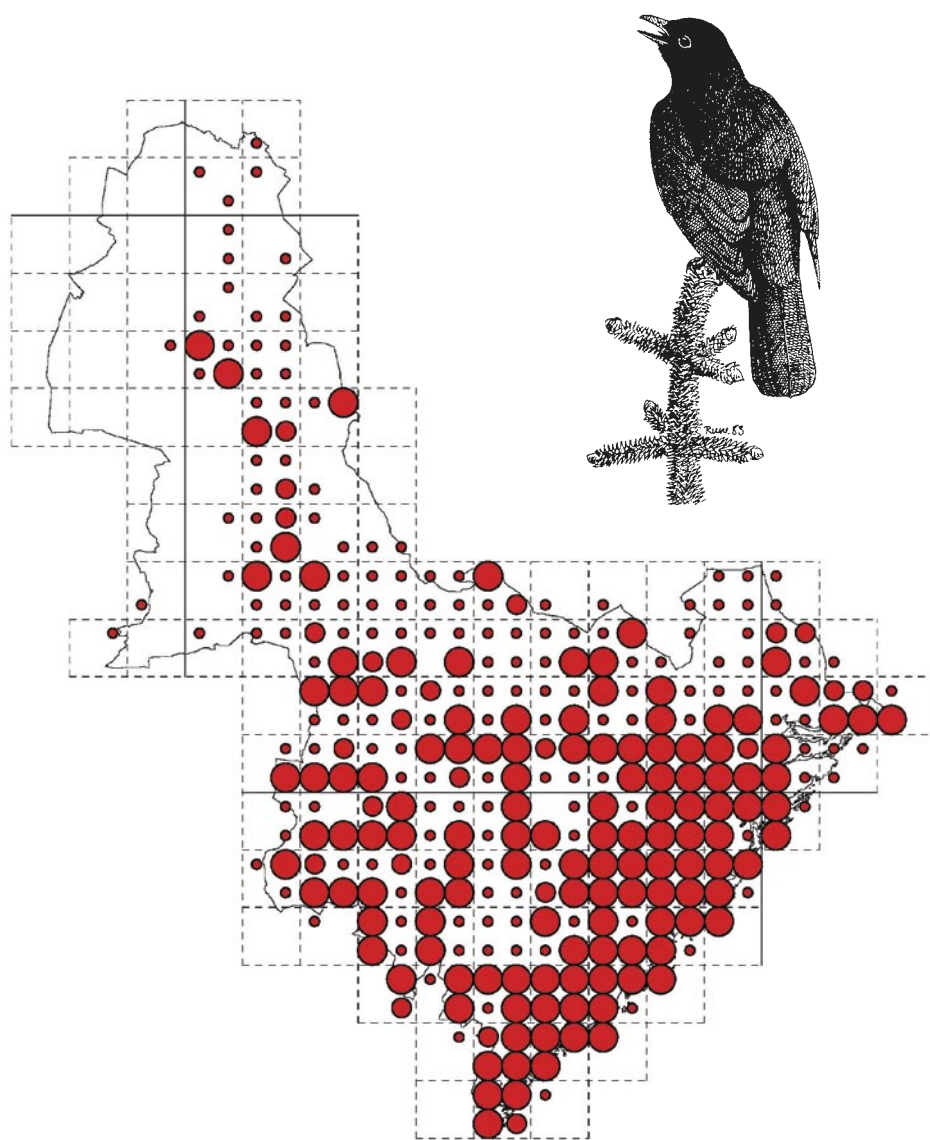


Hekkefuglatlas for Aust-Agder 1995–2004

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Fugler i Aust-Agder Supplement nr. 1 2009
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Sluttrapport for *Prosjekt 1995–2004 på fuglenes hekkeforekomst i Aust-Agder*.

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Samtlige 181 arter påvist som mulig, sannsynlig eller konstatert hekkende er presentert med utbredelseskart og kortfattet tekst. Artsstatus er med for alle 440 undersøkte ruter. I tillegg er mye informasjon om ruter, observatører og observasjoner presentert i kartfigurer og tabeller. En rekke kapitler behandler ulike tema og setter prosjektet og resultatene i perspektiv eller oppsummerer store linjer.

Organiseringen av rapportens innhold er litt utradisjonell, først og fremst på grunn av de to store dokumentene som inneholder henholdsvis artspresentasjoner og rutestatuser. Videre er det av ulike grunner en del gjentakelser av sentrale momenter, noe som sikkert kan føles i overkant for personer som leser alt. Ta en titt på innholdsfortegnelsen for å få oversikt.

Det er ikke utarbeidet register, men i og med at rapporten foreligger i digital form kan man greit søke på arter og annet.

Rapporten (ca. 14 MB) kan lastes ned som PDF på www.agderfugl.net

Innholdet i rapporten er omfattet av åndsverklovens bestemmelser, og opphavsrettighetene tilhører NOF avdeling Aust-Agder og de fire forfatterne. Nedlasting og eventuell utskrift er kun lov til privat bruk og ikke for videreformidling/salg. Ulovlig bruk vil bli straffeforfulgt. Kilde må alltid oppgis ved gjengivelse av innhold.

Selve observasjonsdatabasen med 24 735 observasjoner ble avrundet rundt 1. januar 2009. Den forvaltes av NOF avdeling Aust-Agder, og interesserte kan henvende seg dit.

Forside: Atlasutbredelseskartet til svarttrost som er fylkesfuglen til Aust-Agder, og syngende hann av arten tegnet av Rune Roalkvam.

31. desember 2009

NOF avd. Aust-Agder og rapportforfatterne

English summary

Bengtson, R., Johnsen, A., Selås, K.O. & Steel, C. 2009. Atlas of breeding birds in Aust-Agder county, Norway 1995–2004. – *Fugler i Aust-Agder Supplement nr. 1 2009*. Norsk Ornitologisk Forening avdeling Aust-Agder, Arendal. 485 pp. (In Norwegian)

This report presents *Prosjekt 1995–2004 på fuglenes hekkeforekomst i Aust-Agder (Project 1995–2004 on the breeding occurrence of birds in Aust-Agder)* and its results. Our county is the only one in Norway to carry out two 'atlas' surveys of the breeding occurrence of birds. The results from the first project were published by Bengtson (1988).

Aust-Agder was in this new atlas project, run by the Aust-Agder branch of The Norwegian Ornithological Society (NOF), divided into squares of 5x5 km (10x10 in the previous). (It is important that 5x5 km squares are always denoted with '5x5 km' in brackets after the square code to avoid confusion with the 1x1 km squares that have given the coordinates to the 5x5 km squares). The objective was to find as many bird species as possible breeding within each of the squares that were investigated during the period 1995-2004. There are 325 squares of which the entire area (25 km²) is located within Aust-Agder, but many of them have considerable ocean or lake areas. In total, 440 squares were investigated, and the remaining 17 have little or insignificant areas within the boundaries of Aust-Agder.

The project leader, Roald Bengtson, carried out, in collaboration with more than 150 participants, the field work, and has jointly with Christian Steel constructed the database and processed the observation material. Arvid Johnsen and Kurt O. Selås are co-authors of this report primarily because of their considerable fieldwork and many observations, in addition to control efforts and proof reading. The database was closed around 1 January 2009 and has 24,735 observations. People who request access to material therein can contact the Aust-Agder branch of NOF.

In this report each square is presented with its own summary where, among other things, all recorded species are listed with their highest breeding code. In addition, 10 so-called "Special 2 km protocol walk" (some sort of line-surface inventory) have been carried out. Much information about squares, observers and observations are presented in maps and tables. Many chapters present different subjects and put the project and the results in perspective or sum up the overall lines.

After disregarding 469 observations with A code (i.e. not considered breeding relevant) and 8180 'duplicates' (observations with the same or lower code for a species within a square), the following 'counting' observations remain: 9,279 with B code (possible breeding), 2,533 with C-code (probable breeding) and 4,274 with D code (confirmed breeding). In total, these three categories of atlas codes constitute 16,086 observations that can be found in square summaries (except for some confidential observations; see below) and on species maps.

The project has provided considerable new knowledge on the breeding occurrence of birds in Aust-Agder, both because we have discovered some that were previously probably overlooked, and because actual changes have taken place. Totally 148 species were confirmed breeding (D code), 12 were recorded as probably breeding (C code) and 21 as possibly breeding (B code). In this report, the distributions of 168 species are presented on maps with 5x5 km as the level of detail, seven species with 10x10 km detail (Black-throated Loon *Gavia*

arctica, European Honey Buzzard *Pernis apivorus*, Northern Goshawk *Accipiter gentilis*, Osprey *Pandion haliaetus*, Great Snipe *Gallinago media*, Arctic Skua *Stercorarius parasiticus* and Common Kingfisher *Alcedo atthis*) and six species with a more coarse level of detail (Western Marsh Harrier *Circus aeruginosus*, Golden Eagle *Aquila chrysaetos*, Gyrfalcon *Falco rusticolus*, Peregrine Falcon *Falco peregrinus*, Common Crane *Grus grus* and Eurasian Eagle Owl *Bubo bubo*). We can assume that annually about 160–170 bird species breed in Aust-Agder. Thus, in a Norwegian perspective, the bird fauna in our county is rather average with respect to diversity.

As in Norway in general, the Willow Warbler *Phylloscopus trochilus* is the most widely distributed and most common bird of Aust-Agder. It was recorded as possibly, probably or confirmed breeding in as many as 396 atlas squares (5x5 km).

MK8070 (5x5 km), located around Fevik close to the coast and split between the municipalities of Arendal and Grimstad, was the only square with at least 100 recorded species (102; 35 B, 13 C and 54 D). In the scantiest squares on the mountain plains of Setesdal, less than 10 species may breed. Average number of species recorded in the 325 'whole' squares (25 km² in Aust-Agder) is 40. For all 440 squares with observations, the average is surprisingly only slightly less (36). The median is also 36, which indicates that the material is fairly close to being normally distributed, which again means that there are not a few squares that pull the average very much up or down.

Each species is presented with a short text that primarily gives a brief status for the species in neighbouring counties, lists observations from Aust-Agder in greater detail for rare species, in some instances supplements with some material from before 1995 and after 2004, sometimes comments upon the distribution map, provides category from the Norwegian Red List published in 2006, and estimates the breeding population of Aust-Agder. A population 'estimate' has been made for all species. However, the estimates vary from exact calculations based on fresh and thorough material to loose speculations, often with wide intervals. The texts are often rather brief and not complete, so those who intend to work thoroughly with a species must seek additional sources. A good deal of relevant literature is listed in a separate chapter.

An atlas project like this is well suited to map the qualitative distribution pattern for most of the birds that may breed in the county. On the other hand such large and general projects will have difficulties in sufficiently covering species with a very scattered distribution and those with a mode of living that deviates substantially from "normal" (such as especially nocturnal and anonymous species, but also some more numerous irruptive species). On some atlas excursions some of those demanding species have been given special attention, and some special projects have also been running in parallel with this atlas project. In any case, it is important to take into account that particularly forested squares must be surveyed for a long time to record most species (including more common ones).

While interpreting square statuses and species maps it is important to bear in mind a number of potential sources of error and other aspects, such as degree of coverage, in order to correct for evident and often skewed impressions.

Some changes in the bird fauna of the county have happened over just a couple of decades. Species like Common (Mew) Gull *Larus canus* and Common Tern *Sterna hirundo* have decreased significantly. Greylag Goose *Anser anser*, Common Eider *Somateria mollissima*,

Osprey, Peregrine Falcon, Grey Wagtail *Motacilla cinerea* and Eurasian Tree Sparrow *Passer montanus* have increased greatly in numbers.

It was defined as out of scope for this report to analyze the observation material in detail, so people are welcome to do further work on greater or smaller parts. Not least regarding population estimates are there substantial opportunities for making contributions by comparing the observation material with area of different habitat types in the county in a mathematical manner. In the database there is also a great level of detail on localisation of nests, nest content and so on.

A new atlas project with a ten year scope, carried out in approximately the same manner, should be carried out between 2020 and 2030. It will require far less work if the present differentiated concept and baseline material is utilized, as well as being run more user-oriented by letting participants submit their own observations online. Possible synergies with the recently started "Species observations" online database (www.artsobservasjoner.no) should be considered. This report will hopefully also give inspiration to many smaller projects to supplement our knowledge of several species, such as European Honey Buzzard *Pernis apivorus*, Hazel Grouse *Bonasa bonasia*, Dunlin *Calidris alpina*, Marsh Tit *Parus palustris* and Twite *Carduelis flavirostris*.