

## A stable bird community during 27 years (1980–2006) in the nemoral broadleaf wood Dalby Söderskog National Park

*Ett stabilt fågelsamhälle under 27 år (1980–2006) i den nemoral lövskogen Dalby Söderskog nationalpark*

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Dalby Söderskog is a mixed broadleaf deciduous wood in Scania, the southernmost province of Sweden (55° 40.5' N, 13° 20' E). It was made a national park in 1918 after a period of rather heavy cutting of timber and firewood. Since then the vegetation has developed spontaneously with only marginal management. The history of the wood is known since the sixteenth century. The structure of the wood varied between periods with a rather open character with extraction of firewood and grazing by cattle and horses and periods with regeneration of the tree and bush layers. During the nineteenth century these activities ceased and a rather dense mature wood developed. Major cuttings then occurred in 1880–1916, being the main reason for the protection of the area in 1918. The succeeding period of free development resulted in the current wood where the high canopy was, until quite recently, predominated by ash (most frequent), elm, oak and beech (about equally frequent), and the lower canopy by elm (most frequent) and beech. Oak has not been regenerating for long. Detailed descriptions of the development and status of Dalby Söderskog are found in Lindquist (1938), Malmer et al. (1978) and Oheimb & Brunet (2007). A brief popular review in Swedish, with emphasis on the most recent events, is found in Brunet & Oheimb (2008).

During the period of bird surveys, the habitat was stable until the late 1980s when the Dutch elm disease was first recorded in the wood. A small number of dead or infected elms were removed annually between 1988 and 1997. However, the effect of this on the general appearance of the wood was not important during the 1996 bird survey, mainly due the fact that the dead trees were removed and adjacent trees expanded their crowns. After 1997, dead elms were no longer removed. During the 2006 survey the canopy level elms of particularly two sections of the wood had died back completely.

Thus, apart from this recent event, this bird survey was conducted in an oldgrowth wood in a stable state.

The surveys of Dalby Söderskog were a part of a nation-wide environmental monitoring programme operated by the Environment Protection Agency. This programme was discontinued in the 1990s, with the last survey in 1996. I made an additional survey in 2006 in order to extend the time interval with another decade (Svensson 2006). The 1980 survey was also not part of the EPA programme, but conducted as a private enterprise by Margareta Erlinge and Sam Erlinge. Their unpublished result was kindly put at my disposal.

The wood is 37 ha large. It is completely surrounded by farmland, part of which is an open grazed section of Dalby Norreskog, a nature reserve since 1979. According to the management plan (Länsstyrelsen i Skåne län 2005), Dalby Söderskog will be left to develop spontaneously. This conservation goal also has an explicit scientific component in the management plan, namely to learn what a natural forest would have looked like if human impact had not become manifest.

Scientific names of all bird species are found in Table 1.

### Methods

A territory mapping method was used. The wood was divided into a 50×50 m grid, and at each grid intersection plastic strips of two of four different colours were put up. These points were marked on the visit map. This assisted orientation in uniform sections of the wood, but most often it was sufficient to position the records on the map in relation to different physical features also drawn on the map, such as paths, ponds, a stream, wet depressions, a few rocks, etc. In 2006, no grid of plastic strips was used but the physical features were sufficient. The accuracy of a map record in relation to the position of the bird was usually better than the size of even the smallest territories. All parts of the wood were covered so that no part was more than 25 metres from the observer on each visit. The visiting schedule is found in Appendix 1. Usually, two mornings were used to complete one visit.

Before writing this account I checked all species maps from all the years in order to ascertain that the interpretation and delimiting of territories was consistent throughout. Extremely few modifications had to be made, which was expected as I had already checked all the maps after each field season. This does not apply to the 1980 survey. For

that survey I had access only to the summary report. The fundamental method was, however, the same as in the subsequent surveys (Sam Erlinge, pers. information). Nonetheless, there may have been some differences in field work and territory evaluation.

The Starling was a very abundant species which was surveyed only in the first three years. Records of feeding birds were the main key to the estimates. The 1982 and 1983 surveys were complete, whereas the 1980 estimate was based on a number of randomly selected small sections of the wood recalculated to the whole area.

Population trends were tested by log-linear regression. The test was performed for species with records in more than eight years. In order to be able to use logarithms, I removed zero values by adding one percent of the mean number of pairs of that species to the value of each year. In order to check whether the 1980 (original species maps not examined by me) or the 2006 survey (single year after ten years without counts) affected trends, I also calculated them with and without these years included. The trend tests were made with the regression module of Excel.

## Results

The basic survey results for all the years are given in Appendix 2. Table 1 presents a summary of mean abundance and trends. The number of resident species in all 15 years was 45. The number of species was on average 31 and ranged between 24 in 1984 and 38 in 2006. The community was characterized by a large number of species that were resident in almost all years and a smaller number of temporary species. No less than 30 of the 45 species were recorded in more than half of the fifteen survey years and 18 of them in all years. Only two species were recorded in only a single year.

The total number of pairs could be calculated for only the first three years due to the lack of data on the Starling after 1983. The total of other species varied between 233 in 1985 and 546 in 1980 with an average of 342. The number of pairs (Starling excluded) in 1980 was more than one hundred pairs higher than in any other year due to higher estimates for several species. The value 233 for 1985 was aberrantly low whereas the values of the other years were rather well centered about the mean (272–408).

There was little effect on the trends whether or not the 1980 or 2006 data were excluded (Appendix 3). In most cases the effect was only a one step shift

of the significance level. A larger shift occurred in only three species. It is obvious that inclusion or exclusion of the 1980 or 2006 data does not affect the general results, but only a very limited number of species, and I rely on the full time series.

Among the 29 species for which I calculated trends, the trends were significantly different from zero in only seven species (Table 1). Declining species were (average annual change and significance level within parenthesis): Green Woodpecker ( $-7\%^*$ ), Thrush Nightingale ( $-7\%^{***}$ ), Pied Flycatcher ( $-4\%^{**}$ ), Stock Dove ( $-3\%^{***}$ ), and Garden Warbler ( $-2\%^*$ ). Increasing species were Fieldfare ( $+12\%^{**}$ ) and Redstart ( $+17\%^{**}$ ). Among the species without significant trend more had positive signs (15 species) than negative signs (7 species). The Starling that was not surveyed in most years probably declined (my own impression during the 2006 survey).

The general structure of the community is visualized in Figure 1. Species abundance declined approximately linearly in this diagram where the logarithm of abundance was plotted against the species in abundance order. Starling and Chaffinch, the two predominant species, were much more common than the corresponding values of the regression line.

## Discussion

The general feature of the bird community of Dalby Söderskog was stability. There was no significant change of either the number of species or the number of breeding pairs; declines were compensated by increases. In relation to the national trends (Breeding Bird Survey; Lindström et al. 2009) the seven significant local trends were the same for Pied Flycatcher, Stock Dove, Thrush Nightingale and Green Woodpecker (declines) but different for the other three species. The locally declining Garden Warbler exposed no national trend during the same period. The two locally increasing species had also different national trends. The explanation of this for the Fieldfare is known. The species had expanded southwards in Sweden and the colonization of the most southern province occurred late. This can be seen in a comparison of maps from the Breeding Bird Atlas of 1974–1984 (Svensson et al. 1999) and preliminary maps (2004–2008) from a new atlas for Scania ([www.skof.se](http://www.skof.se)). The establishment of the species in Dalby Söderskog in 1988 was a natural consequence of this. It is more difficult to explain why the local population of the Redstart increased so much when the national population

Table 1. Mean number of pairs and population trends (percent change, average per year). Trends were not calculated for the Starling and for species that were recorded in less than nine of the fifteen years. NS = Trend not significant ( $p > 0.05$ ).

Medeltal par och beståndstrender (procent förändring, medelvärde per år). Trenden beräknades inte för staren och arter som registrerades färre än nio av de femton åren. NS = Trenden ej signifikant ( $p > 0,05$ ).

	Mean Medel	Yrs År	Trend %/yr	P
<i>Sturnus vulgaris</i> Starling Stare	251.7	3*	Not calculated	
<i>Fringilla coelebs</i> Chaffinch Bofink	84.0	15	-0.38	NS
<i>Parus major</i> Great Tit Talgoxe	35.9	15	0.53	NS
<i>Parus caeruleus</i> Blue Tit Blåmes	26.2	15	0.45	NS
<i>Turdus merula</i> Blackbird Koltrast	26.1	15	0.46	NS
<i>Erithacus rubecula</i> Robin Rödhake	16.7	15	1.13	NS
<i>Sitta europaea</i> Nuthatch Nötväcka	15.1	15	1.37	NS
<i>Sylvia atricapilla</i> Blackcap Svarthätta	14.3	15	7.38	NS
<i>Sylvia borin</i> Garden Warbler Trädgårdssångare	13.3	15	-2.02	<0.05
<i>Columba palumbus</i> Wood Pigeon Ringduva	13.1	15	-0.13	NS
<i>Phylloscopus trochilus</i> Willow Warbler Lövsångare	10.0	15	-1.22	NS
<i>Ficedula hypoleuca</i> Pied Flycatcher Svartvit flugsnappare	7.8	15	-4.17	<0.01
<i>Parus palustris</i> Marsh Tit Entita	6.5	15	-0.10	NS
<i>Columba oenas</i> Stock Dove Skogsduva	6.4	15	-2.91	<0.001
<i>Prunella modularis</i> Dunnock Järnsparv	6.1	15	0.81	NS
<i>Dendrocopos major</i> Great Spotted Woodpecker Större hackspett	6.1	15	-1.05	NS
<i>Certhia familiaris</i> Treecreeper Trädkrypare	5.7	15	1.88	NS
<i>Corvus cornix</i> Hooded Crow Kråka	3.6	15	0.96	NS
<i>Luscinia luscinia</i> Thrush Nightingale Näktergal	7.1	14	-6.56	<0.001
<i>Turdus philomelos</i> Song Trush Taltrast	4.1	14	0.72	NS
<i>Troglodytes troglodytes</i> Wren Gärdsmyg	7.6	13	5.14	NS
<i>Hippolais icterina</i> Icterine Warbler Härmsångare	3.3	13	-3.33	NS
<i>Muscicapa striata</i> Spotted Flycatcher Grå flugsnappare	2.9	13	-0.92	NS
<i>Picus viridis</i> Green Woodpecker Gröngöling	0.8	12	-7.00	<0.05
<i>Dendrocopos minor</i> Lesser Spotted Woodpecker Mindre hackspett	0.8	12	1.93	NS
<i>Carduelis chloris</i> Greenfinch Grönfink	3.5	11	7.36	NS
<i>Strix aluco</i> Tawny Owl Kattuggla	0.8	11	4.38	NS
<i>Coccothraustes coccothraustes</i> Hawfinch Stenknäck	2.2	10	6.44	NS
<i>Turdus pilaris</i> Fieldfare Björktrast	4.0	9	11.98	<0.01
<i>Phoenicurus phoenicurus</i> Redstart Rödstart	2.2	9	17.22	<0.01
<i>Corvus monedula</i> Jackdaw Kaja	1.2	5	Not calculated	
<i>Phylloscopus sibilatrix</i> Wood Warbler Grönsångare	0.9	5	Not calculated	
<i>Motacilla alba</i> White Wagtail Sädessärila	0.5	5	Not calculated	
<i>Anthus trivialis</i> Tree Pipit Trädpiplärka	0.7	4	Not calculated	
<i>Phasianus colchicus</i> Pheasant Fasan	0.5	4	Not calculated	
<i>Sylvia communis</i> Whitethroat Törnsångare	0.4	4	Not calculated	
<i>Carduelis carduelis</i> Goldfinch Steglits	0.5	3	Not calculated	
<i>Sylvia curruca</i> Lesser Whitethroat Årtsångare	0.3	3	Not calculated	
<i>Anas platyrhynchos</i> Mallard Gräsand	0.2	3	Not calculated	
<i>Emberiza citrinella</i> Yellowhammer Gulsparv	0.2	3	Not calculated	
<i>Cuculus canorus</i> Cuckoo Gök	0.2	3	Not calculated	
<i>Buteo buteo</i> Common Buzzard Ormvråk	0.2	3	Not calculated	
<i>Dryocopus martius</i> Black Woodpecker Spillkråka	0.2	3	Not calculated	
<i>Phylloscopus collybita</i> Chiffchaff Gransångare	0.1	1	Not calculated	
<i>Carpodacus erythrinus</i> Rosefinch Rosenfink	0.1	1	Not calculated	
Total pairs excl. <i>Sturnus vulgaris</i>	342.3		0.14	NS
Total pairs incl. <i>Sturnus vulgaris</i>	641.3			
Species per year Arter per år	31		0.25	NS
Species all years Arter alla år	45			

\* Present in all but surveyed in only three years. Fanns alla men inventerades bara tre år.

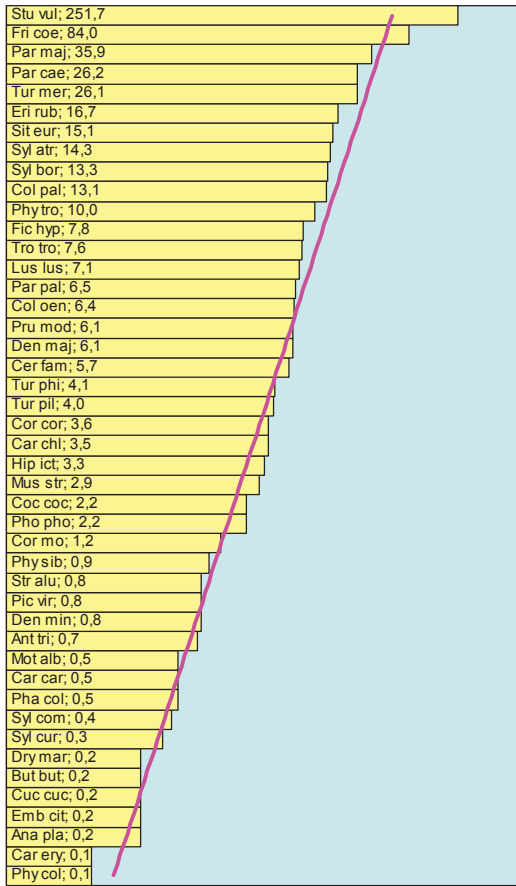


Figure 1. Structure of the bird community of Dalby Söderskog. Number of pairs (x-axis, logarithmic scale) versus species in abundance order. Species codes are the three first letters of the scientific genus and species names (cf. Table 1 or Appendix 2 where the species are listed).

*Strukturen hos fågelsamhället i Dalby Söderskog. Antal par (x-axeln, logaritmisk skala) mot arterna ordnade efter antal. Artkoderna består av de tre första bokstäverna i de vetenskapliga släkt- och artnamnen (se Tabell 1 eller Appendix 2, där arterna listas).*

declined during the 1980s. Possibly the Redstart in the very south of Sweden reflects the continental trend (Heldbjerg & Eskildsen 2009 for Denmark, PECBMS 2009 for Europe) rather than the Swedish one. The continental trend has been particularly positive during the most recent decade which fits well with the 12 pairs in 2006 versus only 0–4 pairs in 1980–1996.

My conclusion of this study is that the bird com-

munity of Dalby Söderskog national park was stable over 27 years. There was little turn over of species, although much variation in numbers between years. The few trends that were significant seemed most often to reflect large scale changes of population size or geographical range expansion or retraction rather than local habitat effects. This accords well with the stability of the habitat features.

### Acknowledgements

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### References

Brunet, J. & von Oheimb, G. 2008. Almsjuka och mördar-sniglar – dramatik i Dalby Söderskog. *Svensk Botanisk Tidskrift* 102: 27–38.

Heldbjerg, H. & Eskildsen, A. 2009. *Övervakning af de almindelige fuglearter i Danmark 1975–2008. Årsrapport for Punktællingsprojektet*. Dansk Ornitologisk Forening.

Lindquist, B. 1938. *Dalby Söderskog. En skånsk lövskog i forntid och nutid*. Svenska skogsvårdsföreningens förlag, Stockholm eller Band 10 av *Acta Phytogeographica Suecica*, Kartografiska institutet, Esselte, Stockholm.

Lindström, Å., Svensson, S., Green, M. & Ottvall, R. 2007. Distribution and population changes of two subspecies of Chiffchaff *Phylloscopus collybita* in Sweden. *Ornis Svecica* 17: 137–147.

Lindström, Å., Green, M., Ottvall, R. & Svensson, S. 2009. *Övervakning av fåglarnas populationsutveckling. Årsrapport för 2008*. Ekologiska institutionen, Lunds universitet.

Länsstyrelsen i Skåne län. 2005. *Bevarandeplan för Natura 2000-område Dalby Söderskog*. Diariern 511-22626-05, 1281-209.

Malmer, N., Lindgren, L. & Persson, S. 1978. Vegetational succession in a south Swedish deciduous wood. *Vegetatio* 36: 17–30.

Oheimb, G. von & Brunet, J. 2007. Dalby Söderskog revisited: long-term vegetation changes in a south Swedish deciduous forest. *Acta Oecologica* 31: 229–242.

PECBMS. 2009. *The State of Europe's Common Birds 2008*. CSO/RSPB, Prague, Czech Republic.

Svensson, S. 2006. Fågelfaunan I Dalby Söderskog 2006. *Anser* 45: 215–220.

### Sammanfattning

Dalby Söderskog, nationalpark sedan 1918, är en 37 ha stor blandlövskog, som fått utvecklas spontant och utan mer än marginella mänskliga ingrepp i snart ett helt sekel. Området är väl känt ur botanisk synpunkt och dess allmänna historia är känd sedan femtonhundratalet. Dalby Söderskog är en förnämlig representant för den typ av nemoral lövskogar som skulle ha täckt stora delar av Skåne

om mänsklig odling inte kommit. Att låta skogen utvecklas spontant även i framtiden är ett av målen med skötselplanen för nationalparken och ett annat mål är att studera vad som långsiktigt händer i en sådan skog.

Området har fågelinventerats sedan 1980. Då gjorde Margareta Erlinge och Sam Erlinge den första inventeringen. Under perioden 1982–1996 inventerades nationalparken inom ramen för naturvårdsverkets dåvarande Program för miljö kvalitetsövervakning (PMK). För att få en färsk uppföljning inför publiceringen av denna uppsats gjorde jag en ny inventering 2006. Därmed täcker inventeringarna en period av 27 år, tyvärr med ett tio år långt uppehåll före den senaste inventeringen.

Inventeringsmetoden har varit revirkartering enligt standardmodell. Tio besök gjordes från april till början av juni (Appendix 1) och alla observationer registrerades på en detaljerad karta över området. Alla arter inventerades med undantag för staren som bara inventerades de tre första åren. Denna art utgjorde också ett undantag vad gäller metodik eftersom huvudparten av registreringarna utgjordes av matande fåglar. Två år avviker något från övriga, nämligen 1980 och 2006. För 1980 har jag tillgång till en sammanfattande lista, men inga originaldata. Sam Erlinge har dock muntligen informerat mig om att metodiken var den gängse för revirkartering. Inventeringen 2006 låg hela tio år efter den föregående och en sådan enstaka inventering kan få kraftig påverkan på regressioner. Därför beräknade jag trender också med ett av dessa år

uteslutet. Resultatet redovisas i Appendix 3. Inget anmärkningsvärt som kan påverka de generella slutsatserna framkom och därför används hela tids-serien i analyserna.

Alla resultat redovisas i Appendix 2. För att av-göra vilka förändringar som skett beräknades lin-jära regressioner. De baserades på logaritmerade värden av antal par eftersom logaritmeringen gör fördelningen av värdena mera normal (nollor ersattes med ett värde motsvarande en procent av medelvärdet för arten). Beräkningen av trender genomfördes på de tjugonio arter som registrerades under mer än åtta av åren (staren utesluten). Endast sju trender var signifikanta (Tabell 1). Arter som minskade var gröngöling, näktergal, svartvit flugsnappare, skogsduva och trädgårdssångare. Arter som ökade var björkrast och rödstjärt. Bland arterna som inte hade någon signifikant trend var det femton arter med positiv och sju med negativ trend. Till de med negativ trend tillkommer med alla sannolikhet staren enligt min subjektiva bedömning från 2006.

Fågelsamhällets övergripande struktur illustreras i Figur 1, som naturligtvis är identisk med Tabell 1 fastän arternas antal visas i logaritmisk skala. Många fågelsamhällen har nämligen egenskapen att arternas abundanser avtar nästan linjärt i denna skala, och så är fallet även i Dalby Söderskog. Två arter kan dock kallas ”överabundanta”, nämligen stare och bofink, som båda faller tydligt över regressionslinjen.

I jämförelse med de nationella indexen enligt

Appendix 1. Observers and survey periods.  
*Inventerare och inventeringsperioder.*

Year <i>År</i>	Observer <i>Inventerare</i>	Period	Surveys <i>Besök</i>	Hours <i>Timmar</i>
1980	Margareta Erlinge, Sam Erlinge		10	
1982	Per Woin	17 Apr – 9 Jun	10	60
1983	Per Woin	23 Apr – 12 Jun	10	77
1984	Per Woin	11 Apr – 8 Jun	10	83
1985	Per Woin	21 Apr – 17 Jun	10	58
1986	Per Woin	9 Apr – 15 Jun	10	34
1987	Sören Svensson, Ingemar Andell	17 Apr – 29 Jun	10	45
1988	Sören Svensson, Per Woin	24 Apr – 14 Jun	10	45
1989	Sören Svensson	13 Apr – 10 Jun	10	25
1990	Sören Svensson	31 Mar – 5 Jun	11	38
1991	Sören Svensson	25 Apr – 4 Jun	9	32
1992	Ann Mari Thormer	30 Apr – 4 Jun	10	42
1993	Mikael Svensson	28 Apr – 4 Jun	10	37
1996	Glen Cornland, Sören Svensson	7 Maj – 3 Jun	10	36
2006	Sören Svensson	11 Apr – 13 Jun	9	43



Appendix 2. Number of pairs recorded in each survey year during the period 1980–2006. The Starling was present in all years but counted only in 1980–1983. English species names in Table 1.

Antal par som registrerades varje inventeringsår under perioden 1980–2006. Staren fanns alla år men räknades bara 1980–1983. Svenska artnamn i Tabell 1.

Year År	80	82	83	84	85	86	87	88	89	90	91	92	93	96	06
<i>Sturnus vulgaris</i>	202	282	271	+	+	+	+	+	+	+	+	+	+	+	+
<i>Fringilla coelebs</i>	130	81	82	99	78	82	81	68	66	79	71	77	112	76	78
<i>Parus major</i>	71	23	23	34	26	30	25	31	31	48	50	35	27	36	48
<i>Parus caeruleus</i>	52	18	16	25	13	21	20	29	27	25	31	31	23	35	27
<i>Turdus merula</i>	25	21	30	26	14	15	22	33	34	38	38	22	23	21	30
<i>Erithacus rubecula</i>	26	14	11	14	5	6	12	21	21	36	14	9	19	17	26
<i>Sitta europaea</i>	17	5	9	10	8	10	13	20	17	28	22	16	19	17	15
<i>Sylvia atricapilla</i>	12	13	18	14	9	11	15	10	13	15	13	21	20	11	20
<i>Sylvia borin</i>	38	22	13	13	11	12	19	13	13	8	8	8	4	4	14
<i>Columba palumbus</i>	19	16	15	14	9	11	14	8	16	13	11	11	10	12	17
<i>Phylloscopus trochilus</i>	27	15	7	7	8	9	6	14	14	1	14	7	2	9	10
<i>Ficedula hypoleuca</i>	27	13	11	7	9	9	2	7	2	12	5	5	5	1	2
<i>Parus palustris</i>	11	6	4	7	4	6	5	6	7	9	7	8	6	5	6
<i>Columba oenas</i>	7	10	8	7	5	9	6	6	6	8	6	7	3	7	1
<i>Prunella modularis</i>	12	11	2	5	1	4	5	6	5	5	6	6	10	7	7
<i>Dendrocopos major</i>	6	7	8	7	8	7	8	6	5	10	2	3	2	6	6
<i>Certhia familiaris</i>	10	3	4	2	1	1	4	6	7	9	9	5	12	5	7
<i>Corvus corone</i>	2	5	2	4	2	2	4	3	5	6	4	3	4	4	4
<i>Luscinia luscinia</i>	8	10	8	9	6	10	9	6	5	14	5	5	4	7	0
<i>Turdus philomelos</i>	4	6	5	4	3	3	0	4	5	5	5	2	5	1	9
<i>Troglodytes troglodytes</i>	2	0	8	7	4	4	0	4	8	10	10	23	14	10	10
<i>Hippolais icterina</i>	7	3	5	7	2	3	2	3	3	1	0	3	5	0	5
<i>Muscicapa striata</i>	5	3	3	0	4	2	5	3	6	0	5	4	1	2	1
<i>Picus viridis</i>	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0
<i>Dendrocopos minor</i>	0	1	1	1	0	1	1	1	1	1	1	1	1	0	1
<i>Carduelis chloris</i>	3	3	1	0	0	0	0	1	7	3	7	2	6	9	11
<i>Strix aluco</i>	1	1	1	1	0	0	1	1	2	1	0	0	1	1	1
<i>Coccothraustes coccothraustes</i>	0	0	0	0	1	1	2	5	5	4	4	5	5	0	1
<i>Turdus pilaris</i>	0	0	0	0	0	0	1	9	15	14	1	3	6	4	7
<i>Phoenicurus phoenicurus</i>	0	1	0	0	0	0	0	1	4	3	3	3	2	4	12
<i>Corvus monedula</i>	10	4	1	0	0	0	0	1	0	0	0	0	0	0	2
<i>Phylloscopus sibilatrix</i>	0	0	2	0	1	0	0	8	2	0	1	0	0	0	0
<i>Motacilla alba</i>	3	0	1	0	0	0	0	1	1	0	0	0	0	1	0
<i>Anthus trivialis</i>	4	3	0	0	0	1	0	3	0	0	0	0	0	0	0
<i>Phasianus colchicus</i>	0	0	0	0	0	0	1	0	0	1	0	0	0	1	4
<i>Sylvia communis</i>	0	1	0	0	0	0	1	0	0	0	0	0	1	0	3
<i>Carduelis carduelis</i>	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5
<i>Sylvia curruca</i>	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0
<i>Anas platyrhynchos</i>	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1
<i>Emberiza citrinella</i>	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
<i>Cuculus canorus</i>	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
<i>Buteo buteo</i>	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Dryocopus martius</i>	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Phylloscopus collybita</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Carpodacus erythrinus</i>	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Total excl <i>Sturnus vulgaris</i>	546	323	300	324	233	272	287	339	354	408	357	326	354	315	396
Tota with <i>Sturnus vulgaris</i>	748	605	571												
Species	33	33	30	24	26	28	30	34	32	30	32	29	32	30	38

Appendix 3. Species with different levels of significance for the trends (%/yr) with and without years 1980 or 2006 excluded. \* =  $p < 0.05$ , \*\* =  $p < 0.001$ , \*\*\* =  $p < 0.001$ . Species in abundance order (Mean). English species names in Table 1.

Arter med olika signifikansnivåer för trenderna (%/år) med åren 1980 eller 2006 exkluderade. Arterna i abtandsordning (Medel). Svenska artnamn i Tabell 1.

	Mean Medel	Trend 1980–2006	Trend 1980 excluded	Trend 2006 excluded
<i>Parus major</i>	35.9	0.5	1.2 *	0.1
<i>Sitta europaea</i>	15.1	1.4	1.8 *	2.7 *
<i>Sylvia borin</i>	13.3	-2.0 *	-1.4 *	-5.1 **
<i>Ficedula hypoleuca</i>	7.8	-4.2 **	-3.6 *	-6.0 **
<i>Columba oenas</i>	6.4	-2.9 ***	-3.2 ***	-1.1
<i>Parus caeruleus</i>	6.2	0.4	1.1 *	0.7
<i>Luscinia luscinia</i>	7.1	-6.6 ***	-7.3 ***	-1.5
<i>Carduelis chloris</i>	3.5	7.4	9.4 *	9.1
<i>Turdus pilaris</i>	4.0	12.0 **	11.6 **	19.1 ***
<i>Hippolais icterina</i>	3.3	-3.3	-2.8	-10.2 *
<i>Phoenicurus phoenicurus</i>	2.2	17.22 **	16.6 *	24.6 *
<i>Corvus monedula</i>	1.2	-2.9	0.6	-16.3 **
<i>Picus viridis</i>	0.8	-7.0 *	-7.4	-3.8

Svensk Fågeltaxering finns det både skillnader och likheter. Bland de sju arterna med signifikanta trender i Dalby Söderskog var trenderna desamma som nationellt för svartvit flugsnappare, skogsduva, näktergal och gröngöling (nedgångar) men olika för de andra tre arterna. Den lokalt minskande trädgårdssångaren har inte haft någon nationell trend under samma period. Detsamma gäller de två ökande arterna. Den ena av dessa, björktrasten, har dock expanderat kraftigt i Skåne, vilket säkert är skälet till ökningen i Dalby Söderskog, men nationellt slår denna provinsiella ökning inte igenom. Svårare att förklara är varför rödstjärten ökat så kraftigt lokalt. En möjlig förklaring är att de sydligaste bestånden av rödstjört mera speglar

utvecklingen på kontinenten än den i Sverige som helhet. På kontinenten (och i Danmark) har nämligen rödstjärten ökat rejält i antal.

Sammanfattningsvis konstaterar jag, trots att ett mindre antal arter förändrats signifikant, att huvudgruppen i utvecklingen visar på ett stabilt fågelsamhälle. Det är i överensstämmelse med biotopens stabilitet. Dalby Söderskog utgör ett unikt område för fortsatt uppföljning av vad som händer med fågelfaunan i en gammal ädellövskog i spontan utveckling.

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