

INFORMATION

REPORT ON PASSERINES RINGED IN THE “LAKE DRUŻNO” RESERVE IN 1999-2001

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In the seasons 1999, 2000 and 2001, in the southern part of the “Lake Družno” reserve (54°05'N 19°27'E) passerines were caught and ringed. In these seasons this site worked in co-operation with the SE European Bird Migration Network (SEEN). 22-23 mist-nets were situated in the same places as in the previous seasons (Jakubas *et al.* 1999), that means mainly in the reedbeds (*Phragmitetum communis*) and willow thickets (*Salix spp.*).

The field data were collected from the end of July to the end of the first decade of September (see Table 1), what covers almost whole autumn migration period of birds from genus *Acrocephalus*. Beside ringing and measuring, directional preferences of birds were tested with Busse's field method (Busse 1995).

The authors were supported in the fieldwork by the students of the University of Gdańsk.

In total, 1756-3006 birds from 51-54 species were ringed at Lake Družno ringing site (Table 1). In majority birds of reedbed were caught. Three species were distinctly most numerous: Reed Warbler (*Acrocephalus scirpaceus*), Sedge Warbler (*A. schoenobaenus*) and Marsh Warbler (*A. palustris*) – in total 1011 (in 1999), 1748 (in 2000) and 864 individuals (in 2001) – what constitutes respectively 47.7%, 58.2% and 49.2% of all birds ringed. This group of birds was also represented by Savi's Warbler (*Locustella luscinioides*), Reed Bunting (*Emberiza schoeniclus*) and Great Reed Warbler (*Acrocephalus arundinaceus*). The total number of caught birds from the whole group was 1223 (57.7%), 1999 (66.5%) and 1053 (60.0%) in subsequent seasons.

Table 1
Periods of work and number of birds ringed in “Družno Lake” reserve
in seasons 1999-2001

	1999 29 Jul.-10 Sept.	2000 24 Jul.-10 Sept.	2001 25 Jul.-5 Sept.
Number of species	54	51	52
<i>Acrocephalus agricola</i>	1	-	-
<i>Acrocephalus arundinaceus</i>	33	51	58
<i>Acrocephalus schoenobaenus</i>	354	706	320
<i>Acrocephalus scirpaceus</i>	492	778	455
<i>Acrocephalus palustris</i>	165	264	89
<i>Aegithalos caudatus</i>	3	15	8
<i>Alcedo atthis</i>	11	13	17
<i>Carduelis cannabina</i>	3	3	4
<i>Carduelis carduelis</i>	-	1	-
<i>Carduelis chloris</i>	18	2	10
<i>Carduelis spinus</i>	1	-	8
<i>Carpodacus erythrinus</i>	11	14	26
<i>Certhia brachydactyla</i>	-	1	-
<i>Certhia familiaris</i>	-	-	5
<i>Coccothraustes coccothraustes</i>	1	-	-
<i>Delichon urbica</i>	1	-	1
<i>Dendrocopos major</i>	7	7	1
<i>Dendrocopos minor</i>	1	5	5
<i>Emberiza citrinella</i>	7	5	9
<i>Emberiza schoeniclus</i>	89	84	72
<i>Erithacus rubecula</i>	42	76	25
<i>Ficedula hypoleuca</i>	5	6	5
<i>Ficedula parva</i>	1	-	-
<i>Fringilla coelebs</i>	1	2	3
<i>Hippolais icterina</i>	10	9	8
<i>Hirundo rustica</i>	58	17	21
<i>Jynx torquilla</i>	-	-	1
<i>Lanius collurio</i>	6	8	3
<i>Locustella fluviatilis</i>	2	-	1
<i>Locustella luscinioides</i>	90	116	59
<i>Locustella naevia</i>	10	4	2
<i>Luscinia luscinia</i>	1	6	1
<i>Luscinia svecica</i>	11	9	8
<i>Motacilla alba</i>	1	-	1
<i>Motacilla flava</i>	3	4	3
<i>Oriolus oriolus</i>	-	1	-
<i>Muscicapa striata</i>	8	9	5
<i>Panurus biarmicus</i>	8	23	23
<i>Parus ater</i>	1	-	1
<i>Parus caeruleus</i>	126	128	127
<i>Parus major</i>	17	28	13
<i>Parus montanus</i>	11	19	21
<i>Phoenicurus ochruros</i>	1	1	3
<i>Phoenicurus phoenicurus</i>	6	11	-
<i>Phylloscopus collybita</i>	101	117	43
<i>Phylloscopus trochilus</i>	184	193	122

	1999 29 Jul.-10 Sept.	2000 24 Jul.-10 Sept.	2001 25 Jul.-5 Sept.
<i>Prunella modularis</i>	-	3	-
<i>Pyrrhula pyrrhula</i>	-	-	1
<i>Rallus aquaticus</i>		1	-
<i>Porzana porzana</i>	3	-	-
<i>Regulus regulus</i>		4	-
<i>Remiz pendulinus</i>	18	68	12
<i>Riparia riparia</i>	-	2	4
<i>Saxicola rubetra</i>	-	-	2
<i>Sitta europaea</i>	2	2	1
<i>Sturnus vulgaris</i>	1	1	-
<i>Sylvia atricapilla</i>	79	68	64
<i>Sylvia borin</i>	55	27	24
<i>Sylvia communis</i>	9	24	13
<i>Sylvia curruca</i>	30	46	21
<i>Sylvia nisoria</i>	3	2	1
<i>Troglodytes troglodytes</i>	5	14	7
<i>Turdus merula</i>	9	5	7
<i>Turdus philomelos</i>	4	3	12
<i>Turdus pilaris</i>	1	-	-
Total	2121	3006	1756

In 2000 and 2001, Lake Družno ringing site worked in Euring Swallow Program. Birds were trapped additionally in one mist-net, which was situated in the roosting place in the reedbeds. From 20 August to 16 September 2000, in total 416 Barn Swallows (*Hirundo rustica*) and 7 Sand Martins (*Riparia riparia*) were caught, and from 11 to 31 August 2001, in total 220 Barn Swallows and 1 Sand Martin were ringed.

In 25 August 1999, an immature Paddyfield Warbler (*Acrocephalus agricola*) was trapped. It was only the second record of this species for Poland (accepted by the Avifaunistic Commission).

Controls and retraps were the most numerous in 2000 (Table 2). The majority of birds with foreign rings were ringed in Russia and Lithuania (Great Reed Warbler – KAUNAS and ST. PETERSBURG, Sedge Warbler – KAUNAS, Willow Warbler (*Phylloscopus trochilus*) – MOSKWA rings), but also in other countries (Reed Bunting – MADRID and Barn Swallow – HELSINKI rings).

Table 2
Controls and retraps in seasons 1999-2001

	Birds with Polish rings	Birds with foreign rings	Retraps	Total
1999	35	2	107	144
2000	75	2	264	341
2001	60	3	142	205
Total	170	7	513	690

The deviations from the long-term average (1990-2001) are shown in Table 3. In 1999-2001, in August (standard period) the numbers of all ringed birds were higher than the value of long-term average. For these seasons, the numbers of ringed Reed Warblers and Marsh Warblers were the highest in 1999 and 2000 (Fig. 1). In the case of Sedge Warblers – in 2000. In 1999 and 2001 the numbers of caught individuals of this species were lower than the value of long-term average. Generally long-term dynamics of these three species shows positive trends, but only the trend for the Marsh Warbler reached statistical significance. Fluctuations of all three species are correlated significantly, with the highest value of correlation coefficient for the Sedge and Marsh Warbler ($r = 0.89$). In the years 1999-2001, the highest positive deviation from the average number of ringed birds was recorded in August 1999 for the Willow Warbler (8.4% more than long-term average). The lowest value (-6.1%) was recorded in 2000 for the Garden Warbler (*Sylvia borin*). The numbers of ringed Blue Tits (*Parus caeruleus*) in 1999, 2000 and 2001 were the highest (5.4%, 4.8% and 5.0% more than the average, respectively). On the contrary, the highest negative

Table 3

Deviation from long-term mean (in percent) of some ringed bird species in August (standard period) in seasons 1990-2001 (1993 skipped because of short working period)

	1990	1991	1992	1994	1995	1996	1997	1998	1999	2000	2001
<i>A. schoenobaenus</i>	-2.3	-5.3	-1.2	-3.6	2.5	8.6	-1.7	1.9	-0.7	4.0	-2.1
<i>A. scirpaceus</i>	-1.2	-1.9	0.4	-4.1	-2.7	3.3	-1.2	5.7	0.2	1.9	-0.3
<i>A. palustris</i>	-5.8	-5.5	-2.2	-4.2	-1.7	11.2	-1.4	1.5	3.6	8.3	-3.6
<i>E. schoeniclus</i>	-4.5	-5.5	0.1	-5.0	1.8	0.5	4.6	4.4	1.3	2.0	0.3
<i>L. luscinoides</i>	-2.3	-4.4	-1.1	-4.5	-0.2	2.0	5.0	4.4	2.0	2.7	-3.6
<i>Ph. collybita</i>	3.8	-1.9	4.1	-1.1	-3.6	4.0	-5.2	1.5	0.1	2.3	-4.2
<i>Ph. trochilus</i>	-1.6	1.2	-3.0	-6.0	-4.5	2.6	0.7	2.1	8.4	-0.7	0.8
<i>S. atricapilla</i>	0.1	-3.9	5.2	-1.1	2.4	1.7	1.8	0.0	-0.8	-2.0	-3.4
<i>S. borin</i>	7.0	-3.5	1.9	-2.3	2.8	4.5	1.0	-2.3	1.7	-6.1	-4.7
<i>P. caeruleus</i>	-1.1	-5.8	-1.8	-3.2	-2.8	3.3	-3.4	-0.5	5.4	4.8	5.0
All species jointly	-1.2	-3.5	-0.5	-3.7	-0.4	4.2	-0.9	2.7	1.1	2.2	0.2

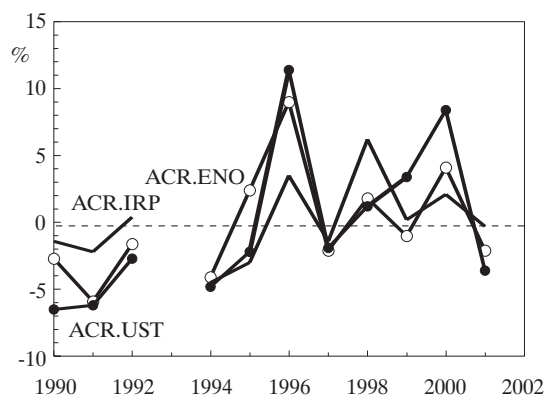


Fig. 1. Long-term dynamics of number of the Reed Warbler (ACR.IRP), the Sedge Warbler (ACR.ENO) and the Marsh Warbler (ACR.UST). Percent deviations from the long-term average are presented.

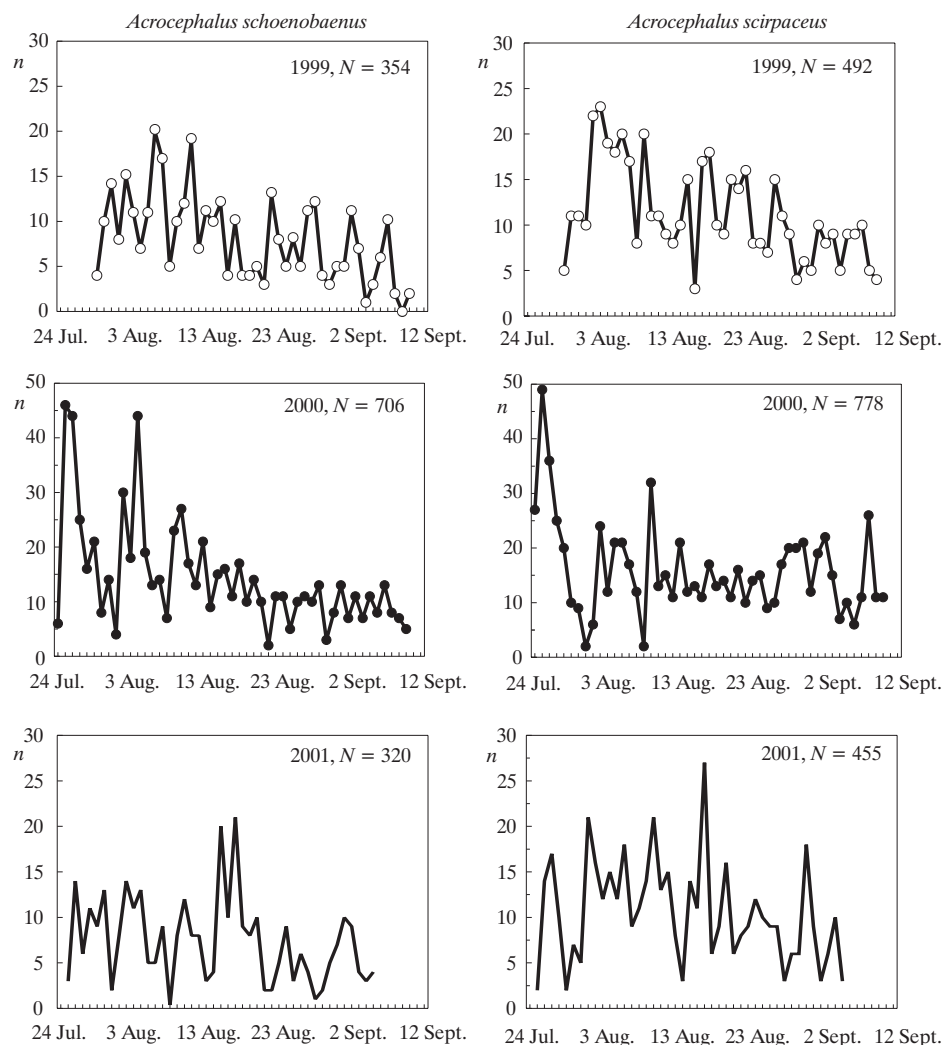


Fig. 2. Migration dynamics of the Sedge Warbler and the Reed Warbler in 1999-2001. Note different scale for season 2000.

values of the deviation were recorded in 2000 and 2001 for the Blackcap – *Sylvia atricapilla* (-2.0% and -3.4%, respectively).

Migration dynamics of the Sedge Warbler and the Reed Warbler in 1999-2001 is shown at Figure 2. In these seasons, the majority of Sedge Warblers were ringed at the end of July and in the first part of August. The number of caught birds decreased in the second part of August and remained rather stable. Migration dynamics of the Reed Warbler in 1999-2001 showed peaks of abundance at the end of July and in the first part of August. Later on, the numbers of caught birds were lower, and at the end of the working period, less than ten birds a day were ringed. Only in 2000, the increase of number of caught birds was recorded at the end of August and in the first decade of September.

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