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THE DISTRIBUTION OF BREEDING WADERS IN CZECHOSLOVAKIA IN 1973-1977

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An atlas survey covering 1360 010 km squares was undertaken between 1973 and 1977. Ten species of waders were found breeding. Most waders are scarce and declining as breeding species, largely as a consequence of habitat loss; only Lapwing, Little Ringed Plover, Woodcock and Snipe are widespread.

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INTRODUCTION

Between 1973 and 1977 an atlas project to document the breeding distribution of birds in Czechoslovakia was carried out. The data was compiled from Bohemia by Dr. Stastný and from Slovakia by Ing. Randík. Since the results of this survey are still awaiting publication, and in view of the recent attention paid to breeding waders in Europe (Piersma 1986), this note presents the provisional distribution maps of breeding waders in Czechoslovakia. It expands on the numerical data presented in Piersma (1986).

METHODS

Between 1973 and 1977 a total of 1360 10 km squares in Czechoslovakia were surveyed for breeding waders. Of these, 846 squares were in the Czech Socialist Republic (Bohemia and Moravia) and all were fully surveyed. The remaining 514 squares were in the Slovak Socialist Republic (Slovakia) with 216 (51%) covered in detail.

The breeding status for each 10 km square was assigned to one of 3 categories:

1. Possible breeders (small dots on the figures),
2. Probable breeders (medium dots on the figures), and
3. Confirmed breeders (large dots on the figures).

RESULTS

Czechoslovakia is a land-locked and largely mountainous country with limited habitat for

Table 1. Approximate numbers of breeding pairs of waders in Czechoslovakia. The figures are based on the national Atlas work carried out between 1973 and 1977.

Species	No. of pairs.
Black-winged Stilt <i>Himantopus himantopus</i>	4
Stone Curlew <i>Burhinus oedicnemus</i>	15-30
Little Ringed Plover <i>Charadrius dubius</i>	1000
Lapwing <i>Vanellus vanellus</i>	2000*
Snipe <i>Gallinago gallinago</i>	1000
Woodcock <i>Scolopax rusticola</i>	1000
Black-tailed Godwit <i>Limosa limosa</i>	300-600
Curlew <i>Numenius arquata</i>	125-150
Redshank <i>Tringa totanus</i>	80-150
Common Sandpiper <i>Actitis hypoleucos</i>	1000

* this estimate is probably very low

breeding waders. Ten species of waders were found breeding in Czechoslovakia during the survey. The approximate breeding population of each, derived from information collected during Atlas Survey work, is shown in Table 1. The same data set was used for Breeding Waders in Europe (Piersma 1986).

The status and distribution of each species in

Table 2. The status of breeding waders in Czechoslovakia. A total of 846 10 km squares were surveyed in Bohemia; and 514 squares in Slovakia.

	Bohemia breeding status ^a					Slovakia breeding status ^a				
	1	2	3	total	%	1	2	3	total	%
Black-winged Stilt <i>Himantopus himantopus</i>	-	-	-	0				1	1	<1
Stone Curlew <i>Burhinus oedicnemus</i>	1	2	3	6	<1	1	-	-	1	<1
Little Ringed Plover <i>Charadrius dubius</i>	47	75	204	326	38	24	34	86	144	28
Lapwing <i>Vanellus vanellus</i>	20	93	637	750	89	25	32	165	222	43
Snipe <i>Gallinago gallinago</i>	73	183	158	414	49	38	25	22	85	17
Woodcock <i>Scolopax rusticola</i>	105	140	144	389	46	52	36	60	148	29
Black-tailed Godwit <i>Limosa limosa</i>	11	22	40	73	7	3	4	12	19	4
Curlew <i>Numenius arquata</i>	4	5	11	20	2	7	2	6	15	3
Redshank <i>Tringa totanus</i>	23	33	44	100	12	19	9	11	39	8
Common Sandpiper	85	73	49	207	25	24	25	82	131	25

^a the number of 10 km squares in which the species was recorded. Breeding status: 1 possible breeding, 2 probable breeding, 3 confirmed breeding.

Bohemia and Slovakia is given in Table 2 and in Figures 1-9. In 1976 only 4 pairs of Black-winged Stilts *Himantopus himantopus* nested in East Slovak lowlands in Senne. The Stone Curlew *Burhinus oedicnemus* (Figure 1) also has a very small breeding population with total number in Bohemia of 10-20 pairs and 5-10 pairs in Slovakia. In contrast, the Little Ringed Plover *Charadrius dubius* (Figure 2) is widely distributed as a breeding species but is limited in some areas by the absence of suitable nesting habitat.

Another widely distributed breeding species is the Lapwing *Vanellus vanellus* (Figure 3) which occurs almost everywhere in Bohemia, with confirmed breeding recorded in 75% of squares. It is much less widespread in Slovakia where breeding was confirmed in only 43% of squares (Table 1).

The Snipe *Gallinago gallinago* (Figure 4) is also more widely distributed in Bohemia than Slovakia. Again there is little information on breeding density, as is the case also with Woodcock (Figure 5). An estimated 250 to 500

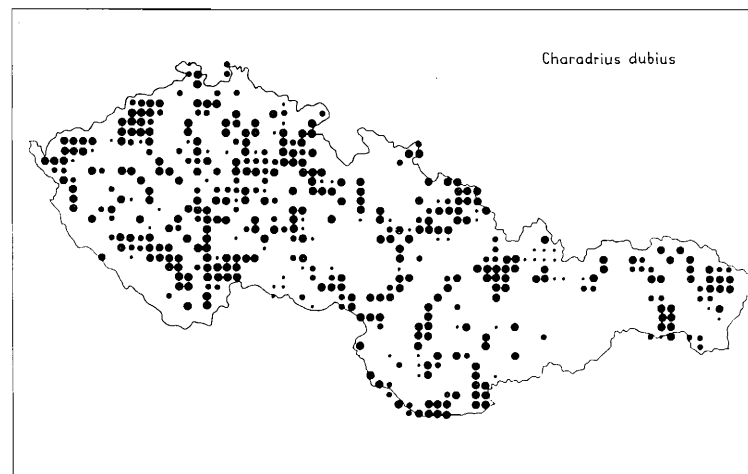


Figure 2. The breeding distribution of the Little Ringed Plover in Czechoslovakia. See text for definitions of symbols.

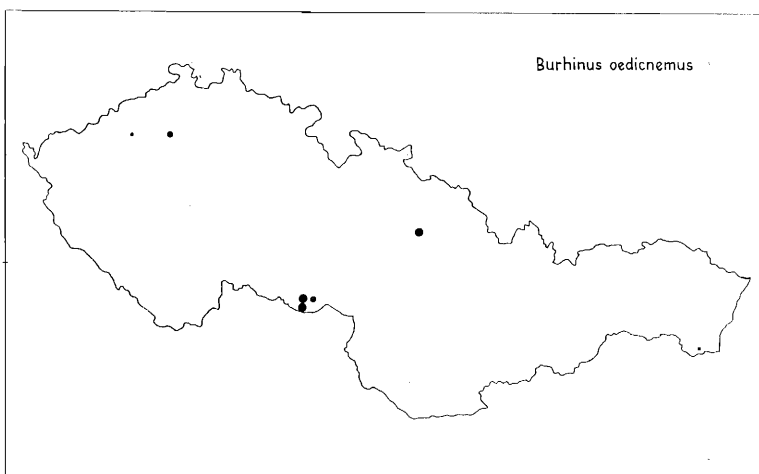


Figure 1. The breeding distribution of the Stone Curlew in Czechoslovakia. See text for definitions of symbols.

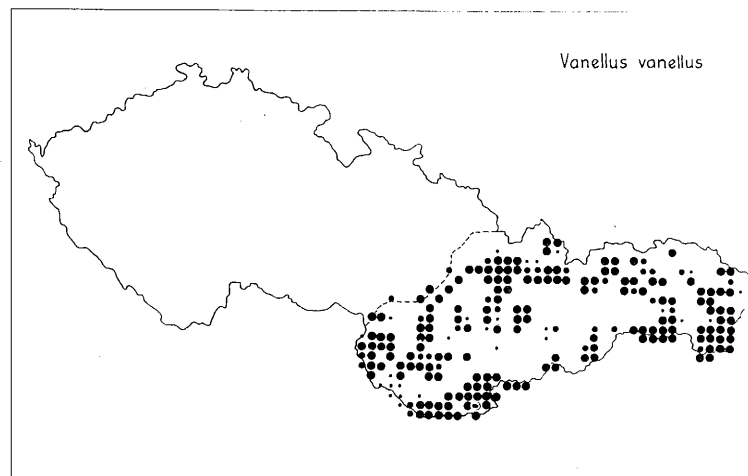


Figure 3. The breeding distribution of the Lapwing in Slovakia. The distribution is not known for Bohemia, where Lapwings occurred in almost all 10 km squares (see Table 1).

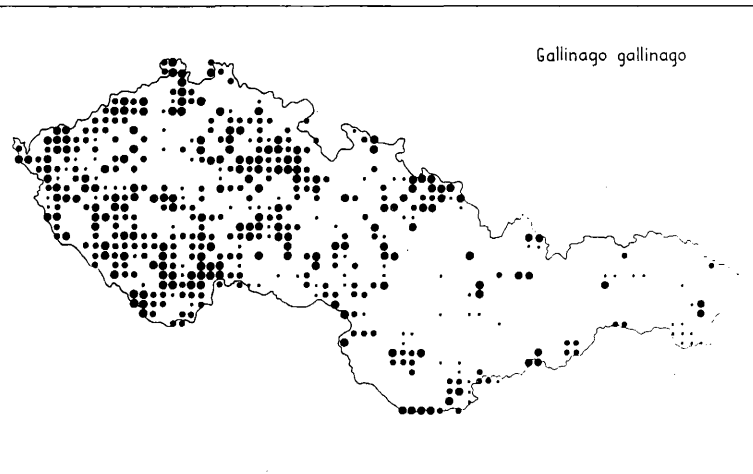


Figure 4. The breeding distribution of the Snipe in Czechoslovakia. See text for definitions of symbols.

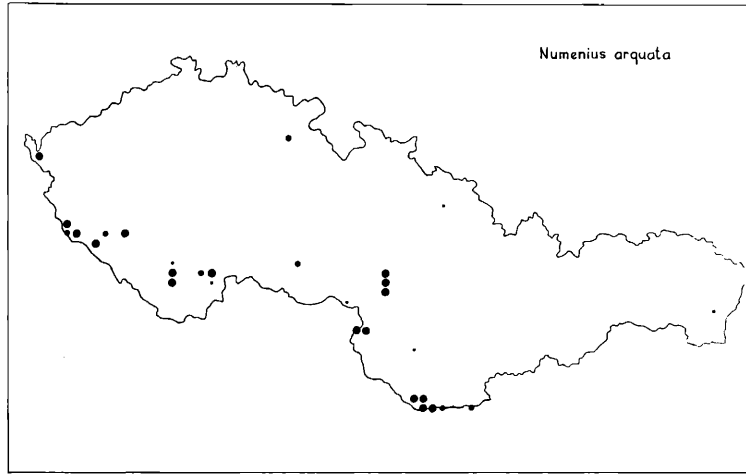


Figure 7. The breeding distribution of the Curlew in Czechoslovakia. See text for definitions of symbols.

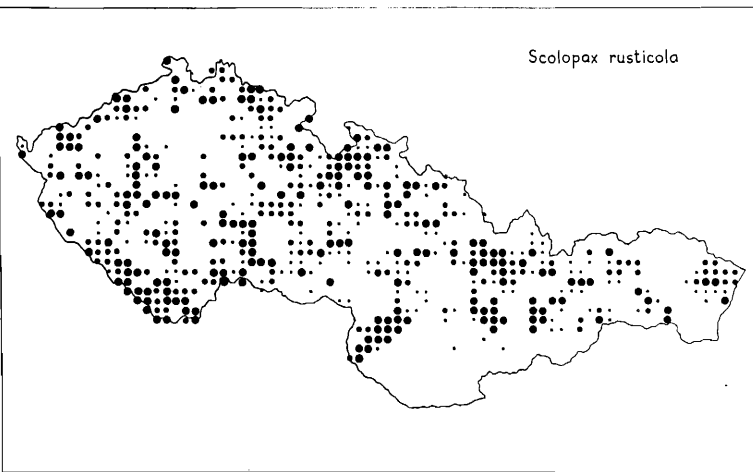


Figure 5. The breeding distribution of the Woodcock in Czechoslovakia. See text for definitions of symbols.

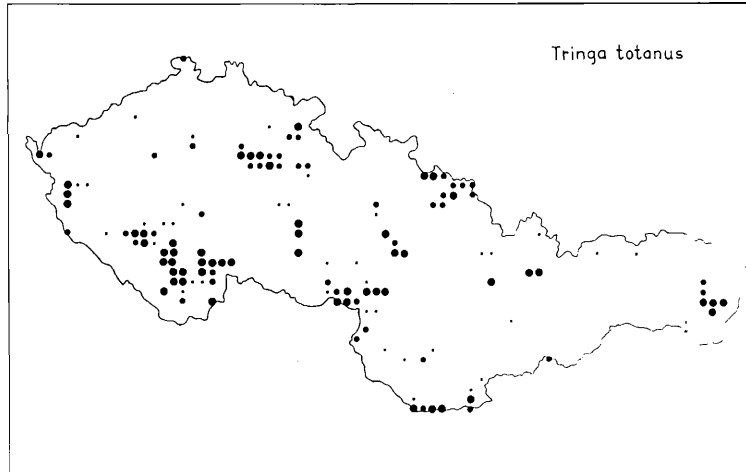


Figure 8. The breeding distribution of the Redshank in Czechoslovakia. See text for definitions of symbols.

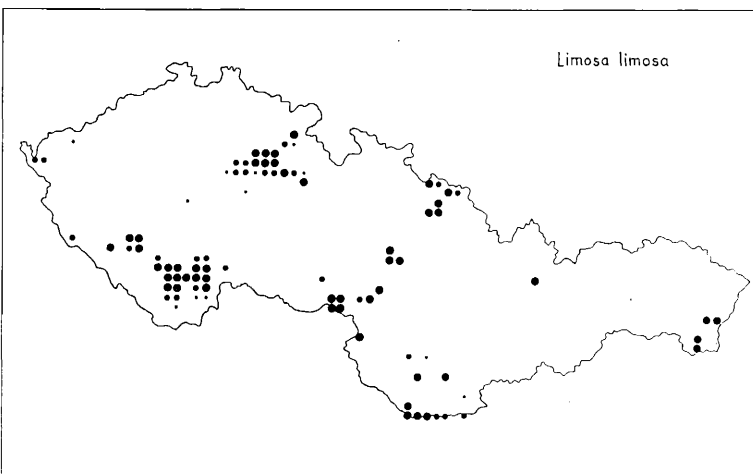


Figure 6. The breeding distribution of the Black-tailed Godwit in Czechoslovakia. See text for definitions of symbols.

pairs of Black-tailed Godwit *Limosa limosa* nest in Bohemia and 50-100 pairs in Slovakia with a scattered distribution across the country (Figure 6).

180-200 pairs of Curlew *Numenius arquata* nested

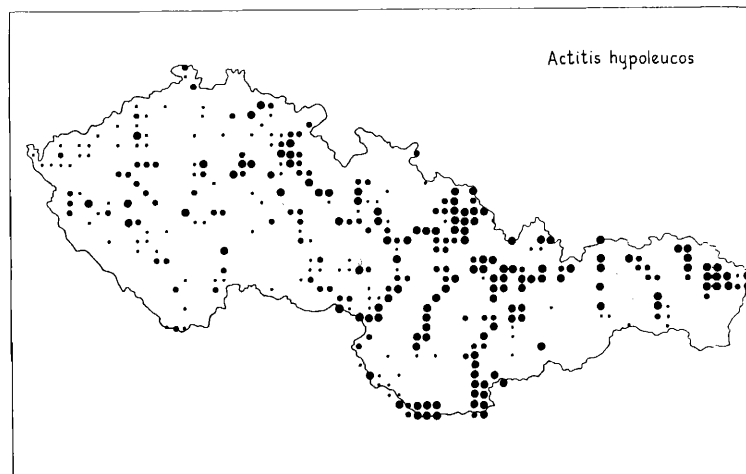


Figure 9. The breeding distribution of the Common Sandpiper in Czechoslovakia. See text for definitions of symbols.

in Slovakia in 1960. Since then numbers have fallen considerably. By the present survey only 125-150 pairs were recorded. In Bohemia only 25-50 pairs were estimated to be breeding in the study period.

The Redshank *Tringa totanus* (Figure 8) has a limited distribution in Czechoslovakia, with an estimated 80-150 pairs nesting in Bohemia. The Common Sandpiper *Actitis hypoleucos* breeds scattered throughout the country, and is increasingly abundant towards the west (Figure 9).

DISCUSSION

Of the 14 recorded wader breeding species in Czechoslovakia only 9 breed regularly, and the other 5 occasionally or rarely (Hudec and Cerny 1977). Eleven have been proposed for inclusion in the Red List of Threatened Birds. Five species, Avocet, Ringed Plover, Dotterel, Green Sandpiper and Black-winged Stilt, have been identified as critically threatened. Stone Curlew and Curlew are considered to be very threatened as breeding species, and Snipe, Black-tailed Godwit, Redshank and Common Sandpiper are threatened (Donat and Sedlacek 1982).

The loss of suitable breeding habitats by man's activities is the major threat to breeding waders in Czechoslovakia, as elsewhere in Europe. Some species, such as the Lapwing, are more able to adapt than others to loss of original breeding habitat and have begun to nest on dry agricultural land. The Little Ringed Plover has begun to breed in muddy and stoney fields at considerable distances from ponds (Urbanek and Bartl 1980). The changes can also be seen in the Stone Curlews (Hudec 1975), and rarely Curlews (Gahura 1979), nest on dry agricultural land.

Woodcock breed in the mountainous Czechoslovak forests at 1200-1400 m above sea level and both Snipe and Common Sandpiper breed up to 1100 m. The Little Ringed Plover and Lapwing breed at lower altitudes to a maximum of 800 m, whilst the highest breeding Redshank occur at 600 m. The remaining species are confined mainly to the lowlands, up to 400-500 m (Hudec and Cerny 1977).

Four species recorded as breeding in Czechoslovakia were not found during the present survey. Avocets have bred occasionally in Czechoslovakia, with records from South Bohemia in 1946-1947 and regular records in South Moravia between 1948-1958. Ringed Plovers attempted to breed in 1953 and 1955, and Dotterel bred regularly in the Krkonose mountains during the last century, but the last recorded breeding attempt was in 1946 (Hudec and Cerny 1977). Green Sandpipers have bred very occasionally (Musilek 1936, Stastny 1974, Zdarek in press).

Of the remaining wader species, only Little Ringed Plover, Common Sandpiper, and perhaps Woodcock, have stable populations. Numbers of breeding Woodcock are practically unknown but it is the only wader species to be regularly hunted in Czechoslovakia. Snipe have declined in some areas (Machacek 1982) whilst in other areas it has adapted to new nesting sites (Hudec and Cerny 1977).

Most wader species have declined in breeding numbers. The decrease in the breeding Lapwing population has been documented recently (Urbanek and Bartl 1980, Klabnik 1984). Hajek (1970) found a decline in breeding Redshank at Lednice ponds, in South Moravia from scores of pairs in 1951 to a maximum of 4 pairs in 1970. In other areas Redshank have disappeared completely.

A slight increase in Black-tailed Godwit and Curlew numbers has been recorded during the last few decades but, more recently both species have disappeared from most breeding areas owing to serious human-induced loss of breeding habitat.

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