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Breeding Waders on Wet Grasslands (Inland Sites) in West Germany: Recent Data

Brigitte Klinner

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In West Germany breeding waders on wet grasslands at inland sites are highly endangered. In this paper data of the four typical species (Black-tailed Godwit, Redshank, Common Snipe and Ruff) are presented. As far as comparable data of different years exists, it shows enormous decreases in the number of breeding pairs/females. At many sites this trend can also be found for Lapwings. The main reason for the declines is the intensification of farming activities which leads to habitat losses.

Brigitte Klinner, *Biologische Station Münster, Coermühle 181, 4400 Münster, Germany.*

Farmland use in West Germany has changed drastically, especially during the last 15-20 years. Extensively farmed meadows and pastures have been and still are converted into fields or highly productive grassland, causing the loss of this semi-natural habitat.

As meadows and pastures already act as substitutes for natural habitats lost due to human activities, the loss of them in turn gives great cause for concern.

Wet meadows and many of the plants and animals living there are especially endangered. In the case of breeding waders the decreases in numbers are enormous. The tables that follow summarize the available data for four species. Although the Black-tailed Godwit *Limosa limosa* is the most typical wader of inland wet meadows and moist pastures, Common Snipe *Gallinago gallinago* and Ruff *Philomachus pugnax* are dependent on these sites too, as their natural habitats (bogs) are nowadays extremely rare

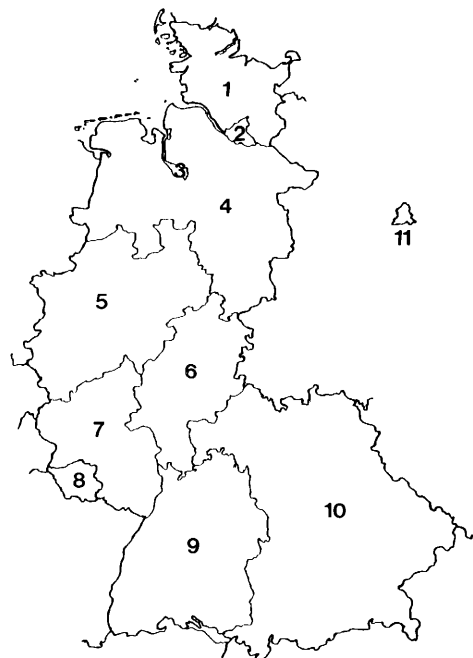


Figure 1. Federal States in West Germany. 1: Schleswig-Holstein, 2: Hamburg, 3: Bremen, 4: Niedersachsen, 5: Nordrhein-Westfalen, 6: Hessen, 7: Rheinland-Pfalz, 8: Saarland, 9: Baden-Württemberg, 10: Bayern, 11: West-Berlin

in Germany. Redshanks *Tringa totanus*, occur also on coastal breeding sites. All these species are mainly distributed in the northern parts of Germany (Schleswig-Holstein,

Hamburg, Bremen, Niedersachsen, Nordrhein-Westfalen) which are characterized by a low and open landscape. In the south there are high numbers only in Bavaria (Bayern).

Table 1. Numbers of breeding pairs of Black-tailed Godwits on West German wet grasslands.

Federal State see Figure 1	1	2	3+4	5	6	7	8	9	10
years	1982-86	1985	1989	1987/89	1982			1983	1986
pairs	ca 1,500	ca 60	ca 6,500	ca 320	2	-	-	ca 20	68-69
trend	1977: ca 2,000		1988: ca 7,000	1975: ca 600					1980: 97

Table 2. Numbers of breeding pairs of Redshanks on West German wet grasslands.

Federal state see Figure 1	1	2	3+4	5	6	7	8	9	10
years	1982-86	1985	1989	1987/89					1986
pairs	ca 3,000*	37	ca 3,000**	ca 50	-	-	-	-	11
trend	inland: decrease		inland: decrease	1976: 60-85					1960: ca 30

*total number (incl. coast) ca. 6,000; **total number (incl. coast) ca 8,000 (very rough estimate)

Table 3. Numbers of breeding pairs of Common Snipes on West German wet grasslands.

Federal state see Figure 1	1	2	3+4	5	6	7	8	9	10
years	1982-86	1984	1989	1987/89	1979	1979	1979	1979	1980/83
pairs	ca 2,000	103	ca 5,500 -ca 6,000	ca 250	ca 330	ca 70	ca 20	ca 200	ca 1,000
trend	1970: ca 10,000 -ca 15,000	decrease	decrease	1975: ca 400	decrease				

Table 4. Numbers of breeding Reeves on West German wet grasslands.

Federal state see Figure 1	1	2	3+4	5	6	7	8	9	10
years	1982-86	1985	1989	1987					
females	ca 170	1-2	ca 50	2	-	-	-	-	-
trend	decrease		1979: ca. 400	decrease					

The sources for the data are mentioned in 'acknowledgements' and in the reference list.

Unfortunately such data does not exist for Lapwing *Vanellus vanellus*. For a long time it was believed that Lapwings were able to cope with the modern way of farming. The changes in the numbers of breeding pairs in many areas show, however, that this view was wrong: Decreases up to 90 % (!) within 10-15 years have been found.

The main reason for the enormous losses in breeding waders in wet grasslands in Germany is the intensification of farming activities which can be summarized as follows:

1. habitat losses:

- conversion of meadows and pastures into fields;
- increase of grass-growing for silage production.

2. habitat modifications:

- drainage;
- fertilization.

with the consequences of:

- increase in the speed of plant growth;
- increase of plant density;
- very early mowing time; and
- several mowings per year.

3. 'ecological trap' maize fields:

In the early spring these large open and also mainly wet fields with only a sparse vegetation cover (remains of maize plants from the year before) seem to be more attractive to waders than does grassland which already has higher and more dense plant cover at that time. Especially Lapwing and Black-tailed Godwit prefer such fields as breeding sites. At the beginning of May, just when the clutches are highly brooded or the chicks even hatched, ploughing starts and nearly all nests and broods are destroyed.

Habitat losses, habitat modifications and 'ecological traps' lead to decreases in wader populations because:

- clutches and chicks are directly destroyed or killed by machines, or indirectly by being covered with manure, slurry or pes-

ticides on fields and pasture;

- chicks die of starvation on fields; and
- chicks become entangled in dense vegetation (especially on pasture).

The consequences of these impacts are that:

- only a few chicks survive;
- an increasing number of pairs do not breed again after having lost their clutches; and
- an increasing number of pairs do not breed at all but just summer.

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