

RINGING RECOVERIES OF THE COMMON SNIPE (*Gallinago gallinago*) CAUGHT DURING AUTUMN MIGRATION IN THE GULF OF GDAŃSK REGION

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ABSTRACT

Meissner W. 2002. *Ringling recoveries of the Common Snipe (Gallinago gallinago) caught during autumn migration in the Gulf of Gdańsk region*. Ring 24, 1: 17-23.

The autumn migration of the Common Snipe was studied in years 1983-2000 in western part of the Gulf of Gdańsk (Polish Baltic coast). In this period 1763 birds were ringed and 50 long-distance recoveries were obtained. The Common Snipe is one of the favoured game birds and the obtained recovery rate (2.8%) is rather high in comparison with other wader species ringed on the Gulf of Gdańsk coast (Meissner and Remisiewicz 1998). After leaving the Gulf of Gdańsk the birds continue their migration in western direction. The majority of them were recorded in France (62%) and Great Britain (20%). The bulk of records were concentrated along the English Channel and the Gulf of Biscay coasts. Although 88% of recovered Common Snipes were shot, there were only 4 recoveries from the western Mediterranean and not one recovery from the Apennine Peninsula, where hunting pressure is very high. It suggests that Common Snipes passing northern Poland follow almost exclusively the southern Baltic and the southern North Sea coasts and their main wintering grounds stretch from Denmark, through northern France, to the Pyrenees. The recovery rate of birds ringed in July was over twice as high as in August and September, in spite of the fact that the majority of Common Snipes was passing the study area between the second decade of August and the end of September. Reasons for differences in recovery rate among birds ringed in subsequent months and in different years are discussed. The average speed of migration calculated on the basis of autumn direct recoveries was only 22.6 km/day ($SD = 13.3$, $N = 17$). It confirms that Common Snipes move slowly in autumn. The species adheres to the B-strategy *sensu* Alerstam and Högstedt (1982) and migrates in autumn in short flights with very low fat reserves.

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INTRODUCTION

The Common Snipe is one of the favourite game birds, especially in western and in southern Europe. It has been estimated that over 1 million of birds are shot

yearly in the continent (Devort 1997). Thus, the ringing recovery rate of this species is high, although variable within the different countries (Dhont and van Hecke 1977, Fog 1978, Kålås 1980, Roos 1984, Pörner 1987, Kharitonov 1998, Meissner 2000, Švažas *et al.* 2001). Distributions of the Common Snipe ringing recoveries have been depicted for Central Europe (Glutz von Blotzheim *et al.* 1977), Denmark (Fog 1978), Fennoscandia (Kålås 1980) and former USSR (Baumanis 1985). Recently Rouxel (2000) summed up the knowledge about migration routes and localisation of wintering areas of this species. The vast majority of ringing recoveries of the Common Snipe comes from shot birds, and hunting season in all western European countries falls on autumn and winter (Schies 1997 in Rouxel 2000). Hence, the knowledge about autumn migration routes and localisation of wintering areas is rather good contrary to the knowledge about spring migration (Rouxel 2000). In Poland, more detailed analyses of ringing recoveries of this species have not been done yet. Only Meissner (2000) showed a general map of distribution of ringing recoveries obtained by the Waterbird Research Group KULING.

The main aim of this paper is to recognise the destination of migrants passing through the region of the Gulf of Gdańsk in autumn.

MATERIAL AND METHODS

Common Snipes were caught during autumn migration in years 1983-2000 at three ringing sites situated on the coast of western part of the Gulf of Gdańsk (Fig. 1). The majority of them were trapped in walk-in traps (Meissner 1998). Occasionally also mist-nets were used. The number of ringed Common Snipes varied

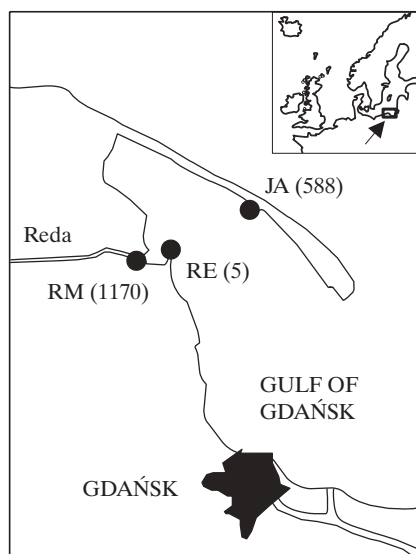


Fig. 1. Study area. Ringing sites of WRG KULING are indicated by dots. RM – Reda mouth, JA – Jastarnia, RE – Rewa. Numbers in brackets – numbers of Common Snipes ringed at given ringing sites.

among the seasons and among the ringing sites. At Rewa this species was met sporadically, because in this place there were only sandy coasts and no suitable habitats for snipes. More detailed description of ringing sites was given in an earlier paper (Meissner and Remisiewicz 1998).

Direct ringing recovery was defined as a recovery obtained within the same autumn or during winter following the ringing. Similarly to other studies (Kålås 1980, Baumanis 1985) birds recorded between the beginning of December and the end of February were considered as winter recoveries. For comparing ringing recovery rates obtained in subsequent months only direct recoveries were used.

Each caught bird was aged (Glutz von Blotzheim *et al.* 1977), although ageing before 1990 was not reliable and after 1990 all recoveries concerned birds ringed as juveniles. Thus, all recoveries were combined. Statistical methods followed Zar (1996).

RESULTS

During eighteen years of study, 1763 Common Snipes were ringed and 50 long-distance ringing recoveries were obtained, with the mean ringing recovery rate reaching 2.8%. Besides, one local recovery was recorded. A juvenile Common Snipe ringed at the Reda mouth on 22 September 1998 was caught in the same place two years later on 23 September 2000. After G -test ($G = 11.9$, $p < 0.01$) the recovery rate proved significantly higher in years 1989-1994 (5.6%, $N = 16$) than in 1983-1988 (2.4%, $N = 16$) and 1995-2000 (1.7%, $N = 12$). There was no difference in the recovery rate between the first and the third six-year periods (χ^2 -test with Yates' correction: $\chi^2 = 0.6$, $p = 0.44$).

The majority of Common Snipes were recorded in France (62%) and in Great Britain (20%) – Table 1. Autumn and winter recoveries were distributed similarly (Fig. 2). The bulk of them were concentrated along the English Channel and the Gulf of Biscay coasts. Only four recoveries came from the Mediterranean, including one, the most distant, from Morocco (2869 km from the ringing place). The closest winter recoveries came from Denmark.

Table 1
The number of long-distance recoveries of Common Snipes
ringed by WRG KULING in years 1983-2000

Country	No of recoveries	Percent share
France	31	62
Great Britain	10	20
Denmark	5	10
Holland	1	2
Ireland	1	2
Italy	1	2
Morocco	1	2
TOTAL	50	100

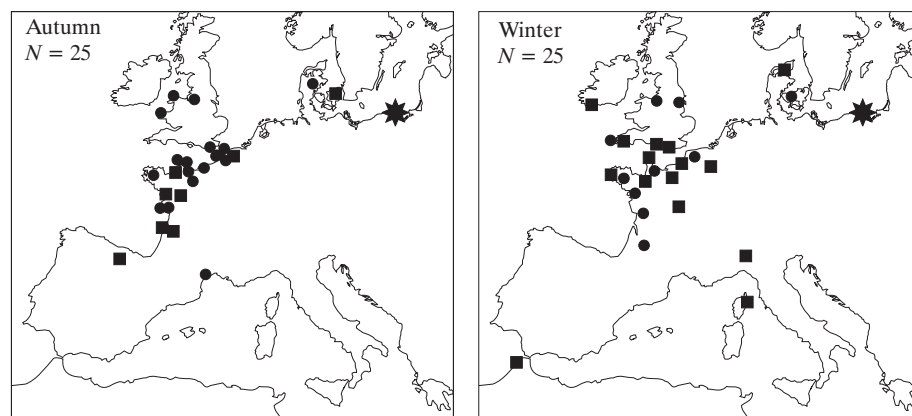


Fig. 2. Distribution of recoveries of the Common Snipe ringed at the Gulf of Gdańsk coast between 1983 and 2000. Dots – direct recoveries, squares – indirect recoveries.

Forty-four (88%) Common Snipes were shot, four (8%) were found dead and only two (4%) were caught and released. Over a half (54%) of recoveries were the direct ones. The longest period between ringing and recovery was 5 years, 6 months and 9 days. The fastest passage of the Common Snipe concerned a bird ringed on 16 July 1989 and recovered after 24 days in southern England (53.3 km/day). The average speed of migration calculated on the basis of autumn direct recoveries was only 22.6 km/day ($SD = 13.3$, $N = 17$).

The recovery rate of birds ringed in July (4.4%, $N = 8$) was much higher than in August (1.7%, $N = 20$) and September (1%, $N = 4$). This difference was statistically significant (G -test, $G = 6.3$, $p = 0.04$). There was no difference between the recovery rates in August and September (χ^2 -test with Yates' correction: $\chi^2 = 0.5$, $p = 0.48$).

DISCUSSION

The obtained recovery rate (2.8%) is rather high in comparison with some other wader species ringed on the Gulf of Gdańsk coast (Meissner and Remisiewicz 1998). However, in other studies on the Common Snipe migration, the reported recovery rate was even higher. In Fennoscandia it reached 6.4% (Kålås 1980), in Denmark – 8.3% (Fog 1978), and in the East Germany – 9.1% (Pörner 1987). It is worth to note that for calculation of these recovery rates data up to the mid-seventies or up to early eighties were used. Hence, this difference and fluctuations of recovery rate detected in this study might have been a result of changes in hunting pressure over the time. However, the contribution of shot birds among recoveries of Common Snipe ringed in Denmark and Fennoscandia reached 90% (Fog 1978, Kålås 1980), which is similar to the value calculated in this study. The data on hunting pressure in Europe are unclear. The annual number of hunting bags has been fluctuating considerably and in some areas it has been increasing, while in others it has

been decreasing (Devort 1997). It also depends on weather conditions in winter, because in France, where the hunting pressure is very high, the hunting of snipes is prohibited during a period of cold spell (Rouxel 2000). Nevertheless, there is some evidence that hunting pressure on Common Snipes estimated on a national scale for the whole of France and Great Britain has been decreasing over the past 20 years (Henderson *et al.* 1993, Devort 1997). However, according to Devort (1997) such differences could be largely caused by the exaggerations of early estimates of the hunting bags resulted from the survey techniques used. Furthermore, Beintema and Müskens (1982) claimed that in the 1970s Common Snipes moved the centre of their summer roost from the north-western Europe towards the Great Britain. Such shift might have affected the probability of obtaining recovery in a given area. Finally, it is worth to note that the French ringing centre was working less efficiently in the 1990s, what could result in lower number of ringing recoveries obtained in that period (Chevalier pers. comm).

The recovery rate of birds ringed in July is over twice as high as in August and in September, in spite of the fact that the majority of Common Snipes pass the study area between the second decade of August and the end of September (Meissner 2000). This might mean that earlier and later migrants are subject of different hunting pressure. However, when taking into account only shot birds, this difference becomes insignificant (G -test: $G = 2.14$, $p < 0.05$). Moreover, drawing conclusions on the basis of hunting as a sampling method is risky. In this case the number of recoveries is strongly linked to the activity of hunters (especially of these specialised on snipes) and to the bird abundance in areas with high hunting pressure.

After leaving the Gulf of Gdańsk, Common Snipes continue their migration in western direction, however it should be borne in mind that a very high proportion of shot birds may have critical influence on obtained recovery distribution. Although 88% of recovered Common Snipes were shot, there were only 4 recoveries from the western Mediterranean and not one recovery from the Apennine Peninsula, where hunting pressure is very high (Devort 1997). The number of birds spending winter in north-western Africa might be underestimated, because of lower probability of obtaining ringing recovery from that area. However, in order to reach this part of African wintering grounds, Common Snipes most probably should fly over the Iberian Peninsula, but only one recovery came from Spain where the hunting pressure on this species is very high (Devort 1997). All these facts suggest that Common Snipes passing northern Poland follow almost exclusively the southern Baltic and the southern North Sea coasts and their main wintering grounds stretch from Denmark, through the northern France, to the Pyrenees. Similar distribution of ringing recoveries was given by Fog (1978) for birds passing Denmark and by Baumanis (1985) for birds ringed in western Russia. Common Snipes ringed in Norway spend winter more frequently in Great Britain than birds from Sweden and Finland (Kålås 1980). The majority of Common Snipes ringed in Lithuania, Latvia and Estonia occupied wintering grounds localised much more southerly – in southern France and northern Italy (Baumanis 1985). Birds shot at the Apennine Penin-

sula came mainly from Germany and former Czechoslovakia and only small number of them were ringed in Scandinavia (Massoli-Novelli 1986). Common Snipes ringed in East Germany and in Switzerland had somewhat similar distribution to that obtained in this study, but clearly more birds were found in southern Europe (Glutz von Blotzheim *et al.* 1977, Pörner 1989). Published results showed that different populations of the Common Snipe were occupying different wintering areas, although there were no clear-cut borders between them. The results obtained hereby do not support a conclusion about the destination of the birds passing Poland in autumn made by Hémery and Nicolau-Guillaumet (1979 in Rouxel 2000). These authors claimed that Common Snipes coming *via* north-western Germany, eastern Germany and Poland had a greater tendency to be found in the continental and Mediterranean regions of France. Birds ringed in northern Poland rather belong to the group passing through coastal zones of the Baltic and the North Sea, which heads to western France, in particular to the English Channel and the Atlantic regions. Among 56 ringing recoveries obtained from Common Snipes ringed at the Jeziorsko reservoir in central Poland, 9 (16%) came from Italy (Bargiel *et al.* 1998). Hence, it is possible that Common Snipes migrating through central and southern Poland occupy wintering grounds localised more southerly than in the case of birds ringed within this study.

The low average migration speed confirms that Common Snipes move slowly in autumn. This species adheres to the B-strategy *sensu* Alerstam and Högstedt (1982) and migrates in autumn in short flights with very low fat reserves (Meissner *in press*).

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