Results of Ringed Plover *(Charadrius hiaticula)* ringing in the Gulf of Gdańsk (southern Baltic, Poland) using metal and colour rings

Szymon Bzoma[1], Włodzimierz Meissner[1,2]

[1]Waterbird Research Group KULING, ul. Świerkowa 34/7, 81-526 Gdynia, Poland, e-mail: szymbz@poczta.onet.pl

[2]Avian Ecophysiology Unit, Department of Vertebrate Ecology & Zoology, University of Gdańsk, Wita Stwosza 59, 80-308 Gdańsk, Poland.

Ringed Plovers were captured with walk-in traps in northern Poland during autumn migration between the beginning of July and end of September in 1983 - 2013. A numbered stainless steel ring was put on the left tarsus of each bird. From 2012 onwards, an engraved plastic ring (green with white inscription) was additionally placed on the right tarsus. Here we evaluated all recoveries of metal rings and resightings of colour rings recorded in a distance larger than 100 km from the ringing site and reported up to 30 Apr 2014. In the case of birds seen more than once at a given site, only the first record was used.

13 colour-marked Ringed Plovers were resighted and 10 ringed only with metal rings were recovered by 12 September 2013 (Table 1). The resighting rate of individuals marked with engraved plastic rings was significantly higher than those fitted with steel rings ($\chi^2 = 20.77$, df = 1, $P < 0.001$) (Table 1). According to these results 21 Ringed Plovers should be ringed with colour plastic rings to get one resighting, whereas as many as 141 with metal rings to obtain the same result, i.e. one ringing recovery.

The distribution of colour-ring resightings is generally similar to that found using recoveries of steel rings (Fig. 1). Vast majority of them originated from coastal areas of Central and Western Europe where the networks of birdwatchers are well-developed.

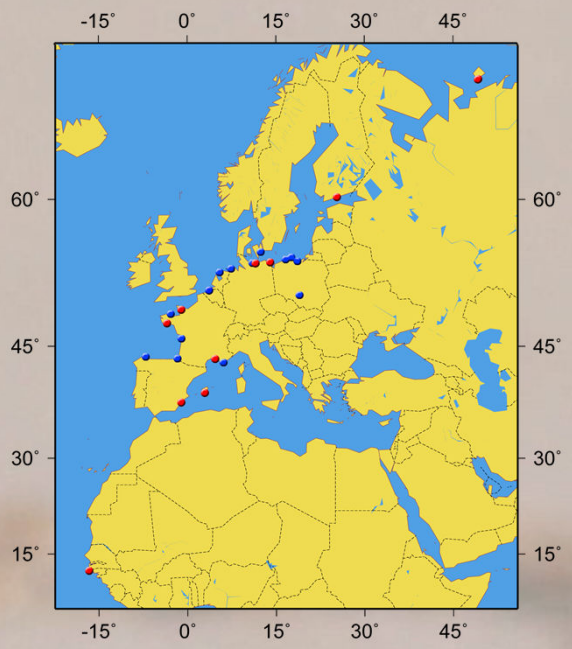

Fig. 1. Distribution of the resightings (blue dots) and recoveries (red dots) of Ringed Plovers marked during autumn migration in northern Poland

The resighting rate of colour-marked birds in September was lower than in the previous months (Fig. 2). This may be due to the fact that in September the northern subspecies of the Ringed Plover *(Ch. hiaticula tundrae)* migrates through the Baltic coast (Meissner 2007). These birds breed in northern Eurasia and winter in Central and South Africa. Hence the chance of the recovery/resighting from these areas is lower than in the case of individuals spending winter in Europe.

Table 1. Comparison of the recovery and resighting rates of Ringed Plovers marked with stainless steel rings or engraved plastic rings.

Type of ring	Ringed (N)	Recovered/ Resighted (N)	Recovery/ resighting rate
Stainless steel rings	1410	10	0.7%
Engraved plastic colour rings	268	13	4.9%

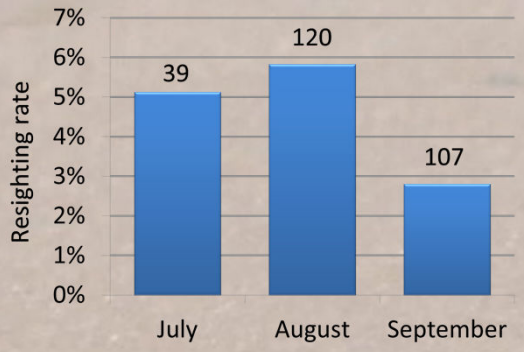

Fig. 2. Resighting rate of colour-marked Ringed Plovers in different months during autumn migration. The number of colour-ringed birds is given above thebars.

References

MEISSNER W. 2007. *Different timing of autumn migration of two Ringed Plover* Charadrius hiaticula *subspecies through the southern Baltic revealed by biometric analysis*. Ringing & Migration 23: 129-133.