

Woodcock ringing in Hungary between 1913 and 2014

GERGELY SCHALLY, Szent István University, Institute for Wildlife Conservation, Páter K. u. 1., 2100 Gödöllő, HUNGARY Email: sgergo@ns.vvt.gau.hu

Eurasian woodcock (*Scolopax rusticola*) ringing data in Hungary are available since 1913; however their number increased only in the last decade due to the development of the capturing methods. In this report, I summarized the information gathered along the 1913-2014 period, aiming to support basic knowledge about the birds ringed or recovered in Hungary.

In Hungary, captures are carried out by using the method based on specific dip nets with spot lamps (Gossmann *et al.* 1988) which was introduced in our country with the kind help of French ringers in 2005 (Fluck 2011). Before that, most captures occurred unintentionally, during the captures of passerines with mist nets. Most of the captures take place in March-April and October-November, when the majority of migrating birds dwell in this region.

The official data of the Hungarian Bird Ringing Centre were used and the annual number of ringers and ringed birds were summarized. In order to highlight the differences caused by

methodological development, the data were split into two groups: before and after the year 2005. The ringing data were also summarized for the two main periods according to the reported age of the captured birds.

Ringing and recoveries were displayed on a map. Some birds that were ringed by Hungarian ringers abroad were not considered in this case. Recaptures were also excluded because all of them occurred at the sites of their captures. The lines connecting the points of woodcocks that were ringed as chicks in Hungary were also emphasized.

The distribution of the distances (km) and the time elapsed (years) between the sites of ringing records and their recoveries were presented on histograms. The groups of birds that were ringed and those that were recovered in Hungary were separated. Recaptures were also excluded.

Data analyses were performed using Microsoft Excel 2010 and R (v3.2.1). Quantum GIS (v2.10) were used for spatial analysis.

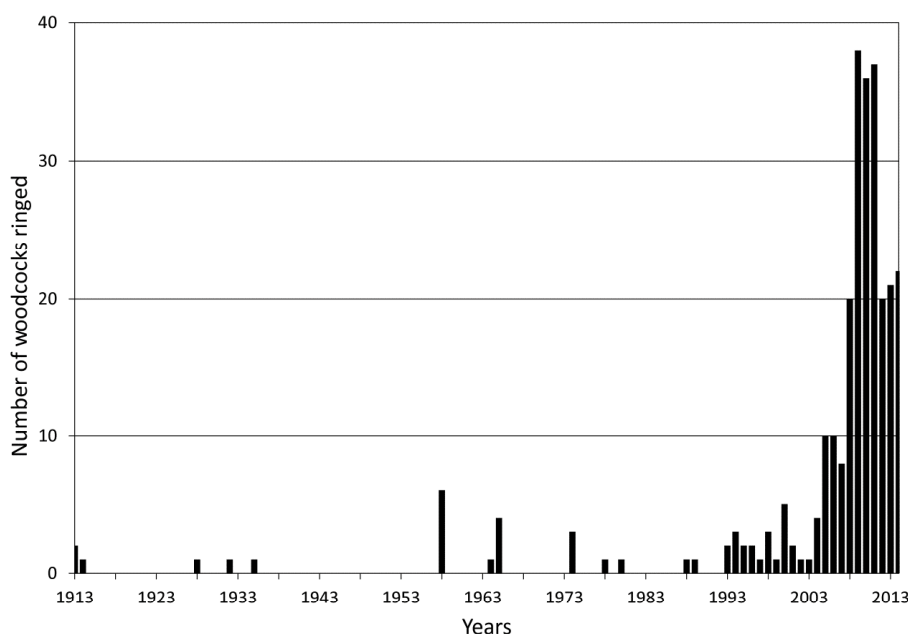


Figure 1. Number of woodcocks ringed in Hungary (1913-2014).

Results

In total, 273 Eurasian woodcock ringing records were registered in Hungary during the 1913-2014 period, 222 of them (81%) occurred since 2005 (Figure 1). It should be noted that the woodcocks in 1913, 1914, 1928, and one in 1998 were ringed by Hungarian ringers but not in Hungary. Since 1993 there has been at least one record each year.

Both the annual number of ringers and the number of ringed birds increased in the second period (Table 1). The mean rate of ringed birds per ringer was 3.14 after 2005, which can be regarded as low compared to the published French data (2012/13/14 mean: 17.06; Gossmann *et al.* 2012; Gossmann *et al.* 2014; Gossmann *et al.* 2014) or Russian data (2012/13/14 average: 12.64; Fokin *et al.* 2012; Fokin & Blokhin 2013; Fokin *et al.* 2014).

The rate of adult birds increased after 2005 (Table 2). This can be explained by the changes in the capturing method (mist nets vs. drop nets) but also by the development of ageing methods.

In total, 26 woodcocks were recovered of the 268 woodcocks that were ringed in Hungary until 2014 (Figure 2), in the following countries: France (7), Italy (6), Russia (2), Slovenia (2), Belarus (1), Croatia (1), Greece (1), Macedonia (1), Poland (1), and Spain (1). There were also 3 inland recoveries. The woodcocks recovered in Hungary originated from France (45), Italy (11), Russia (4), Belarus (1), Czech Republic (1), and Spain (1).

The shortest lines connecting the ringing and the recovery locations intersect several countries, from which we do not have confirmed ringing information so far: Austria, Bosnia and Herzegovina, Germany, Latvia, Liechtenstein, Lithuania, San Marino, Serbia, Slovakia, Switzerland, and Ukraine.

Two of the woodcocks that were ringed as chicks in Hungary were recovered north and northeast from the country, which may indicate that they went further to breed than the place where they were hatched.

Period	Number of ringers/year	Number of woodcocks ringed/year
1913-2004	1.60	0.55
2005-2014	7.10	22.20

Table 1. Summary of the ringing records in Hungary (1913-2014).

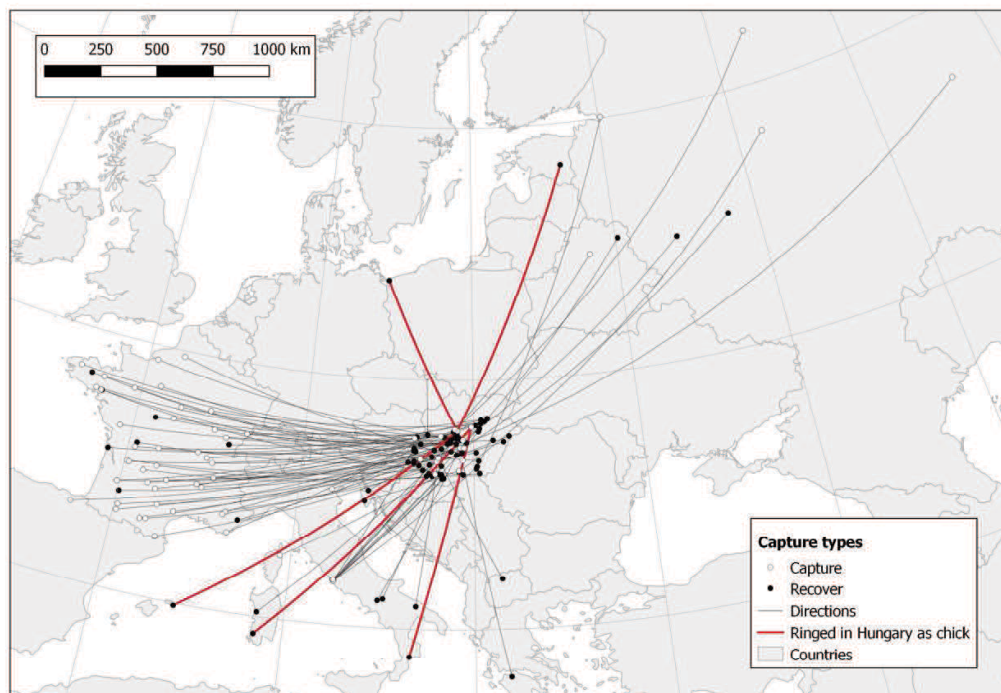


Figure 2. Map of the woodcock ringing and recovery locations associated with Hungary.

Period	Chick	First-year	Adult	Full-grown	No data
1913-2004	18	12	1	18	2
2005-2014	1	122	82	17	-

Table 2. Number of woodcocks according to their age at ringing (1913-2014). (Full-grown: able to fly freely, but age otherwise unknown)

Each recapture occurred exactly at same place as the original capture, with a mean of 18.30 days elapsed between them. The maximum of time elapsed before a recapture was 124 days (2013.11.22 – 2014.03.26), supposedly in the case of a bird that spent the winter at the same site.

Most woodcocks (captured both inland and abroad) have been recovered at a distance of 1 000-1 500 km from their ringing locations; there were also numerous birds within 0-500 km (Figure 3). The longest distance registered was 2 832 km. These results are in accordance with the results of satellite telemetry studies (Arizaga *et al.* 2015), as the country may lie close to the

middle of the migration routes, which can be 5 000-10 000 km long. This may be a drawback in some respects, since we have information on only less than half of the routes in the case of most woodcocks. In order to have a better knowledge of the paths of birds crossing our country, it would be very important to raise the number of recaptures.

Most woodcocks (captured both inland and abroad) have been recovered within one year after ringing (Figure 4). The longest time elapsed was nearly 10 years (3 630 days), in case of a bird that was ringed in Saint-Launeuc, France, and recovered in Kóka, Hungary.

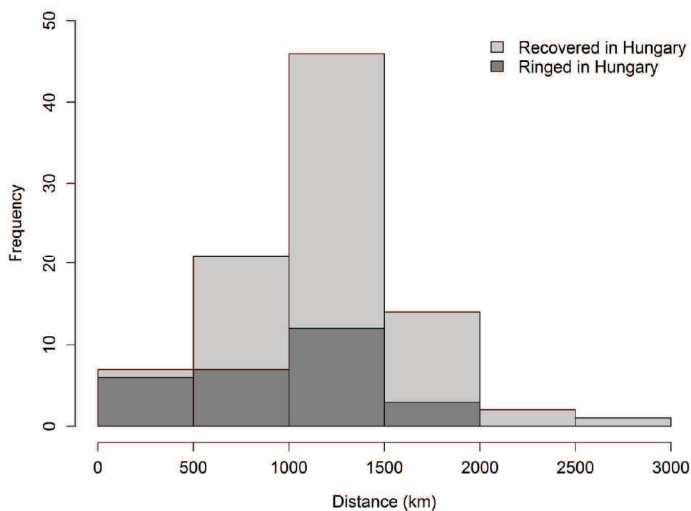


Figure 3. Frequency of woodcocks according to the distances between their sites of ringing and recovery.

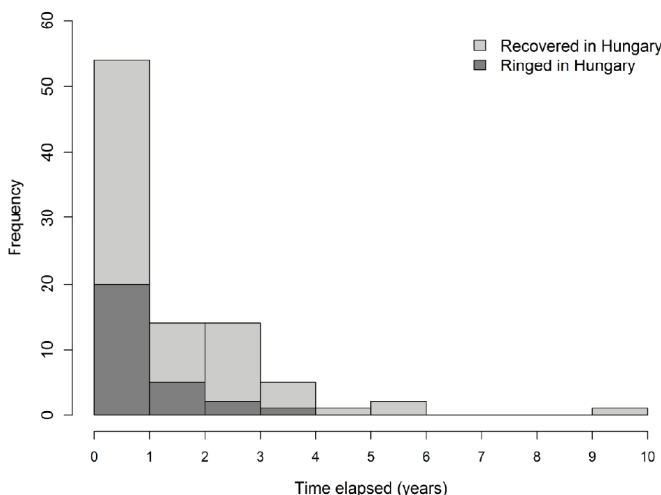


Figure 4. Frequency of woodcocks according to the time elapsed between their ringing and recovery.

Conclusions

Both the annual number of ringers and the number of ringed birds per ringer have multiplied in the last decade, however they can still be regarded as low compared to other areas. The reason for this can be twofold: on one hand, the effort per ringer (number and length of field trips) could also be lower. On the other hand, the probability of capture is lower, due to the lower abundance of the birds in this region. In any case, increasing the number of birds ringed for sufficient information may only be achieved by spending more individual effort and by involving many more professional ringers in the fieldwork.

It would also be important to pay more attention to capturing and ringing breeding and wintering birds, as well as chicks. The great disadvantage would be that these activities might require far

more effort with less chance of success. The technique which is suitable for conditions in spring or in autumn might not be efficient in summer, when woodcocks may spend less time in open fields at night (Hoodless & Hirons 2007).

The recovery rate – which is linked mainly to hunting – can be considered high. However, hunting activity and reporting rate of rings may vary among different countries, which may have a significant influence on the spatial pattern of the data.

Minor methodological differences can be noticed among the ringers, in relation with local conditions and personal preferences. In order to share experience and knowledge, and to promote the development of methods, it is essential to organize national and international meetings and field expeditions regularly.

Acknowledgments

Many thanks to Dénes Fluck for his persistent work and efforts supporting the woodcock ringing project in Hungary, and also to the Bird Ringing Centre for providing the ringing data. Thanks to all professional ringers, who helped in the data collection with their fieldwork.

References

- Arizaga J., Crespo A., Telletxea I., Ibáñez R., Díez F., Tobar J.F., Minondo M., Ibarrola Z., Fuente J.J. & J.A. Pérez. 2015. Solar/Argos PTTs contradict ring-recovery analyses: Woodcocks wintering in Spain are found to breed further east than previously stated. *Journal of Ornithology* 156:515–523.
- Fluck D. 2011. A szalonkagyűrűzés hatéves tapasztalatai. *Nimród Vadászújság* 99:16.
- Fokin S. & Y. Blokhin. 2013. 2013 European Russia roding census and Woodcock ringing report. *WI/IUCN-WSSG Newsletter* 39:16–17.
- Fokin S., Blokhin Y., Zverev P., Romanov Y. & M. Kozlova. 2012. 2012 European Russia roding census and Woodcock ringing report. *WI/IUCN-WSSG Newsletter* 38:29–31.
- Fokin S., Blokhin Y. & P. Zverev. 2014. 2014 Russian Woodcock Report (Moscow Group). *WI/IUCN-WSSG Newsletter* 40:6–9.
- Gossmann F., Bastat C., Coreau D. & Y. Ferrand. 2012. 2011-2012 French Woodcock report. *WI/IUCN-WSSG Newsletter* 38:34–37.
- Gossmann F., Bastat C., Coreau D. & Y. Ferrand. 2014. 2013-2014 French Woodcock Report. *WI/IUCN-WSSG Newsletter* 40:19–21.
- Gossmann F., Loidon Y. & G. Sardet. 1988. Méthodes et Résultats de Baguages des Bécasses des Bois (*Scolopax rusticola*) en Bretagne. In: Havet P, Hirons GJM (eds). Third European Woodcock and Snipe Workshop, Paris, 14–16 October 1986. pp 34–41.
- Hoodless A. & G. Hirons. 2007. Habitat selection and foraging behaviour of breeding Eurasian Woodcock *Scolopax rusticola*: a comparison between contrasting landscapes. *Ibis* 149:234–249.