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WOODCOCK and SNIPE

SPECIALIST GROUP

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Wetlands International

Woodcock and Snipe Specialist Group

This Newsletter is supposed to serve as a contact organ to inform the about 100 members of the Woodcock and Snipe Specialist Group (WSSG), a research unit of Wetlands International (WI) and likewise of the World Conservation Organisation (IUCN). Subjects of the WSSG are species of the genus *Scolopax*, *Gallinago* and *Lymnocyrtus* that differ in several respects remarkably from all other wader species. For this reason a separate research unit was established.

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Editorial

The year 2002 will be marked by an important change in our Woodcock and Snipe Specialist Group. As announced in Newsletter n°26, Prof. Dr. Herby Kalchreuter has decided to step down from the coordination of our Specialist Group.

At the time of the 3rd Board of Members Meeting in November 2001, Herby Kalchreuter proposed my application as the coordinator of WSSG. This proposal was accepted by the Board of Members. Of course, it is a great honour for me to succeed to Herby. It is also a great pleasure... and a great challenge.

For 22 years Herby was giving life to the WSSG with efficiency, competence and dynamism. Four Workshops were organised which stimulated everyone to develop research as well as this newsletter in which year after year we found the most recent knowledge about our favourite species. Herby was (and still is) convinced of the weight of scientifically-based arguments, so he highlighted the results of our Group in many international Congresses and Conferences. In the name of all WSSG-members I would like to thank him for his important work and wish him an active and pleasant life in the next years. Not too far from forests and marshes to keep in touch with the *Scolopacidae*.

Many WSSG-members probably don't know me very well, so let me introduce myself. I have taken a great interest in the Woodcock for more than 20 years as a professional biologist. I passed my PhD thesis on the breeding behaviour of the Woodcock male and following this work proposed a census method now applied in France, Switzerland and Russia. At the present time, I am working at the "Office national de la chasse et de la faune sauvage", the French State Agency responsible for the wildlife management, where I am in charge of Woodcock and Snipe research.

But more important for the future is the enthusiasm of WSSG-members to pursue a scientific task. Woodcock and snipes are high-value quarry species. Because their wild nature, the hunter's interest for these species is increasing all over Europe. Our objective must be to improve our knowledge of every aspect of their biology in order to assure their sustainable exploitation. Much research is still necessary, especially on population dynamics and habitat. An ambitious monitoring program must be set up at least in the European part of their distribution area. WSSG has obviously an important part to play in that. The main strength of our Group is its international network and I am sure that I can rely on you.

In this issue, you will find the latest developments in Woodcock research in many European countries and the mention of a new Woodcock species in the Philippines.

On the snipes side, the jack snipe is much in evidence with the beginning of studies in France and in Russia on which you will find a progress report.

As you can see, WSSG-members' activity is rather important and I think that we are able to get together to discuss many very exciting topics.

So, the year 2003 will probably be the one of the Sixth Woodcock and Snipe Workshop which should take place in France. You will receive more information as soon as possible.

In the wait of this meeting, I wish you much success with your research.

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The delay of this publication compared with the previous ones is due to the start-up of this new organisation. Many thanks to all the WSSG-members who patiently waited for this issue.

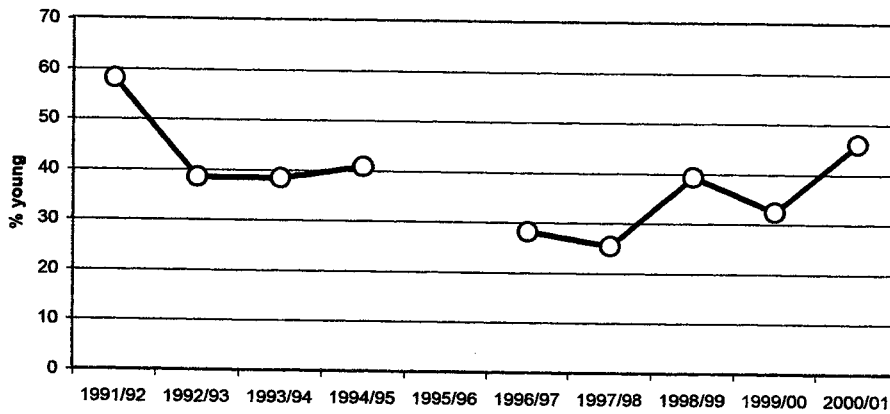
Woodcock and Snipe age-ratios in hunting bags in Ireland

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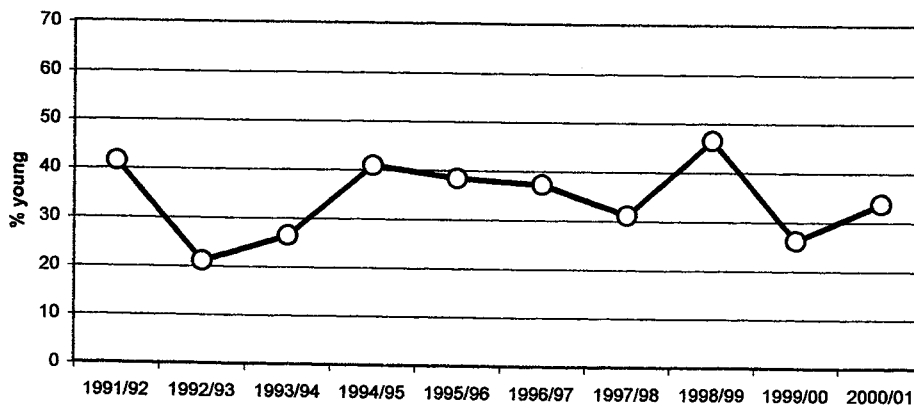
Woodcock and Snipe wing surveys have been conducting over the last 10 years in Ireland to assess the age-ratios in hunting bags. The results are presented in the figures below.

The Irish Woodcock age-ratios appear to be very low compared with the Woodcock age-ratios obtained in France (70% on average), in Denmark (70% on average) or in Italy (65%). This result could confirm a hunting pressure on wintering Woodcock in Ireland that according to the rule of site fidelity is lower than in other European countries. (YF)

Snipe



Woodcock



Ecology and behavior of Eurasian woodcock in winter A progress report

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The Woodcock, *Scolopax rusticola*, is mostly a migratory species, with a major wintering area located in France. It is hunted in many European countries including France. Because of a recent increasing interest in Woodcock hunting, we must be prepared to inform about efficient measures for the management and conservation of populations, as well as, eventually, to create reserves in case of population declines. However, the biology and noticeably wintering ecology and behavior of this bird remain poorly known. It is important to precisely understand its habitat requirements.

To optimize the management of woodcock populations, it is essential to better understand the relationships between diurnal and nocturnal habitats, time-budgets, variations of energy reserves and thus variations in food requirements, distribution and prey abundance as well as the influence of climate.

Material and methods

Study site

The study site is located in Brittany, the main wintering region for woodcocks in France. It is made up by the Beffou forest and the surrounding bocage rich in meadows grazed by cows. The study site has a surface of 1750 hectares. The Beffou forest (600 ha) belongs to the Conseil Général des Côtes d'Armor and woodcock hunting is prohibited since 1995.

Methods of trapping and monitoring

Woodcocks are trapped at night while feeding in meadows, with a headlight and a landing net. Once the bird caught, it is weighed and measured. A blood sample is taken for future sexing. Last, a radio-transmitter is fitted on the bird's back with a harness. The two-loop harness used during the 1999-2000 season, was abandoned because 5 birds died hang up by the

bill in the harness. From the second fieldwork season on, we used another type of harness, with a single loop, that had been used already successfully on American woodcock (*Scolopax minor*) by David Krementz's team, from the University of Arkansas, USA.

In total, 37 woodcocks were equipped in winter 1999-2000, 48 in 2000-2001 and 34 in 2001-2002. There was no difference in body mass and body condition (mass / size) between woodcocks in these 3 years, nor between adults and juveniles.

Each bird was localized three times per week in daytime (with a precision of about 10 m) and three times per week at night (with a precision of about 20-50 m). In order to know if woodcocks were moving much during the night, 7 steadyies were performed to localize each bird 3 to 5 times during the same night. The birds were monitored intensively from mid-December to early April.

Habitat descriptions were performed in March, on sites visited by birds as well as in randomly chosen sites in order to compare used to available habitat.

Results

Mortality risks

Combining both seasons, 44.5 % of the birds survived to the winter and went on migration. The first departures for migration occurred on February 20 in 2000 and March 8 in 2001, and February 26 in 2002. The last birds stayed until the beginning of April. The causes of mortality are mainly hunting (12.6 %) and predation by terrestrial mammals (foxes or mustelids) (10.9 %). 5.9 % of the birds died due to problems with the first back pack harness. 5.9% died for unspecified reasons and 16.8 % lost their tag. Predation by terrestrial carnivores mostly happened in open habitat (meadows) and not in forests.

Site fidelity and relationships between habitats

The equipped woodcocks were very faithful to their wintering site in general and only 3 birds left the study area at the beginning of February 2002, before the migratory departure. Three birds fitted in January 2002, after the cold spell of December 2001, left the study area at the end of January. They were adults, and not very faithful compared to the other birds. They probably originated from another region but came to the Beffou forest because of the cold spell and went back when the weather became milder.

The fidelity to diurnal and nocturnal habitats appeared to be very variable between individuals and could also vary time. Some birds are very faithful to the same sites; others change a few times during the season and there are those that will change everyday. These differences in behavior don't seem to be linked to a particular category of birds (age, body condition...). One bird monitored in the first winter (1999-2000) was caught again in December 2001 and tracked until its departure in February 2002. It used exactly the same edge and meadows as two years before.

In case of frost, most of the birds preferred to stay in the forest at night rather than to go to the meadows. Outside the frosty periods, 15 birds did not leave the forest at night during several weeks and one bird even never left the forest during the whole winter !

Throughout the seven full nights of monitoring, most of the birds did not even change sites during the same night. Thus, a localization of a bird made in the beginning of the night must reflect the habitat selection of this bird for the whole night. Anyway, one individual was moving 2 to 5 times every night.

These results must be analyzed further with Geographic Information Systems software (Arcview).

Habitat selection

Habitat analysis consists in looking at the types of plots or stands selected or avoided by animals. For the analysis, we choose the compositional analysis (Aebisher *et al.*, 1993), the statistically most correct one, which for each individual compares the proportion of habitats used to the proportion of available habitats. The areas of the

different available habitats were measured with precision via GIS.

Nocturnal habitats selected by woodcocks are in accordance with those described in the literature (Ferrand and Gossmann, 1988; Granval and Bouche, 1993; Ferrand and Gossmann, 1995). Grazed meadows are preferred to ungrazed ones, to stubble fields and wheat fields. No effect of year, age of birds or frost period was detected.

The selected diurnal habitats were mostly young beech plantations, wet forests, deciduous and mixed timbers. Thickets and coniferous timbers were avoided. The quality of forest humus seems to be a more important component because their selection index and the statistical tests were stronger than for forest plantings. The mulls, rich in earthworms, are greatly preferred to moders and mors, which partly confirms the importance of abundant soil fauna for woodcock habitat. No effect of year, age of birds or frost period was detected.

Hedges with trees or shrub were preferred to hedges without shrub. Hedges with a lateral shrub edge were even more often selected than without edge. Favorable micro-habitats seem to be the presence of lateral edge and abundant bramble within the hedge

In conclusion, it is now clear that the richness of available food is very important for diurnal habitat selection, and the forest managers who want to increase woodcock numbers must probably try to increase the soil and humus quality while maintaining an important shrub cover for bird protection. However, humus gives indirect proofs of earthworm abundance and we still need to get actual data on soil fauna abundance.

Food availability

To determine whether the distribution and behavior of Woodcock is linked to its preys (earthworms and insect larvae), it is necessary to determine the distribution and abundance of the soil fauna. This aspect was accounted for from January to Mid-April 2001 and 2002 in collaboration with the Paimpont Biological station of the University of Rennes.

The method consisted first in flushing a bird and placing 3 wooden-boards of 1 m² over the site where the bird was staying (called used site) and 3 other boards 50 m away at a randomly chosen

point (called available site). The soil fauna was counted after spraying the soil with formalin . For 35 birds at least one diurnal and one nocturnal site were sampled.

In nocturnal habitats, an original study was made to quantify the number of earthworms going up to the soil surface at night, which are directly available to woodcocks.

Time budget and activity rhythms

Does the time budget change according to the diurnal and nocturnal sites, according to the weather or according to individuals ? Are there some activity cycles ?

Thirty-five woodcocks were fitted with a transmitter with an activity switch, the signal of which varies according to the bird's position. Thus it is possible, while recording the pulse rate of the signals received with a fixed directional antenna, to determine whether the bird is active or not and the duration of the activity periods (which mostly correspond to feeding activity)

All birds were continuously monitored by periods of 24 hours. The first results are encouraging and original. Contrary to our beliefs, the diurnal activity rates are often equal or superior than the nocturnal rates. For the birds that are going to the meadows outside the forest at night, the diurnal and nocturnal activity rates are similar. On the contrary, for birds that are staying in the forest at night, the nocturnal rate is very low but the diurnal activity rate is greater than the one of birds that are leaving the forest at night. Activity cycles seem to happen during night and daytime but should be analyzed yet. Outside the frost period, there are no differences between adults and juveniles, nor between the beginning and the end of the nights and days. There is no difference according to the type of humus or plantings in the forest.

In case of frost, the activity rate over a 24-hour period is slightly superior than in normal weather. Birds were more active in daytime in the forest and were reluctant to go to the meadows at night (but some birds did...).

There seems to exist a great inter-individual, intra-individual and temporal variability in activity rhythms, suggesting individual strategies which are a reflection of environmental conditions (habitat, food availability, weather conditions).

All these preliminary results are to be confirmed by further analyses.

Energetic needs

To understand how the energy needs influence the woodcock behavior and how they vary with weather conditions, we want to elaborate an energetic model which could help us understand the complex relationships between the movements between diurnal and nocturnal habitats, habitat selection and time budgets. Moreover, as woodcocks will change their behavior during cold spells (habitat, activity, movements), this model would be a useful management tool to decide when hunting should be suspended.

This energetic part was realized in November 2000 and 2001 at the Chizé CNRS-CEBC. 36 woodcocks were caught in the fields around the Chizé forest and placed for 24 hours in a respirometric chamber under different temperatures to measure Resting Metabolic Rate (RMR) at different temperatures and its variations (thermoregulation).

These original results show that the RMR in Eurasian woodcock is below the RMR given by the allometric equation of Kersten and Piersma (1987) (calculated for other temperate *Scolopacidae* species) and also below the value estimated by Aschoff and Po'hl (1970) for non-passerine birds. It is consistent with the results found in American Woodcock (Vander Haegen *et al.*, 1994). One hypothesis to explain a lower RMR would be the sheltered environment of woodcock compared to the usually windy and cold environment (mudflats and arctic tundra) of the shorebird species studied by Kersten and Piersma.

Perspectives

A third fieldwork is currently done to increase the data set. Result analysis is just starting and will certainly take a lot of time. Our objective is to use our data set and the energetic model to test some optimal foraging theories and define dependent models concerning the trade-off between the risk of predation and need of food. Many theoretical models had already been developed in this way (Caraco *et al.*, 1990; Bednekoff and Houston, 1994; McNamara *et al.*, 1994; Houston and McNamara, 1999) but very few were validated by data from wild birds in nature.

* This three year research project is carried out within the framework of a PhD thesis funded by the French Office national de la chasse et de la faune sauvage

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2000-2001 ringing report of the French Woodcock Network

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The 2000-2001 ringing season was again a record one in France. In total, 4 020 woodcocks were ringed in 84 French "départements". 1 155 ringing sites were visited by 284 professional ringers.

The ringer's success rate raises to 29% (14 986 contacts). During this season, 140 direct and 152 indirect retraps were obtained as well as 222 direct and 294 indirect recoveries.

The average woodcock numbers encountered during a trip in 2000-2001 is 5.75, i.e. one point less than in the two previous years.

Age-ratio

The age-ratio has risen to 58.9% of young. This value is the lowest registered over all the last 15 years except the 1996-1997 one (58.5%). We should notice that the Danish age-ratio hunting bag was particularly high during this 2000-2001 season: 80% from October to mid-December.

This value was the highest registered in this country during the same period. A high proportion of juveniles has probably delayed leaving Denmark because of the very mild weather conditions. This phenomenon shows that only the age-ratio analysis at the scale of the wintering area is relevant.

Monthly distribution of captures

Usually, January represent less than 10% of captures. In 2000-2001, almost a quarter of the captures (24.5%) was realized during this month. Even, the number of captures in January is higher than in December which with November is generally the most successful month. The reason is that the birds stayed longer than usual in the Eastern part of France and thus the ringers could work throughout the whole winter in this region (see below).

Characteristics of the 2000-2001 season

The observations of ringers and Woodcock hunters as well seem to prove that the 2000-2001 season was a very particular one for migration and wintering.

We have tried to test this "difference" from the data collecting during the ringing operations. We founded our analysis on the number of birds seen per hour during the nocturnal trips since the 1996-1997 season. This gives 16 000 trips and 62 500 Woodcock contacts.

The average number of contacts/hour clearly shows the weakness of the numbers observed in 2000-2001 (fig. 2). However, a Kruskal-Wallis test shows a significant difference only for the following cases: 2000-2001/1999-2000 and 2000-2001/1998-1999.

A monthly analysis shows that November 2000 is significantly different from all previous Novembers. Other significant differences appear between the 2000-2001 season and the previous ones, i.e. October 1999, December 1998, March 1996 and March 1999. No difference is found in January.

Consequently, the 2000-2001 season is characterized by a deficit Woodcock number in November and a progressively increasing number up to January. But the situation can be different from one region to another. Brittany and the Pays de la Loire follow this pattern quite well, even if the January peak has not been observed. Nevertheless, in the Central and Eastern part of France, the densities were higher than usual, especially in January. In these regions, the very mild weather conditions offered a very good situation for wintering birds.

Country	N. recoveries
Russia	141
Spain	88
Latvia	28
Great-Britain	20
Sweden	18
Lithuania	11
Denmark	10
Italy	10
Finland	9
Byelorussia	9
Hungary	9
Poland	9
Estonia	8
Austria	7
Belgium	7
Germany	6
Portugal	5
Netherlands	3
Ireland	2
Switzerland	2
Norway	1
Ukraine	1
Turkey	1

Table 1 : Number of European recoveries for woodcocks ringed in France in the last ten years.

European recoveries

During the last ten years, 405 woodcocks ringed in France were recovered in Europe. Russia adds up 35% of the recoveries. Spain takes the second place with 22%. This result very well shows the important connection between the Russian breeding area and the French wintering sites. It also emphasizes the function of the Iberian peninsula as a wintering area but also as a transit and cold spell refuge one.

Temporal variation in annual survival probability of the Eurasian woodcock *Scolopax rusticola* wintering in France

[Published in *Wildlife Biology* 8:1 (2002), 39-48]

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Abstract – The Eurasian woodcock *Scolopax rusticola* is an important quarry species hunted all over its range. Some authors have reported local declines in both wintering and breeding woodcock numbers. In order to investigate whether these possible declines are the result of a negative trend in survival, we analysed 3,312 recoveries of 15,839 woodcocks ringed in France during 14 consecutive winters (1984/85 – 1997/98). We distinguished between winter (October-February) and summer (March-September) recoveries in order to estimate survival and recovery rate separately for each period because selective pressures during these two periods are likely to be different. Survival varied according to year during both winter and summer. Winter survival probability covaried positively with mean winter nocturnal temperature and ranged from 0.74 (SE = 0.057) during the winter of 1985/86 to 0.83 (SE = 0.042) during the winter of 1994/95. Mortality of first-year birds was 22% higher than that of adults in any year. Results from a second analysis in which we compared survival of birds ringed during 1991-1997 in the three main woodcock wintering area along the French Atlantic coast suggested a threshold effect of weather conditions. Mean winter survival covaried with temperature and rainfall mainly in the northernmost regions where weather conditions are more severe. We did not find any particular trend in survival probability that could explain the possible declines in woodcock numbers. However, the generally low adult annual survival, and the negative influence of stochastic events such as severe winter conditions might drive populations to a level from which it could be difficult to recover. Results of a two-age-class demographic model are discussed together with implications for management.

OMPO (Migratory Birds of the Western Palearctic) just published a booklet intitled :

« **Key to ageing and sexing of the Common Snipe *Gallinago gallinago* by the study of feathers** »

Available (in English and French) at :

OMPO, 5 avenue des Chasseurs, F-75017 Paris

E-mail : ompo@ompo.org

Price : 3 €

Snipe population estimates in Byelorussia

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Method - To define the breeding density of Common Snipe a count of drumming males was carried out in the same territories in 3 different periods: 1st period – between 15-30 April, 2nd period - between 10-25 May, 3rd period – between 5-20 June. The counts were made along transects in selected territories of different habitats within 3 hours at dawn or dusk. A method of territory mapping was also used to determine density in habitats with small numbers of birds. In this case all records of displaying males were plotted onto 1:50,000 scale maps.

The Great Snipe was counted at lekking arenas in late evening. Displaying males were counted

from short distance (10-20 m to the closest male). The flushed birds were counted as well to estimate overall numbers of birds. Combined search methods have been used to find lekking arenas (Kålås 2000, Kuresoo and Luigujõe 2000): daytime survey in optimal feeding habitats (since the lekking arenas are often situated near the feeding area), late evening search of displaying males. The breeding birds were caught in mist-nets at the lekking arenas. 12-m long mist-nets were placed around the lekking arena, and then several persons who were dragging a rope flushed the birds.

Species	Breeding population (n. of "pairs")	Survey years	Data quality*	References
Common snipe	68 000 – 92 000	1997 – 2001	3	1, 4, 5, 6, 7
Great Snipe	4 600 – 6 000	1997 – 2001	3	1, 4, 5, 6, 7
Jack Snipe	0 - 20	1993 - 2001	1	2, 3, 4, 5, 6, 7

* 1: poor data quality (only a few actual counts)

3: some regions well covered, probably less than 50% of population covered by recent surveys

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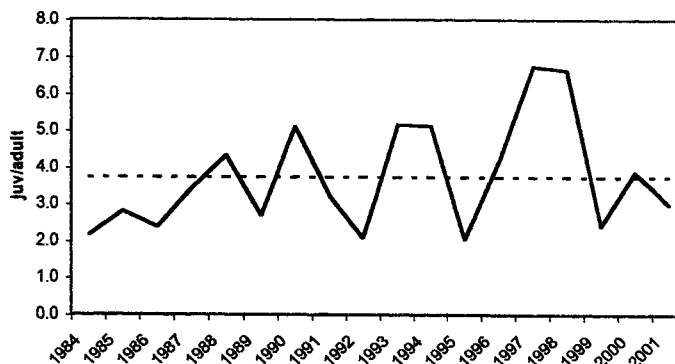
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Danish Wing survey 2000/2001

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Snipes

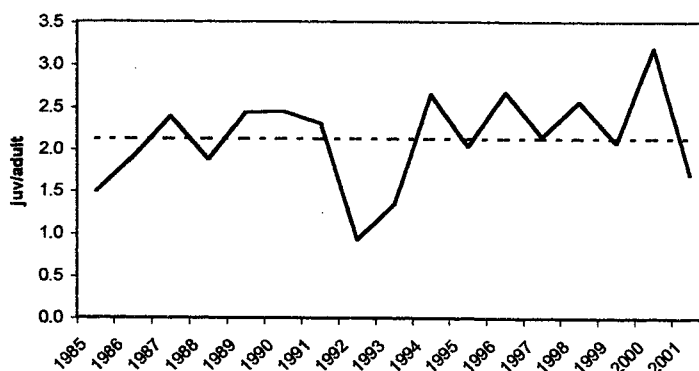
The snipe bag in 2000 contained 23,500 Common Snipe and 3,500 Jack Snipe specimens. It is about 20% higher than in previous years.



Number of juveniles per adult Common Snipe during 1984-2001.

Woodcock

The Danish bag of Woodcock during the hunting season 2000/2001 (1 October – 31 December) was the highest ever recorded in Denmark. A total of 44,600 birds was taken i.e. nearly twice the average number. Breeding success was also extremely good in 2000 [3.2 juveniles per adult (a 2.3 average)]. Breeding success in 2001 was lower than average. For more than 1,000 Woodcock wings the ratio was 1.7 juvenile per adult. Even if reproduction was poor, the hunting season was good. The weather conditions during the peak migration period are much more important for the bag size than breeding success.



Number of juveniles per adult Woodcock in 1984-2001.

Current Situation of the Woodcock in Slovakia

PAVEL HELL & MARCEL LEHOČKÝ, Forest Research Institute Zvolen

Woodcock (*Scolopax rusticola*) may be hunted in the Slovak Republic from 16 March to 30 April, but only during roding at dusk and dawn. Hunting by woodland beat (battue) and quartering is prohibited. Hunting of roding birds is traditional in our country. Mainly males are killed as shown by Ryšavý and Farkaš (1982). During the years 1975 and 1977, they dissected 317 bagged woodcocks during roding and found only 15 (4.7%) females among them. However, considering that the woodcock is a polygamous bird, we do not think that this had a serious influence on the population level, especially because of the low annual hunting bag level in Slovakia: from 1968 to 2000, on average only 1,937 woodcocks were killed according to official game management statistics. For this period, the bag was comprised between 448 to 4,126 individuals. In comparison with much more than one million woodcocks killed in Western Europe this number really is irrelevant. It is

possible that the actual bag would be 10-20% higher than mentioned in the official statistics, but, this does not change the mentioned statement. In addition, it is known (Kalchreuter, 1979) that within the woodcock population non-lekking subdominant males are able to substitute killed individuals.

The year-to-year variations in woodcock hunting bags are presented in figure 1. The important decrease of hunting during the years 1989 - 1994 was caused by the restructuring of the hunting grounds and the whole game management in connection with a process of privatization after the political change in 1989 and by amendment of the game management Act in 1993. It means that the woodcock bag decreased because many hunters could temporarily not play the hunter part and this as a consequence of the mentioned changes, but not because a decrease in woodcock abundance in our country.

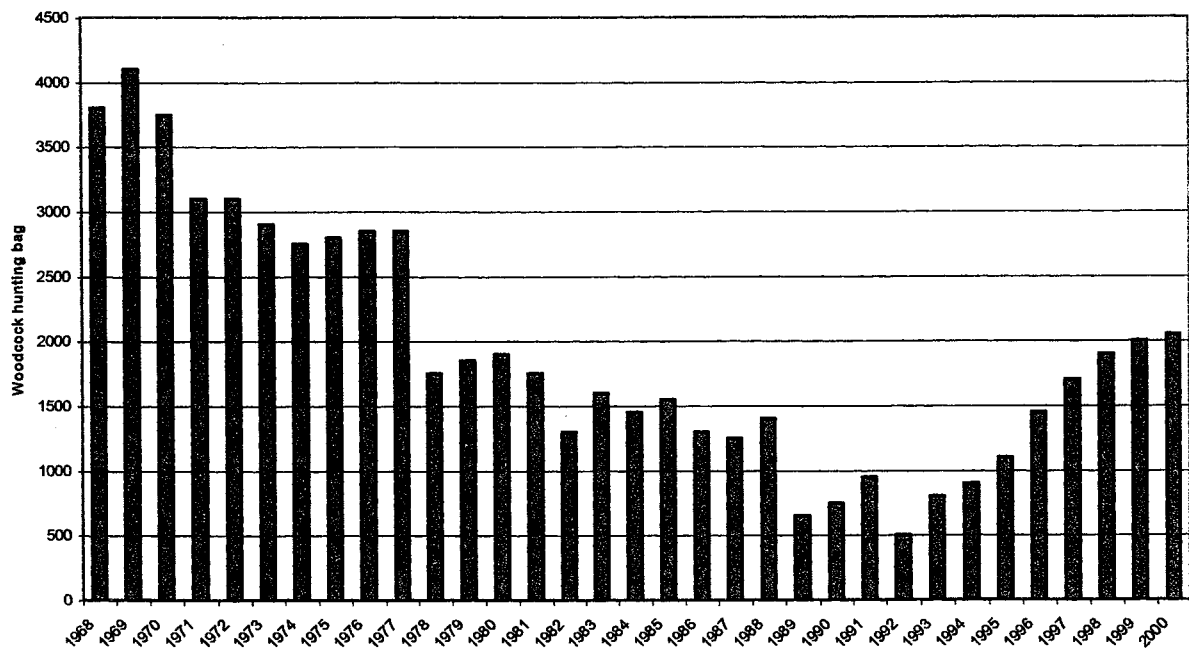


Figure 1: Year-to-year variations of Woodcock hunting bags in Slovakia from 1968 to 2000

Figure 2 presents the Woodcock hunting bags according to districts counted per 1 km² of the whole hunting area and the figure 3 in counting per 1 square kilometre of only forest hunting area. Over the last 33 years, an average of 0.05 woodcock per 1 km² of hunting area or 0.1 woodcock per 1 km² of forest hunting area were killed per year in our country. Even though we accept that the actual bag is 10-20% higher than presented in the official hunting statistics, in any case these bags counted per 1 km² are low. 50 000 hunters are registered in Slovakia, and we can prove that on average only 0.04 woodcock per hunter are killed annually. This hunting bag is very low and several causes may explain this. Woodcock are shot in the majority of cases for taxidermy (stuffing) to serve as decoration of the hunters' interiors. In case a hunter already has a preparation further he partially loses motivation to hunt it. Many hunters do not hunt woodcocks because it does not provide a larger amount of venison or an imposing trophy and its hunt is time demanding and little effective. Therefore mainly idealistic and romantic hunters will dedicate themselves to

the hunt of woodcock, although we permanently point out that a hunter should only shoot one woodcock per year. As shown in figure 2 and 3, in Slovakia most woodcock are hunted in West Slovakia in the mountains demarcating the Podunajská lowland, and its hooks in the river basins in the North, i.e. in the most western part of the Carpathian arch. The bag per 1 km² of forest is highest in the districts with a low percentage of forest because many woodcocks are concentrated in a small number of minor forest complexes. In addition, there a high number of hunters, many of whom are also dedicated to the shooting of woodcocks. In East, Central and North Slovakia, the woodcocks are scattered over the large mountains and to hunt them is more difficult. Moreover, the winter in the higher mountains lasts longer and therefore woodcocks will be later in spring, frequently only at the end of April when their hunting season already ends. In the case of snow in the higher mountains that will stay for a long time, the woodcocks will also stay longer at lower altitudes so that in such years the hunters may hunt more woodcocks.

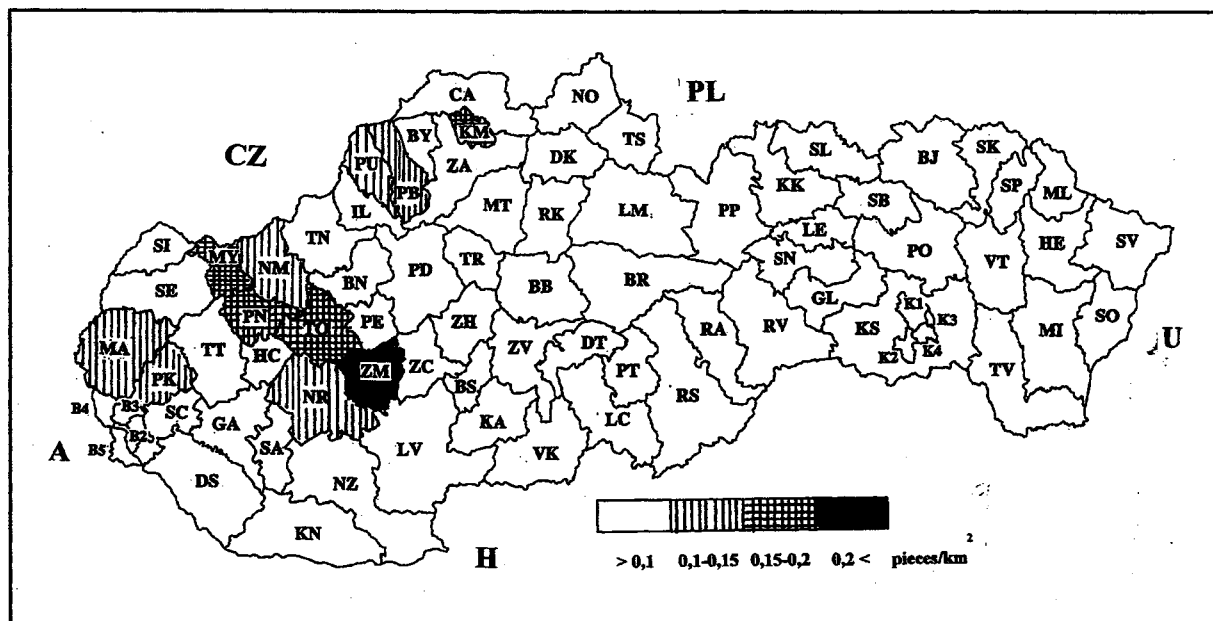


Figure 2: Woodcock hunting bag per 1 km² of hunting area in each district, in 2000

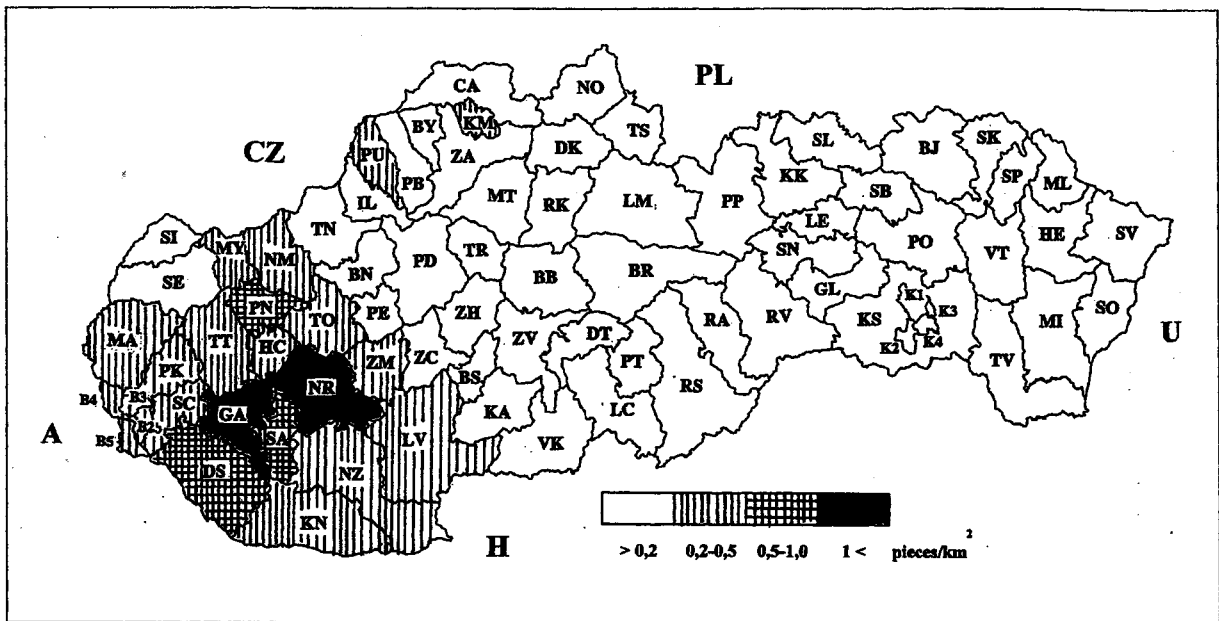


Figure 3: Woodcock hunting bag per 1 square kilometre of forest hunting area in each district, in 2000

In Slovakia until now almost no attention has been paid to woodcock research. We can only mention the helminthologic research on woodcocks carried out by Ryšavý and Farkaš (1982). They dissected 134 individuals and identified 6 species of tapeworms such as *Polycercus paradoxa*, *Aploparaksis brachyphallos*, *Aploparaksis filum*, *Aploparaksis parafilum*, *Aploparaksis pseudofilum* and *Wardium sp.* The highest intensity of invasion has been found in a certain type of *Aploparaksis pseudofilum* (73%) and *Aploparaksis brachyphallos* (12%). In the other kinds the intensity of invasion ranged between 3 and 7%.

A longer time ago, the snipe (*Gallinago gallinago*) had also been hunted in Slovakia, but its numbers decreased so much that at present it is perennially protected. The reason of its decrease was not hunting but anthropogenic changes of its environment in the Podunajská and Potiská lowlands. The landscape had been drained and ploughed, swamps and wet grasslands disappeared and with that also suitable habitats. In 1964, Ferienc wrote that snipe "in lower locations of Slovakia in suitable places is everywhere ordinary, however, hardly anywhere abundant nesting bird...", but this statement belongs already to the past.

In Slovakia, the great snipe (*Gallinago media*) never belonged to sought-after objects of

hunting and even in the past it was only transmigrant here. Jack snipe (*Lymnecryptes minimus*) is also only transmigrant in our country and it does not belong to game species. All other woodcock kinds (*Scolopacidae*) are neither being hunted because its abundance is minimal in Slovakia.

As for a traditional spring pass-shooting of a small number of woodcock at the scale of a population losses are totally insignificant in comparison with the hecatombs of woodcocks hunted in Western Europe. It is performed in very considerate way which is very ineffective for hunters (unlike in some counties in Western Europe) and therefore we would like to keep it also in the future *. During nesting the woodcock is already protected so hunters do not disturb its reproduction. However, any surveys to find out the age structure of hunted woodcocks have not been done in our country till now.

* Remember that the European Bird Directive bans hunting during the breeding period and thus this hunting method is forbidden in Europe (YF)

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 RYŠAVÝ, B. - FARKAŠ, J. 1982 Výskyt pásomnice pri sluke hôrnej na Slovensku [Occurrence of tapeworm in woodcock in Slovakia]. In: Folia Venatoria, 12.:261-268.

Woodcock Task Force Formed

A new consortium of state, federal and private conservation concerns has formed to effect recovery of the American woodcock. The Woodcock Task Force has been organized under the auspices of the International Association of Fish and Wildlife Agencies. It is co-chaired by Jim Kelley, woodcock specialist for the US Fish and Wildlife Service, and Wayne MacCallum, Director of the Massachusetts Division of Wildlife.

Members of the Woodcock Task Force include state game bird biologists from woodcock breeding ranges in the United States and Canada and from wintering ranges in the US. Also included are Fish and Wildlife Service, USGS Biological Resources Division, and USDA Forest Service biologists, as well as the continent's leading scientific experts in woodcock research. A particularly unique feature of the task force is the inclusion of private industrial forest managers as members. As timber management decreases on many state, private and federal forests, industrial forest managers may play an increasingly critical role in ensuring recovery of the species.

Woodcock are a popular, webless, migratory game bird. With their breeding flights in early spring, they also are a delight to other wildlife watchers. Since the late 1960s, woodcock populations have been experiencing a gradual decline throughout their range. Most experts attribute the decline to loss or degradation of prime woodcock habitat, as abandoned farmlands mature into heavily stocked forests or are removed as habitat by development. Recent studies in the Northeast suggest that, under present hunting regulations, the mortality rate of woodcock is not significantly

different between hunted and non-hunted sites. Additional studies are being conducted in the Great Lakes states to ensure that hunting is not a contributing factor to the population decline.

"We annually monitor both woodcock population trends and recruitment indices," said Jim Kelley. "The trends in both measures suggest a critical need to elevate woodcock management to stop the species' decline."

The Woodcock Task Force will be developing strategies to return woodcock to earlier levels of abundance. Subsequent investments will be closely integrated into existing bird conservation initiatives, especially the habitat joint ventures developed under the North American Waterfowl Management Plan and regional planning efforts of the North American Bird Conservation Initiative (NABCI).

"Recovery of a species that breeds in northern states and Canada, migrates through some of the most heavily developed urban areas on the East Coast, and winters on the Gulf Coast will require federal, state and provincial land and resource management agencies and private concerns to make a dedicated commitment of energy, resources and creative thinking. The work of the Woodcock Task Force is certainly timely and should become the model of international bird conservation strategies," added task force member Scot Williamson of the Wildlife Management Institute.

For more information, contact Jim Kelley, U.S. Fish and Wildlife Service, Division of Migratory Bird Management, BH Whipple Federal Building, 1 Federal Dr., Fort Snelling, MN 55111-4056. James R. Keley@fws.gov

Research Projects abstract available

In the United States, the major source of funding for research on American Woodcock

(*Scolopax minor*) and to a lesser extent Common Snipe (*Gallinago gallinago delicata*) is the Webless Migratory Game Bird Program (WMGBR). It was established in 1994 to provide cooperative funding from the US Fish

and Wildlife Service (USFWS), state wildlife agencies, and other sources for research on migratory game birds other than waterfowl. In addition to funding research on American woodcock and common snipe, the WMGBR provides funds for research on several species of doves (*Zenaida macroura*, *Z. asiatica*, *Leptotila verreauxi*), the band-tailed pigeon (*Columba fasciata*), Sandhill crane (*Grus canadensis*), American coot (*Fulica Americana*), common moorhen (*Gallinula chloropus*), purple gallinule (*Porphyryula martinica*), and the hunted species of rails (*Rallus longirostris*, *R. elegans*, *R. limicola*, and *Porsana carolina*).

Each year, abstracts of research currently funded by the WMGBR program are published in a U.S. Fish and Wildlife Service Report (Webless Migratory Game Bird Research Program *Project Abstracts – 2001*) available from: David Dolton, U.S. Fish and Wildlife Service, Division of Migratory Bird Management, P.O. Box 25486 DFC, Denver, Colorado 80225-0486.

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Effects of Hunting on Survival and Habitat use by American Woodcock on Breeding and Migration Areas (Progress Project Abstract)

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Expected Completion Date: December 31, 2002

Context Reminder (already published in Newsletter n°26)

*The American woodcock (*Scolopax minor*) population has declined during the last 29 years at an annual rate of 2.5% in the Eastern*

Publications available online

The status of the American woodcock in North America is monitored annually by the USFWS with a Woodcock Singing-ground Survey (SGS) and a Wing-collection Survey (WCS). The SGS monitors annual changes in the number of displaying male woodcock heard along approximately 1,500 routes located in the primary breeding range of the woodcock. The WCS uses wings obtained from hunters to obtain data on reproductive success of woodcock. The American Woodcock Population Status, 2001 report is now available on line at :

<http://migratorybirds.fws.gov/reports/reports.html>

The “Woodcock in the Southeast: Natural History & Management for Landowners by David G. Krementz and Jeffery J. Jackson is available on line at :

<http://www.ces.uga.edu/pubcd/b1183.htm#Understand>

region and 1.6% in the Central region. In 1996, the breeding population index in the Eastern region was the lowest on record. The major causes of the decline are thought to be degradation and loss of suitable habitat on breeding and wintering areas. Although

hunting is not thought to be a cause of the decline, hunting mortality can be controlled and research on the effects of hunting mortality on woodcock populations at both local and regional levels is lacking.

We are using radio-telemetry to determine sources of mortality, survival rates, habitat use, and movement of woodcock during fall on local areas within the breeding range of woodcock. Also, we will relate fall survival on local study areas to local singing ground surveys.

This study is a cooperative venture among USGS- Patuxent Wildlife Research Center (PWRC), U.S. Fish and Wildlife Service (USFWS)-Region 5 (Moosehorn National Wildlife Refuge [MNWR] and Erie NWR [ENWR], Lake Umbagog NWR), Maine Department of Inland Fisheries and Wildlife (MDIFW), Pennsylvania Game Commission, Champion International Corp., Dartmouth College, New Hampshire Fish and Game Department, the Wildlife Management Institute, Vermont National Guard, University

of Vermont, and Vermont Fish and Game Department.

Field work for the study was completed in December, 2000. The total number of birds marked during the study was 913 woodcock. Statistical analyses are ongoing.

The following text is an update of the 2000, published in WSSG-Newsletter n°26, p 19-21 . The chapters Spring Monitoring , Spring Captures and Fall Captures have not changed.

Fall Telemetry

Proportional hazards analyses of survival data will begin in December. Preliminary analyses of survival rates from all sites indicate that survival rates among sites are not related to whether a site is hunted or not (Table 1). The lowest survival rate (0.552) occurred on the Vermont site, which was not hunted. Analysis of all data combined between hunted and non-hunted sites produced survival rates that were nearly identical (Table 2).

Table 1. Combined sample sizes and Kaplan-Meier Survival estimates for American woodcock radio-marked at Moosehorn NWR (MNWR), forest land in Hancock County, ME (Champ), Frye Mt. Game Management Area, Ethan Allen Firing Range (VT), Second College Grant (NH), Pennsylvania Game Commission=s Game Land 314 (PA-314), and Erie NWR (PA-Erie) during fall 1997-2000.

	n	SR	Low CI	Upper CI	
MNWR*	165	0.758	0.586	0.931	a ¹
CHAM	202	0.675	0.535	0.815	abc
FRYE	105	0.706	0.556	0.856	ab
NH	66	0.721	0.571	0.870	ab
VT *	145	0.552	0.401	0.703	c
PA314	124	0.582	0.428	0.736	bc
ENWR*	107	0.766	0.667	0.860	a

* Sites closed to hunting.

¹ Sites with the same letter are not statistically different from each other

Table 2. Combined Kaplan-Meier Survival estimates for American woodcock radio-marked at sites that were hunted (forest land in Hancock County, ME, Frye Mt. Game Management Area [ME], Second College Grant [NH], Pennsylvania Game Commission's Game Land 314) and sites not hunted (Moosehorn NWR [ME], Ethan Allen Firing Range [VT], and Erie NWR [PA]) during fall 1997-2000.

	n	SR	Low CI	Upper CI
Hunt	497	0.656	0.502	0.810
No Hunt	416	0.684	0.482	0.885

Receiver recorder system monitors passage of radio-tagged woodcock at Cape May, New Jersey

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The following text is an update of the 2000, published in WSSG-Newsletter n°26, p 25

In 2001, transmitters were placed on 140 woodcock captured at 3 different sites in Maine. We established three additional recording systems in New Jersey to try and monitor passage of birds along their entire eastern migration corridor. In addition, a

recording system was located on coastal Virginia to determine how many birds pass through this area on the southward migration. As in previous years, woodcock began migrating in late October, with the majority of the birds leaving during the second and third week of November. Tapes have not been analysed at this time. We plan to mark another 120 birds during fall 2002.

Determining the Extent and Source of Lead Contamination in Woodcock Breeding in Wisconsin [Expected Completion Date: December 2002]

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The Canadian Wildlife Service has documented elevated lead levels in adult and

young of the year woodcock bones (Schuehammer et. al. 1999). Although lethal

and sub-lethal levels of lead in waterfowl are well established, it is unknown whether the concentrations of lead observed in woodcock are sufficient to impact woodcock health and productivity. The objectives of this study are to determine the extent and source of lead contamination in woodcock breeding in Wisconsin, and to explore the potential contribution of sub-lethal lead exposure on woodcock.

An initial survey of lead concentrations in the wing bones of Wisconsin woodcock (conducted in 1998) revealed elevated lead concentrations ($> 20 \mu\text{g/g}$ dry wt.) in both young-of-year and adult woodcock. The results of this survey, along with other habitat criteria, were used to select sites for further sample collection. During the 1999 and 2000 field seasons, hunter-harvested woodcock were collected using steel shot. Birds were collected a minimum of two weeks prior to the hunting season to ensure that only locally exposed birds were collected. The combined data from 1999 and 2000 indicated that 18 of 43 (42%) young of year and 20 of 44 (45%) adult birds had bone lead levels in the elevated range.

Lead was not detected in the liver tissue of any of the 1999 samples. However, this was likely a result of poor reporting limits. Improved reporting limits were utilized for the 2000 samples and lead was detected in the liver tissue of 17 of 20 young of year birds (85%) (range $0.10\text{-}1.05 \mu\text{g/g}$ wet wt.) and in 22 of 24 adults (92%) (range $0.153\text{-}0.717 \mu\text{g/g}$ wet wt.). The level of quantification for liver analysis ranged from $0.1 \mu\text{g/g}$ – $0.25 \mu\text{g/g}$. The concentrations of lead observed in liver tissue were considered elevated ($> 1 \mu\text{g/g}$ wet wt.) in only 1 sample (from a young of year bird).

The impact of the observed bone lead concentrations on woodcock is unknown. Bone concentrations above $20 \mu\text{g/g}$ are associated with toxic effects in waterfowl. These data clearly demonstrate that young of year birds are exposed to and accumulate significant concentrations of lead on the breeding grounds in Wisconsin. The impact(s) of the observed lead exposure on the health of Wisconsin woodcock is unclear. In addition, the source and timing of the lead accumulation is still unclear, especially given the low levels of lead found in GI contents and liver samples.

Stable Isotope Analysis

Stable isotope analysis was conducted on a sub-set of bone samples from the year 2000 young-of-year woodcock in order to determine the source of lead. The results of the stable isotope analysis were somewhat inconclusive as far as identifying the origin of the high lead contents in woodcock wing bones. The measured ratios of Wisconsin woodcock overlaps with the lead isotope compositions measured in shotgun pellets and lead characteristic of rock from the Precambrian era (a natural source). Therefore, the possibility that the elevated bone lead concentrations are a result of ingestion of shotgun pellets cannot be ruled out. However, the woodcock wing bones have lead isotope compositions that would be expected for lead that naturally occurs in Wisconsin or as a possible product of other industrial processes. It is hoped that further stable isotope analysis (including earthworm analysis) will further delineate the source of the lead exposure.

2001 Sample Collection

For the 2001 field season, an emphasis was placed on obtaining samples from woodcock chicks. Data obtained from the chicks is especially important since we can be certain that the observed lead levels and impacts are a result of local exposure and the confounding factor of migration can be eliminated. Blood samples will be analyzed for lead concentration as well as aminolevulinic acid dehydratase (ALAD) activity. Aminolevulinic acid dehydratase activity is a very useful, sensitive, and accurate biomarker that is highly specific to lead exposure and gives an indication of potential physiological impacts of lead exposure.

The number of sampling locations was reduced from 6 sites in 2000, to the Mead and Navarino Wildlife Areas (located in north central and northeast Wisconsin respectively). This decision was based on previous data in addition to the likelihood of catching birds and knowledge of the area. Focusing on these 2 sites allowed for the collection of more samples (larger sample size), especially samples from chicks for assay work. The 2001 field work began in early April with mist-netting returning male woodcock. A total of 10

adult males were captured, banded, a blood sample taken, then released. Playing a recording of peenting males greatly increased activity and our chances of drawing males directly into the nets.

Brood searches using pointing dogs began in early May. Thirteen broods were found (and chicks banded and bled) over a 3-week time span. Most chicks ranged in age from 3 to 14 days. In almost all cases, 1 chick from each brood was sacrificed for tissue analysis. If only 1 chick from the brood could be captured, and it was large enough, an attempt was made to take the blood sample, band and release the chick.

The mean blood lead concentrations of both adult and woodcock chicks from both sites do not reach a level that is considered to be elevated in waterfowl ($> 0.200 \mu\text{g/ml}$). In fact, only one individual (an adult from Mead) had a blood lead concentration approaching this level.

The collection of hunter-shot birds began in June with 10 birds collected from each site. An attempt was made to collect a blood sample (via cardiac puncture) from the shot birds. This technique proved to be quite successful with blood residue samples collected from 16 of the 20 shot birds and ALAD samples collected from 15 of the 20. All hunter shot birds will be analyzed for lead in wing bone, liver and GI contents.

Study Direction/Future Research

There are several questions pertaining to this project that still remain unanswered. We have accumulated enough data to state with some degree of confidence that young-of-year woodcock are being exposed to and are accumulating high concentrations of lead in Wisconsin. However, the source of this lead still remains uncertain. Additional stable isotope analysis will be conducted (dependent on funding) to further help narrow down potential sources of lead. Soil samples collected during the 2000 and 2001 field seasons will be analyzed for lead and earthworms collected during the 2001 season will be analyzed for lead and stable lead isotopes. Determining the lead isotopic composition of the woodcock's primary food

source (earthworms) should help elucidate the route of exposure and source of the lead.

The direct route of exposure for lead in woodcock has yet to be clearly identified. Radiographic and physical evaluation of GI contents has failed to produce any evidence of lead shot. This data, combined with the low lead levels observed in blood and liver tissue, would suggest that direct ingestion of lead shot is not a likely exposure route. However, soil contaminated with eroded shot cannot be eliminated as a potential source. Dietary exposure through the consumption of contaminated earthworms still remains as a potential exposure route. Further lead analysis of soil, earthworms, and GI contents will further help to examine this possibility. Examining the relationships between these variables (soil lead vs. earthworm lead, earthworm lead vs. woodcock lead, etc.) should help determine the route of exposure.

Similar to 2001, a concentrated effort will be made in 2002 to find broods and sample woodcock chicks. The data obtained from these samples will strengthen our data set and further help to determine if woodcock chicks are being physiologically impacted/injured by exposure to lead in Wisconsin. In addition, if/when whole eggs are found, one egg will be collected for lead analysis. Examining egg contents for lead will give us an indication of lead levels of woodcock pre-hatch and prior to dietary exposure. It will also help investigate the slight possibility of maternal transfer of lead to the egg. Determining the concentration of lead in eggs will allow us to calculate bioaccumulation factors (BAFs) at different life stages. Bioaccumulation factors are a ratio of the concentration of a contaminant in an organism to the concentration of the contaminant in the environment. They are a measure of how readily a contaminant can bioaccumulate in an organism. The data will allow us to determine if different life stages accumulate lead more or less readily than others.

These results are from the third year of a 3-year study, to determine the extent and source of lead contamination in woodcock breeding in Wisconsin. However, due to a turnover in personnel, the study has been extended for a period of one year. Recommendations to

minimize risk will be formulated for regulatory agency consideration. This study is funded by the Webless Migratory Game Bird Research Program (U.S. Fish and Wildlife), the Wisconsin Department of Natural Resources

Wildlife Health Program, and the Ruffed Grouse Society.

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News from.....

PHILIPPINES

A new species of woodcock (Aves : Scolopacidae) from the Philippines and re-evaluation of other Asian/Papuan woodcock [Published in Forktail 17 (2001) : 1-12]

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Abstract – A new species of woodcock, *Scolopax bukidnonensis* Bukidnon Woodcock, known from central and northern Luzon and from four mountains on Mindanao, is described. Specimens of this new taxon obtained in the 1960s from Dalton Pass, Nueva Vizcaya Province, Luzon, were incorrectly identified as the Eurasian Woodcock *S. rusticola* until it was sighted and heard on Mt Kitanglad, Bukidnon Province, Mindanao, in February 1993, and a specimen obtained from Mt Kitanglad in January 1995, that the species involved was recognized as distinct. Bukidnon Woodcock occurs in montane and montane mossy forests and in adjacent clearings, usually above 1,000 m, and appears to be locally common. Its display, vocalizations, habits and breeding behaviour are summarized. Since earlier records (specimens were destroyed during World War II) of the Eurasian Woodcock were of birds collected in the lowlands of Luzon, this migratory species is retained on the list of Philippines birds. However, there are no recent records of the Eurasian Woodcock in the Philippines. Other Asian/Papuan woodcock are also reviewed, leading to confirmation of the validity of the two recognized subspecies of the Sulawesi Woodcock, *S.c. celenbesis* and *S.c. heinrichi*, and to the conclusion that the two formerly recognized subspecies of *S. saturata* should be considered full species, *S. saturata* Javan Woodcock and *S. rosenbergii* New Guinea Woodcock.

Firstly mentioned in :

Harrap S. & T. Fisher (1994) – A mystery woodcock in the Philippines. *Oriental Club Bull.* 19 : 54-56

Reviews, bibliographies, translations from Russian into English of literature, published on the Woodcock and all Snipe species; inhabited the territory of the former Soviet Union: Dr JEVGENI SHERGALIN, Soprusse pst. 175-58, Tallinn 13413 Estonia. Tel: (3726) 624549; Fax (3726) 599351. E.mail: zoolit@hotmail.com
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GERASIMOV, YU.N., SAL'NIKOV, G.M., BUSLAEV, S.V. 2000. Ptitsy Ivanovskoi oblasti [Birds of Ivanovo Region]. Moscow, Kamchatka Institute of Ecology and Natural Resources Management. 125 p. ISBN 5-85941-233-9. In Russ.

98. Common Snipe – *Gallinago gallinago*. pp.41-42.

The Common Snipe – common breeding species. Inhabits different types of wet and swamped habitats: meadows on edges of fields and in river floodplains, overgrown peat mines, peat sphagnum bogs etc. In 1958 on the quick grounds of the Gorkiy water reservoir the Common Snipe number reached 2.2 pair / ha (Molodovskiy, Khokhlova, 1963).

In the 1950's the arrival of the common Snipes in the Privolzhskiy district was registered from 4 till 22 April. In spring 1953 the number of birds in migration period was higher than usually (Bubnov, 1968). According to our data, the earliest registration of the Common Snipes in the territory of the Region is April 5, 1990.

Just after arrival the Common Snipes begin to display actively. In the course of the breeding season at the end of April – May the display behaviour does not stop even at night. The latest display behaviour was registered on June 29, 1955 by M.A.Bubnov (1968).

A nest with a fresh clutch was found on June 6, 1954, that was incubated on May 31, 1955 (Bubnov, 1968). Two full clutches of the Common Snipe were discovered in the second half of May 1988 by a huntsman M.G.Borisov (pers. comm.) on the tussocky bog. We have found the clutch on May 15, 1997 in the vicinity of Zavolzhs. It contained four eggs with sizes (mm): 40,7-42,7x26,1-28,8, that is an average size of 41,6+/-0,9 x 28,0+/-1,3. The latest date of find of the nest with eggs (incubated clutch) was July 7, 1934 (Bubnov, 1968).

The autumn migration starts in September. The latest observation is October 17 (Bubnov, 1968).

99. Great Snipe – *Gallinago media*. p.42.

The Great Snipe – rare, probably breeding species. In the period of migrations in August it is common. The Great Snipe was common in the 1930's, but in the 1950's became to be sighted very seldom and only on autumn migrations (Bubnov, 1958, 1968). Later the Great Snipe number increased again and now it is a hunting trophy of the summer hunting. In nesting period the Great Snipe is sighted every year on the Serkovskoe Lake.

100. Jack Snipe – *Lymnocyptes minimus*. p.42.

The Jack Snipe – rare passage species. In the 1930's the Jack Snipe was bagged by hunters during the autumn passages in "considerable number", but already in 1950's it became very rare (Bubnov, 1968). According to a communication of the huntsman M.G.Borisov, the Jack Snipes were shot by him in Vyaz'ma R. floodland, but after 1985 they were no longer sighted by him at all. In the 1990's the Jack Snipe was sometimes sighted in the Gavrilov-Posadskiy district.

101. Woodcock – *Scolopax rusticola*. pp.42-43.

The Woodcock – common breeding species. It inhabits the forest habitats, prefers plots, where the forest alternates with cleared spaces, glades and forest roads.

The first Woodcocks appear at the end of March – beginning of April. The earliest roding flights were observed by us on April 11, 1993 in the Ivanovskiy district and on April 8, 1999 in the Puchezhskiy district. Woodcock roding lasts till the end of June.

A Woodcock nest with 4 eggs was found on July 6, 1981 in the Kineshemskiy district near the Krasnogor'ye settlement. In the next days chicks favourably hatched. Another nest with a clutch of three fresh eggs was found on June 22, 1997 in a copse near Kochnevo village. A Woodcock brood of 4 chicks escorted by an adult bird was observed on June 2, 1997 in a spruce-grove near the river (vicinities of Bun'kovo village, Ivanovskiy district).

In autumn the Woodcocks quite often are observed in the harvested fields. Their mass passage is observed in the third decade of September and usually lasts several days. The latest passages have been recorded on October 16, 1955 (Bubnov, 1958) and November 8, 1998 (data of Department of Hunting Industry).

The Woodcock is the greatest mass object of the spring hunt. According to data of the Department of Hunting Industry in the territory of the Ivanovo Region in 1996, officially 2659 Woodcocks were shot, 2920 in 1997, 2641 in 1998, but the real quantity of the birds shot, obviously, is considerably higher.

FOKIN, S.YU., BLOKHIN, YU.YU., ZVEREV, P.A., MEZHNEV, A.P. 2002. On the activities of the Moscow Group for studies of Woodcock *Scolopax rusticola* in 2001 // Information materials of the Working Group on Waders. Issue 15. Moscow. Pp.29-32. In Russian with Engl. summary.

The group continued studies of several aspects of the Woodcock ecology. A survey of aerial display activities of Woodcock using questionnaires distributed among hunters and during expeditions organized to various parts of European Russia has shown the same level of display intensity as in previous years; they have also helped to find the areas of the highest breeding density of Woodcock. Breeding season 2001 was favourable at the beginning, but changed to worse later on. July and August were unusually dry. In September and October 239 Woodcocks were ringed in various parts of European Russia. 18 recoveries of Woodcocks were collected due to special announcements posted in hunting magazines and newspapers. 79.5% of the young of the year originated from late broods. A hunting bag survey has revealed the same level of Woodcock elimination from the population in the spring hunting season as before. For the first time the same information was collected for the autumn hunting season. It was found that Woodcock hunting is much less effective in autumn, and in total 42,700 Woodcock were reported being shot in 39 provinces. A breeding biology study of Jack Snipe *Lymnocyrtus minimus* was started in NE European Russia.

IL'INSKIY, I.V. 2002. Some results of Woodcock *Scolopax rusticola* study north-west of Russia in 2001. // Ibidem. Pp.32-35. In Russ. with Engl. summ.

Results of standardized counts of displaying Woodcock males in Leningrad and the Pskov regions in late May and June, 2001 have shown that numbers of birds and/or their activity were not lower than in 2000. Counts and catching of birds in September to early November resulted in the ringing of 172 Woodcocks. The dry conditions of the post-breeding season were unfavourable for the species. The season was characterized by a prolonged autumn migration of low intensity. The most interesting result was an unusually large proportion of juveniles originating from late broods (55.8% of the total). This suggests a low productivity at the beginning of the season and agrees with observations of cold and rainy weather in June.

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