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This Newsletter seeks to be a contact organ to inform the members of the Woodcock and Snipe Specialist Group (WSSG), a research unit of Wetlands International (WI) and of IUCN, the International Union for Conservation of Nature. The subjects of WSSG are species of the genera *Scolopax*, *Gallinago* and *Lymnocryptes* that in several respects differ remarkably from all other wader species. For this reason a separate research unit was established.

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Editorial

The year 2011 was an important one for the Woodcock & Snipe Specialist Group.
Eight years after the Nantes' Workshop in France, the 7th Woodcock & Snipe Workshop was held in Saint-Petersburg (Russia) from 16 to 18 May 2011. This meeting was organized by the *Office national de la chasse et de la faune sauvage* with the financial help of the Embassy of France in Russia and the Russian Association of Hunters and Fishermen .
About 50 members of the Woodcock and Snipe Specialist Group participated in the Workshop in order to review the knowledge on these game species. Twelve countries were represented: Germany, Denmark, United Kingdom, Portugal, Russia, Romania, Ukraine, Lithuania, Switzerland, Estonia, Hungary, France. Due to the venue location, the Russian biologists formed a third of participants.
In total, 22 communications were presented and the proportion between Woodcock and Snipe was well balanced. Several topics were taken up: distribution, migration, morphology, genetics, monitoring and hunting management.
As in 2003, the workshop took place in a both serious and convivial atmosphere. The WSSG members were able to better get to know each other and to strengthen good relationships which could lead to future projects, especially in Russia, which is a key region for many migratory species in Europe. This, of course, was one of the important objectives of this meeting.
The Proceedings of this Seventh Workshop should be published in the course of 2011 depending on the time of reception of all the papers. Unfortunately, neither Wetlands International, nor IUCN accepted to participate in publishing and, therefore, the Proceedings will not be a part of a series as for the 6th Workshop. However, you can rely on us to do our best to have a high quality document.

Because of an important effort from members to present a communication at the Workshop, the Newsletter 2011 is less thick than the previous ones. However, new and interesting information from different countries are presented which show that WSSG members do not give up!

I wish you a very happy New Year and much success with your scientific work.

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Participants to the 7th WSSG Workshop in Saint-Petersburg (Russia) in May 2011.

2011 Belarus Woodcock Report

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Woodcock ringing and study of migration were carried out in the Berezinski Reserve vicinities from the 15th September to the 3rd November. This autumn was warm and rainy. Total rainfall during September – October was close to the last year quantity. The first ground frosts in ringing places started only in the second half of October. Few woodcocks were recorded at night during September and the majority registrations were made in the second and third pentads of October (Figure 1). Passage dynamics of woodcock according to grouped observations by pentads are presented in Figure 2. Only one peak of woodcock passage was observed in the second pentad of October. This autumn migration started probably later than the last year.

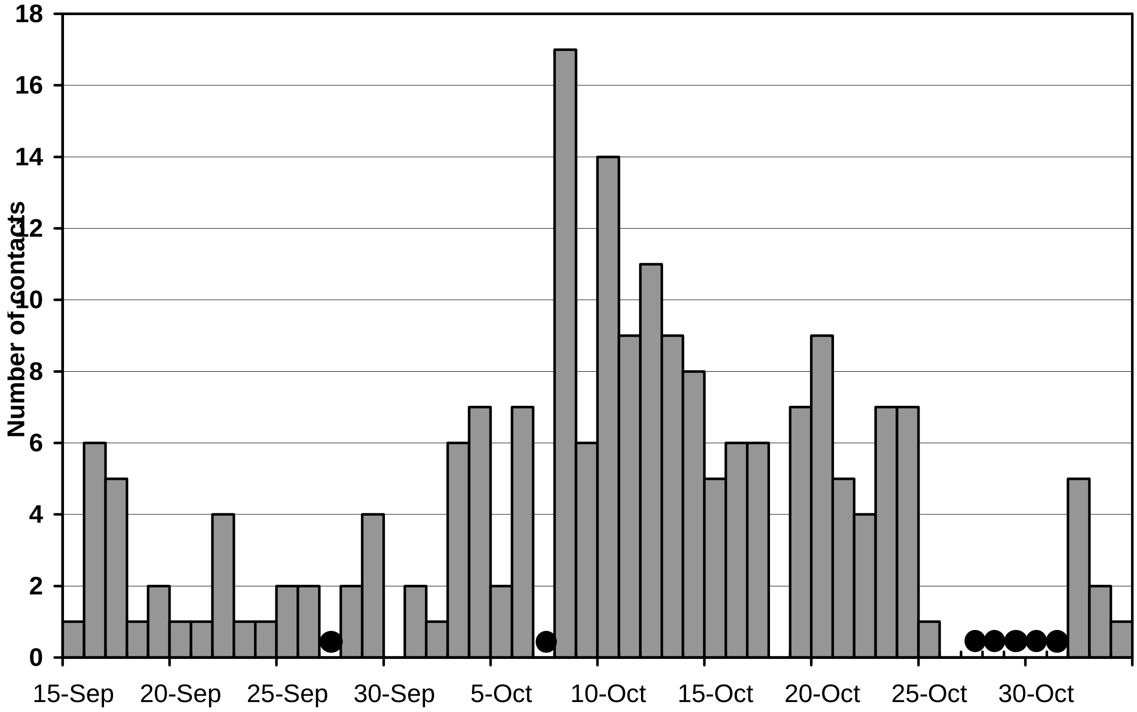

Figure 1: *Passage dynamics of Woodcock according to records of nocturnal contacts in vicinities of the Berezinsky Reserve in 2011. The black dots indicate days without counts on stationary census plots.*

The mean number of contacts per hour registered during the ringing trips is a good index of woodcock abundance. This year, 235 contacts were recorded during 86 hours and 58 birds were caught. The mean number of contacts/hour is 2.73 (Figure 3). Although this value is lower than the last year, it is quite high. The proportion of juveniles among caught bids was 70.4% (39.5% in 2010). Since it is the highest value for the last 7 years, this season was probably favourable for breeding woodcocks. Juveniles of late broods represented 31.6% of juveniles.

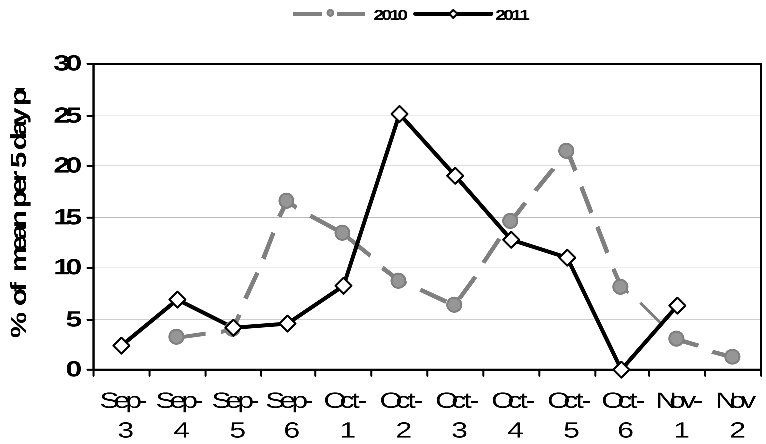

Figure 2: *Passage dynamics of woodcock according to records of nocturnal contacts in 2010 and 2011. Data grouped in five-day periods.*

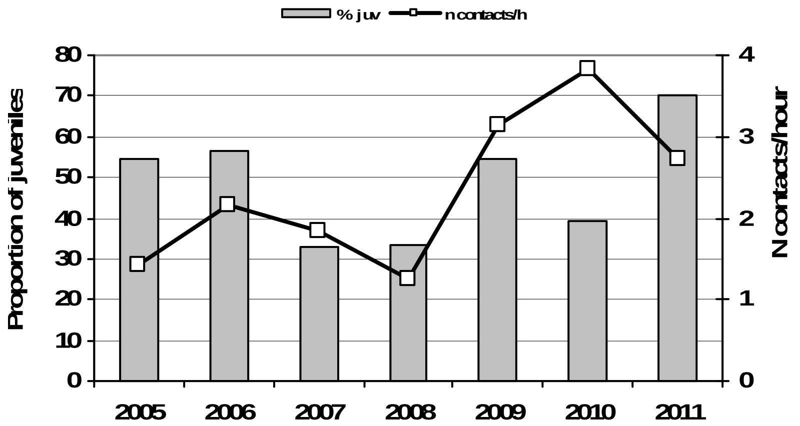

Figure 3: *Annual fluctuations of the number of contacts per hour and proportion of juveniles among caught woodcocks.*

This autumn, 54 woodcocks were ringed and 4 birds ringed this year were retrapped at the same places after 6-29 days. The catching success rate was 24.7 %, which was rather more than the last year (21%). Few birds were caught in the full moon nights. In total, 351 woodcocks were ringed during eight years, 2004-2011 (Table 1). Now 30 recoveries of Belarusian rings have been received from France (19), Spain (5), Italy (4) and Great Britain (2). The least time between the capture and recovery was 10 days. One woodcock ringed in 2007 was retrapped two times at the same place in 2008 and 2010 and was later shot in France. The distance covered by the woodcock was about 1900 km.

Year	N ringed birds	N direct retraps	N indirect retraps	N direct recoveries	N indirect recoveries
2004	16	-	-	1	1
2005	33	2	-	1	1
2006	46	-	-	2	-
2007	54	-	1	1	-
2008	40	2	2	4	2
2009	34	1	1	2	2
2010	74	6	2	8	4
2011	54	4	-	1	1
Total	**351**	**15**	**6**	**20**	**10**

Table1: *Ringing results collected for the 2004-2011period.*

Acknowledgements - We thank Alexander Kashtalian and all others who assisted our work. We are grateful the *Office National de la Chasse et de la Faune Sauvage* for funding the survey.

News from…….	HUNGARY

Woodcock report from Hungary – Spring 2011

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The national woodcock monitoring programme, which was started in 2009, (Schally *et al.*, 2010) continued in 2010 and 2011. The main goal of the programme is to maintain an adaptive harvesting based on reliable information about the species. We gather information about migration of woodcocks in our country. This short report presents the data collected in spring 2011 compared to the results of the first two years of the programme.

Methods

Roding surveys (Ferrand, 1993) were weekly performed by observers (mainly hunters). The synchronized censuses took place every Saturday night from 12th February to 30th April in 2011. The total number of observation points was 922 (856 in spring 2009, 922 in 2010). The locations of the points were chosen by the observers and they are the same from one spring to another. The observers recorded on standardized forms the number of contacts (woodcocks seen), and additional information (the estimated size of the visible area, the duration of the observation, weather conditions and the landcover types surrounding the observation point).
In order to describe the characteristics of migration, we used different methods of data analysis:
1. Descriptive statistics (medians, minimums, maximums, and quartiles) were calculated from the number of contacts for each observation week. Their distribution represents the temporal dynamics and intensity of migration.
2. Temporal dynamics of the national occupation rate were calculated for each year. These rates correspond to the % of listening points at which at least one roding male was observed (positive site) (Ferrand *et al.*, 2008) in each week. It can also be used as an index of the spatial pattern of the migration.
3. Temporal dynamics of the rate of high abundance sites were calculated for each year. These rates correspond to the % of positive sites at which at least five roding males were observed in each week. They can be also regarded as a spatial pattern concentrated on preferred areas.
We used Chi-squared test for homogeneity to detect the differences among the distributions (dynamics) a) of the number of contacts and b) the number of positive sites within the three years.One-way ANOVA was used to detect the differences among the means of the relative proportion of the number of contacts (contacts of one day /contacts of the whole period) in consecutive years.

Results

The distributions of spring season’s medians fit one-peak curves in each year but there is a temporal difference between the annual peaks (Figure 1.). There are great differences even within one date’s observation data. The minimums are 0 for each date, even in periods with the highest numbers of contacts. The maximum values ranged between 2-28 contacts (3-23 in 2009 and 2-16 in 2010).
We found no difference among the means of relative proportions of the number of contacts in the three years (ANOVA $F_{2,33}$= 0.06343; NS). However, we found difference among the distributions of the number of contacts (χ^2=720.318; df=22; p<0.005).
The proportion of positive sites was the highest (90 %) on 26th March in 2011 (91 % on 28th March 2009 and 88.6 % on 20th March 2010) (Figure 2.). The highest rate of high abundance sites can be related to the highest rate of positive sites each year (17.4 % in 2009, 13.1 % in 2010 and 15.5 % in 2011) (Figure 3.). We detected slight differences among the distributions of the numbers of positive sites in the three years (χ^2=232.360 df=22 p<0.005).

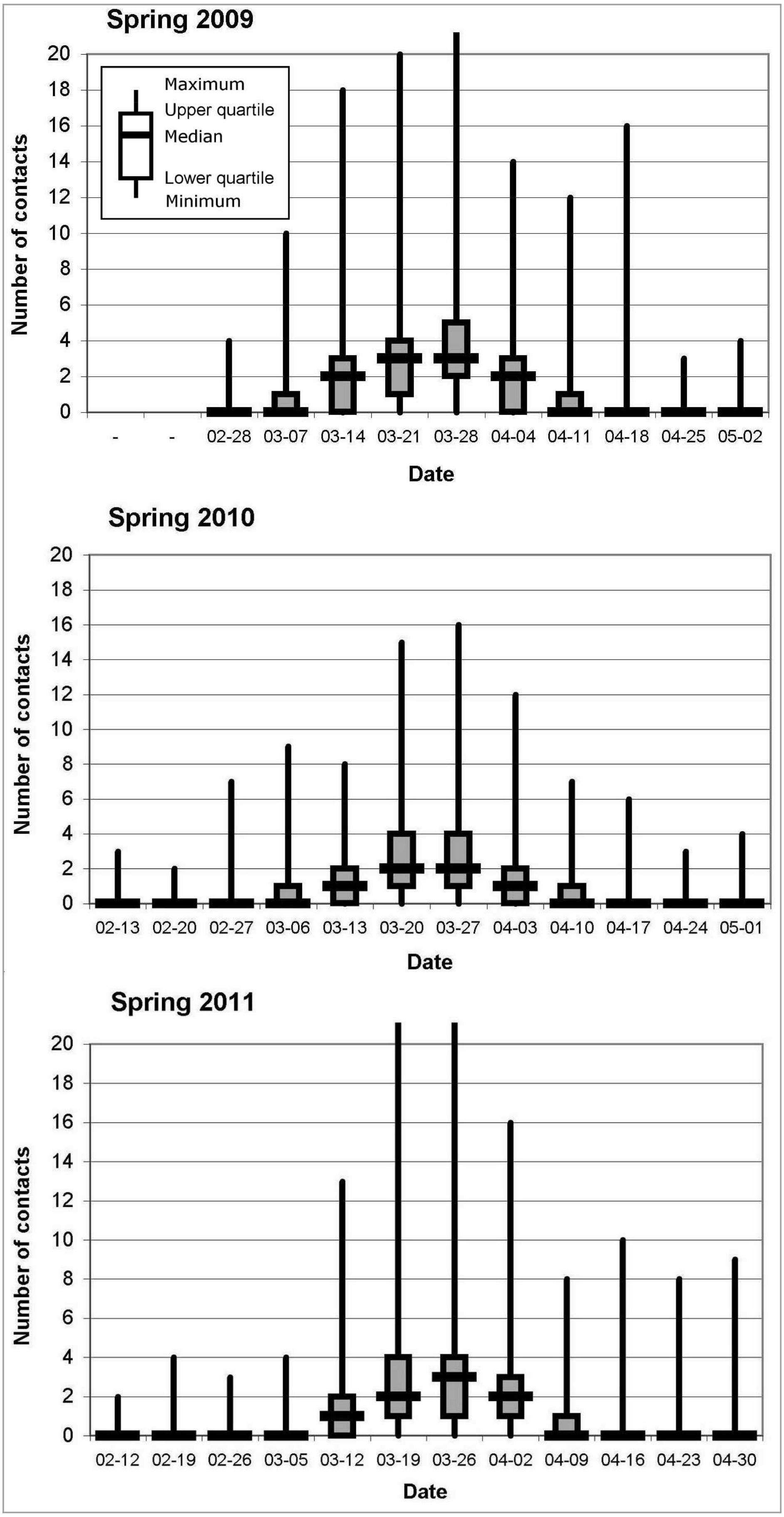

Figure 1: *Distribution of the number of contacts in spring 2009, 2010 and 2011.*

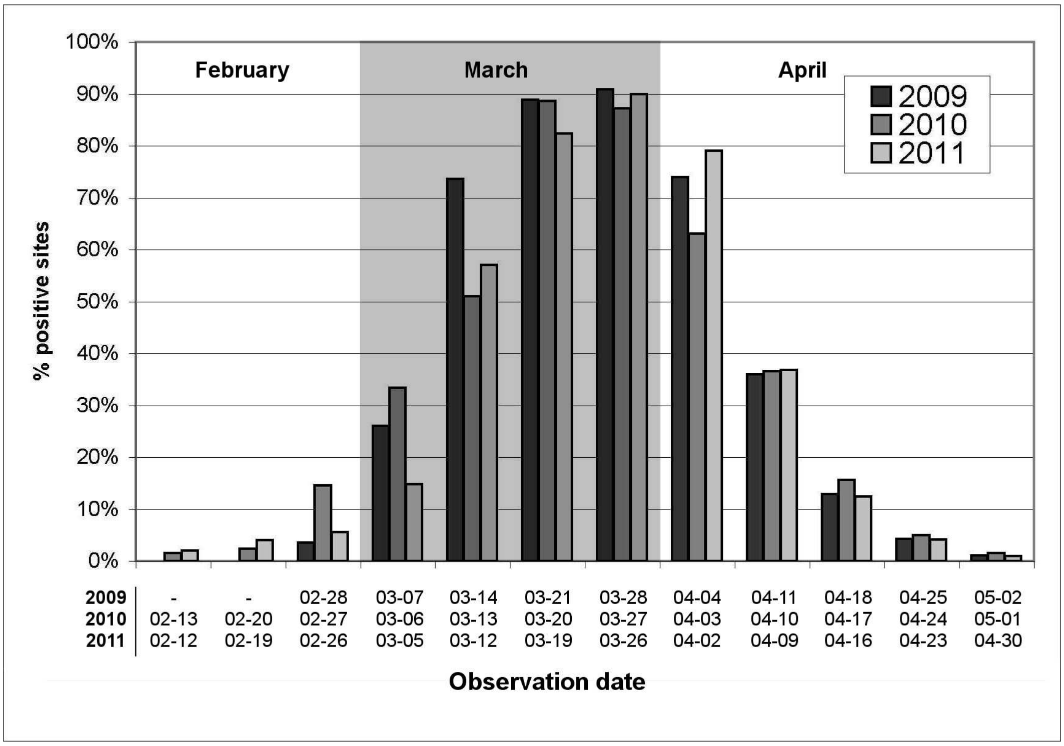

Figure 2: *Proportion of positive sites in spring 2009/2010/2011.*

Discussion

Both the temporal and the spatial dynamics of spring migration are very similar year by year. Although there are slight differences, the main characteristics remain the same. Furthermore, the results of a season obtained with different methods of analysis are also similar.

With the increase of the summarized number of contacts, the proportion of positive sites and the proportion of high abundance sites also increased. This can be caused by changes in habitat suitability during the migration period and also by the limits of the population density.

According to our results, the slight differences among the number of contacts in consecutive years may reflect fluctuations in migrating population numbers. The proper estimation of the population size is confirmed to be problematic, but our aim is to make approximations about that as accurate as possible in the future.

The great differences within one date's observation data were also typical year by year, so this kind of monitoring may provide data with low accuracy in spite of the high efforts made. However, it is still the best method for monitoring the migration of the species in Hungary to date.

Acknowledgements

The monitoring program has been running on a national scale for three years. We are glad to report that the number of participants remained stable. We are grateful to everyone who took sides with the program, especially the ones who persist in collecting data from the beginning. We are also thankful to the Hungarian National Chamber of Hunters and the Ministry of Rural Development for their help in coordination.

References

Ferrand Y. 1993. A census method for roding Eurasian Woodcocks in France. Biol Rep 16: 19–25.

Ferrand Y., Gossmann F., Bastat C. & M. Guénézan. 2008. Monitoring of the wintering and breeding Woodcock populations in France. Revista Catalana d'Ornitologia 24: 44-52.

Schally G., Bleier N. & L. Szemethy. 2010. Country-wide monitoring of the migrating Eurasian woodcock (*Scolopax rusticola*) populations in Hungary. WI/IUCN-WSSG Newsletter, 36, 17-20.

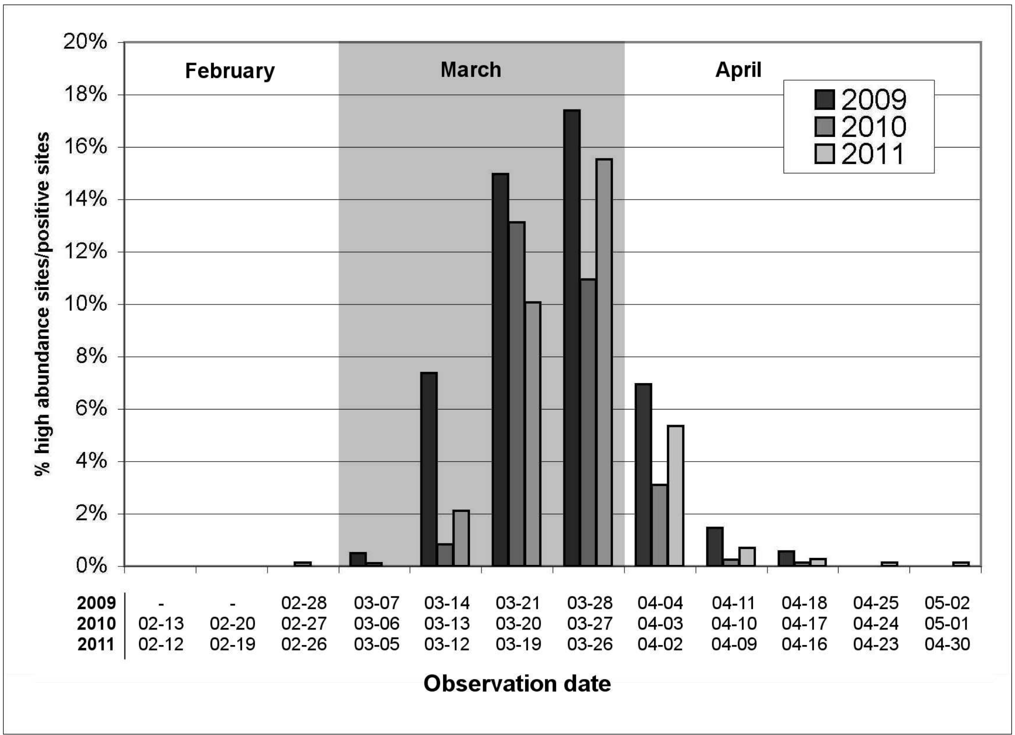

Figure3: *Proportion of high abundance sites in spring 2009/2010/2011.*

The 1st Meeting of the Hungarian Woodcock ringers (Karád, 2011)

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In Hungary there has been Eurasian woodcock ringing data since 1913*, although the ringing activity has really increased since the last few years – due to the considerably more successful French drop- net method, which was introduced in Hungary in 2005, and its subsequent spreading, as well as the introduction of the ringing system applied only to Eurasian Woodcock. The number of Woodcocks ringed in Hungary reached 100 in autumn 2010, which event proved an excellent occasion for a celebration. It was time to organize the 1st Meeting of the Hungarian Woodcock ringers. The aim of the meeting was for the ringers to exchange knowledge about each other's results and experiences not only by reputation, as well as to help them become an active cooperating community. The meeting was organized in the Hunting Lodge in Karád on 29 May 2011. The participants presented their experiences and results: László Jakus summarized the Eurasian Woodcock ringing data in Hungary from the very beginning until today. Gergely Schally presented experiences of the ringing in spring 2011. He compared the observations from ringing with those of roding. Dénes Fluck summarized the methods and results of international Woodcock research programs in his presentation.

Many interesting questions and problems arose in conversations, many of which have been discussed in detail. Later, a film was shown about the way of life of the Eurasian Woodcock, which presented the life of this species from an almost unprecedented proximity. The last program was a field trip, on which participants visited the pastures (ringing sites) near the Lake Balaton.

* Magyar MadárgyűrűzésiAdatbank; http://www.mme.hu/termeszetvedelem/madargyrzesi-koezpont.html

The event has proven very useful, and it is important to organize such an event in the future. Observation and research on Eurasian woodcock are difficult, its hidden way of life and its mystery contribute to its popularity. Ringing is an irreplaceable method to get information about the behaviour of this bird, as well as the characteristics and current state of migration. It is also important to note that observation requires a lot of time, energy and stamina. All those, however, who are interested in this species and are committed, should be united, supported, and their knowledge and techniques should be improved. The 1st meeting was an important step in this direction. The tasks of the organization of this meeting were performed by László Jakus Jr.

Seasons	Time (hours)	contacts	Nocturnal abundance index	Birds ringed	Mean weight (g)
Spring 2005	19	15	0.80	4	-
Spring 2006	48	5	0.10	0	-
Spring 2007	-	-	-	1	-
Spring 2008	31	25	0.81	2	327
Spring 2009	63	67	-	15	332
Spring 2010	51	67	1.10	17	310
Autumn 2005	25	16	0.63	4	353
Autumn 2006	-	-	-	2	-
Autumn 2007	67	34	0.51	3	378
Autumn 2008	78	95	1.21	16	330
Autumn 2009	52	52	1.00	20	350
Autumn 2010	84.5	79	0.93	19	308

Table 1: *Results of Eurasian Woodcock ringing in Hungary between 2005 and 2010.*

Participants to the meeting: Béla Benei, Gergely Svéda, Péter Agócs, László Jakus Jr., Dénes Fluck, Attila Konkoly and Gergely Schally.

Development of a winter survey for Wilson's Snipe in the Mississippi Flyway

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Among North American game birds, the Wilson's snipe (*Gallinago delicata*) (hereafter snipe) has received little research attention (Arnold, 1994). Evidence of this lack of information is that no statistically rigorous population, regional abundance, or higher-level trend estimates exist (Tuck, 1972; Arnold, 1994; Mueller 1999). Anecdotal estimates place the North American snipe population at about 2 million (Brown *et al.*, 2001; Delaney & Scott, 2006). Nonetheless, snipe are being managed without reliable abundance estimates. The only continent wide trend survey available for snipe is the Christmas Bird Count (CBC) which was not designed for surveying snipe.

Tuck (1972) discussed winter surveys that were based on line transects, and focused on winter concentration areas across the U.S. winter grounds. These surveys were to be augmented by CBC data recognizing that the CBC was not designed to survey snipe. As with the breeding ground surveys, Tuck (1972) indicated that there were problems with this approach. The primary issues noted were: 1) numbers of snipe recorded fluctuated annually at individual sites, 2) the number of snipe wintering outside of the United States was uncertain and could change annually, and 3) that weather and water levels affected survey-specific detection. Despite the stated limitations of the winter survey approach, Tuck (1972:380) concluded that, "Winter population censuses have most merit and would be most reliable if carried out in the southern states in early February when the population is relatively stable." Based on the combined consensus that population abundance estimation methods for snipe are needed (Tuck, 1972; Fogarty *et al.*, 1980; Arnold, 1994; Mueller, 1999) and that Tuck (1972) recommended that winter population surveys offered the most promise, I conducted a two year study to evaluate a winter ground survey for snipe in the Mississippi Flyway. This study and the data that I provide serves as a first step towards developing the methods for a United States-wide winter snipe survey.

The objectives of my study were to: 1) develop a feasible roadside survey for wintering snipe, 2) estimate winter snipe population abundance for the Mississippi Flyway, 3) determine whether survey-specific covariates need to be included in the survey design, and 4) examine factors affecting between-year variability in individual site abundance estimates.

Methods

The study area included the snipe wintering grounds in the lower Mississippi Flyway (Figure 1), specifically the Lower Mississippi Alluvial Valley, Red River Valley in Louisiana and the Gulf Coastal Plain of Louisiana (Figure 1). I selected the study area based on CBC data (National Audubon Society, 2011) indicating that the primary wintering states for the Mississippi Flyway include Arkansas, Louisiana, and Mississippi. I included 50 townships of which 20 were based on Christmas Bird Count data (snipe per party hour) (National Audubon Society, 2011) and 30 were chosen randomly using ArcGIS 9.2 (Environmental Systems Research Institute Inc. [ESRI], 2006). In 2010, I increased survey coverage by adding 37 more random townships to our sampling strata (Figure 1). I used random townships to estimate snipe densities and abundance for the study area. I compared the CBC township counts against random township counts and I also compared the actual CBC snipe counts against our roadside counts in the same CBC townships (see below).

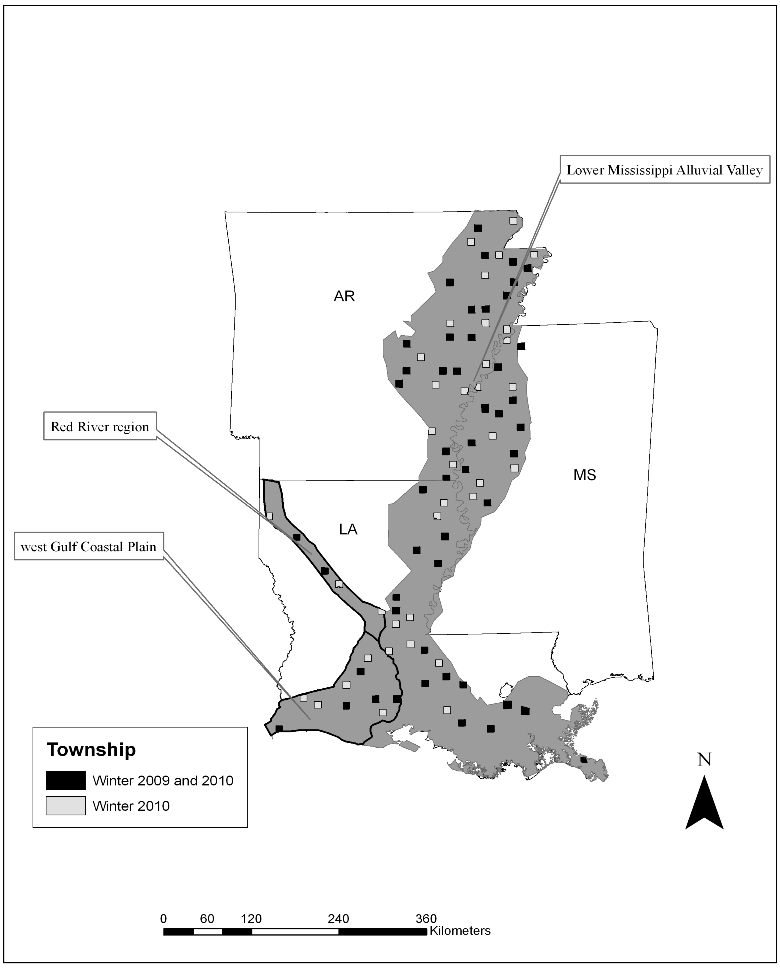

Figure 1: *Study area including the lower Mississippi River Alluvial Valley, Red River region of Louisiana and west Gulf Coastal Plain Louisiana. Black symbols represent townships that were surveyed during both years. Gray symbols represent surveys that were newly added for the 2010 field season.*

For my sub-sampling unit I attempted to conduct 9 1.8 km (~200m wide) line transects along secondary roads within each township. Along these routes, I recorded the GPS coordinates of start and stop location, distance from the road to each bird (or flock and how many individuals were in the flock), vegetation height, weather conditions, average water depth, percent water and vegetation cover in a segment, and general habitat type. I conducted line transect surveys throughout the daytime from late January to late February during 2009 and 2010. Routes were traversed at <15 Km/h by truck with both observers scanning for snipe, and periodically stopping to observe for snipe in heavy cover (Rosenstock *et al*., 2002). I conducted surveys from sunrise to sunset as Hoodless *et al.* (1998) found that other than crepuscular periods of the day, Common snipe (*G. gallinago)* movement was minimal during winter in southwest England. Surveys were not run during moderate or heavy precipitation or during dense fog. I based timing on the recommendation of Tuck (1972) that snipe had not yet begun spring migration then and was relatively stable in distribution.

I applied distance sampling (Buckland *et al.*, 2004) in a road based line transect approach to model detection and derive density and abundance estimates for snipe in the study area. I ran 422 road transects (757 km) in 49 townships during 2009 (21 January - 24 February), and 705 road transects (1271 km) in 84 townships during 2010 (21 January - 27 February). Visual inspection of the 2009 detection histogram from my global plot produced by program DISTANCE (Buckland *et al*., 2004) did not indicate avoidance of the road by snipe.

Based on my set of a priori covariates I included observer as a factor covariate and percent water cover, percent vegetation cover, and vegetation height score as non-factor covariates. I modeled detection using the Multiple Covariate Distance Sampling (MCDS) engine in program Distance 6.0 (Thomas *et al*., 2010). This enables the modeling of detection through the inclusion of factors other than only distance (Marques & Buckland, 2003). To assess goodness-of-fit I visually inspected the relationship between the fitted and cumulative distribution (cdf) and the empirical distribution function (edf) and the results of the Kolmogorov-Smirnov test generated by program Distance (Buckland *et al*., 2004; Marques *et al*., 2007). I used Akaike's Information Criterion (AIC) (Akaike,1973; Burnham & Anderson, 2002) to select among candidate models.

Winter snipe densities can experience localized fluctuations across years due to changes in weather and habitat availability (Robbins, 1952; Tuck, 1972). To account for this possible variation in densities, I first analyzed each year separately, and if the 95% confidence intervals for the annual estimates overlapped, I then pooled the years to produce a density estimate with greater precision. I used program Distance 6.0 (Thomas *et al*., 2010) to estimate detection probabilities, abundances and densities (inds/km^2). I calculated abundance by multiplying the size of the study area (~127,507 km^2) by the density estimates (Marques *et al*., 2007). Finally, to compare CBC snipe counts and counts from the same CBC township, I used a Wilcoxon matched-pairs signed ranks test.

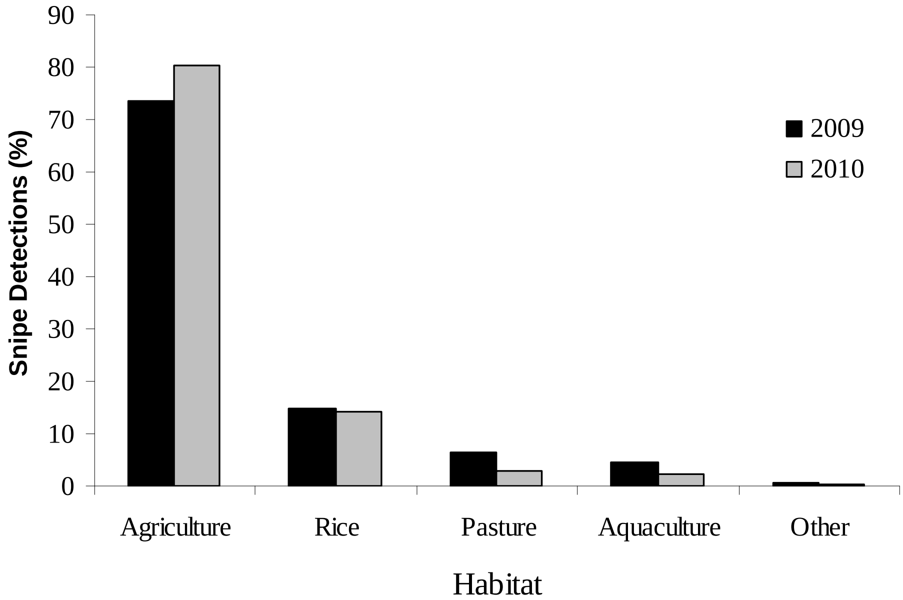

Figure 2: *Percent of snipe detected in different habitat types in the lower Mississippi Flyway during winter 2009 and 2010.*

Results

In 2009, I detected 1,492 (422 transects) snipe while in 2010 I detected 2,487 (705 transects) snipe. Of the 2,487 snipe detected in 2010, I detected 1,087 in routes repeated from the 2009 season and I detected 1,400 snipe in new routes. In both years combined, I surveyed 1,462 Km of roads in random townships and 557 Km of roads in CBC townships for a total of 2019 Km of survey effort. I detected 58% of snipe as individuals, 34% of snipe in a cluster size of 2-5 birds, and 8% of snipe in cluster sizes of >5 birds.

In both 2009 and 2010, I detected more snipe in row crop than in any other habitat type (Figure 2). In 2009 I detected 74% of snipe in row crop, 14% in rice, 6% in pasture, 5% in aquaculture and 1% in other habitats (Figure 2). In 2010, I detected 80% of snipe in row crop, 14% in rice, 3% in pasture, 2% in aquaculture and <1% in other habitats (Figure 2).

In 2009, I detected more snipe (42%) in habitats with 0% vegetation cover than in any other vegetation cover category (Figure 3). In 2010, I detected more snipe (35%) in habitats with 75-100% vegetation cover (Figure 3). In 2009, I detected more snipe (58%) in habitats with 25-50% water cover than in any other water cover category (Figure 4). In 2010, I detected more snipe (49%) in habitats with <25% water cover than in any other water cover category (Figure 4).

In each year and for the combined years, the most plausible models included observer, water cover and some aspect of vegetation as covariates (Table 1). Density estimates between 2009 and 2010 by either random or CBC townships were not different (Table 1). However, the snipe densities in CBC townships were higher in 2009 compared to 2010 (Table 1). I calculated the study area wintering abundance as 1,167,964 (95%CI: 664,312-2,061,788) in 2009, 511,303 (95%CI: 351,919- 744,641) in 2010, and 529,155 (95%CI: 385,072-726,791) for both years pooled.

In 2009, 16 of 20 comparisons between the CBC snipe counts were greater than road survey counts conducted in the same CBC townships. The mean difference between CBC and road survey counts in CBC townships in 2009 was 87 snipe detected, $p < 0.05$). In 2010, 15 of 18 comparisons between the CBC snipe counts were greater than road survey counts conducted in the same CBC townships. The mean difference between CBC and road survey counts in CBC townships in 2010 was 80 snipe detected ($p < 0.005$).

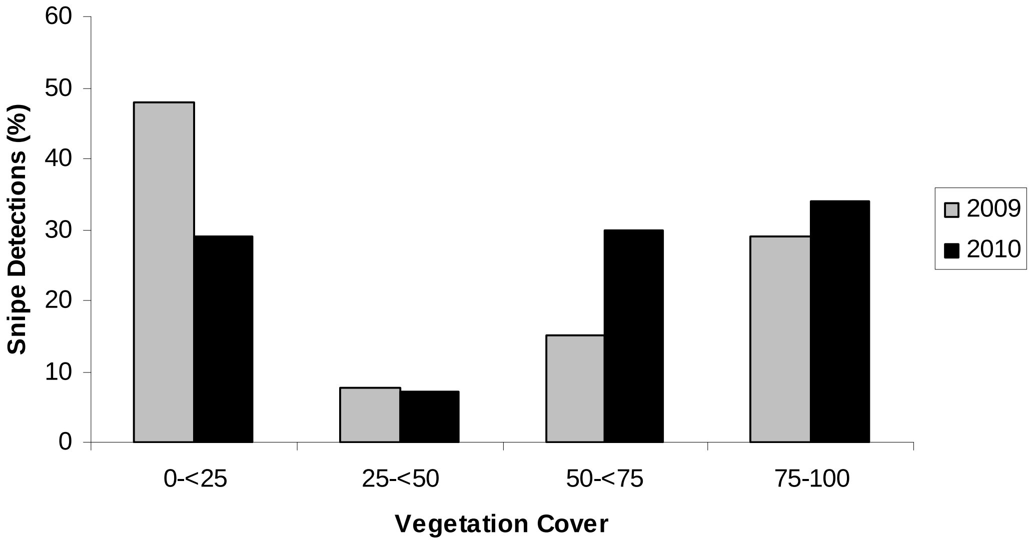

Figure 3: *Percent of snipe detected in habitats with varying percent vegetation cover in the lower Mississippi Flyway during winter 2009 and 2010.*

Discussion

Using my road survey line transect method for surveying wintering snipe in the lower Mississippi Flyway, I was able to: 1) conduct a large number of surveys over a short period of time, 2) detect a large number of snipe, and 3) survey privately owned lands from public roads. While I recognize that roadside surveys are not without faults, the most plausible alternative method, aerial surveys, have proven ineffective (Robbins, 1956). The use of CBC snipe counts as a surrogate for my more statistically rigorous survey approach remains unclear. My comparisons between the CBC snipe counts and my estimates from the same townships were significantly different each year with the CBC counts being consistently higher than my counts. With only 2 years of data, I cannot say with assurance whether the CBC counts follow the same trends compared to my estimates. Until a longer series of comparisons between the two survey methods are available, I suggest that management agencies be cautious in using CBC snipe counts to base trends on.

Year	TS [1]	Effort (km)	N [2]	Candidate Model[3] (key & adjustment + covariates)	No. of Parameters	Density inds/km²	95% CI	%CV
2009	R	451	364	HNC + obs + veg cover + wat cover	4	9.18	5.21-16.17	29.47
	C	306	376			12.95	6.90-24.31	32.88
2010	R	1010	605	HRC + obs + veg height + wat cover	8	4.01	2.76-5.84	19.29
	C	251	126			2.30	1.15-4.58	36.30
Pooled	R	1462	975	HNHP + obs + veg cover + wat cover	8	4.15	3.02-5.70	16.32
	C	557	375			2.82	1.53-5.19	31.84

***Table 1**: Model selection results and corresponding density estimates of the top candidate models for 2009, 2010 and both years pooled, in the lower Mississippi Flyway during winter, 2009 and 2010. Models were ranked within years using AIC score.*

[1]Townships. Random (R) or Christmas Bird Count (C)

[2] Number of clusters used in density estimation after truncation

[3]Half normal cosine (HNC), hazard rate cosine (HRC) or half normal hermite polynomial (HNHP) with observer (obs), vegetation cover (veg cover), vegetation height (veg height), and water cover (wat cover) as covariates

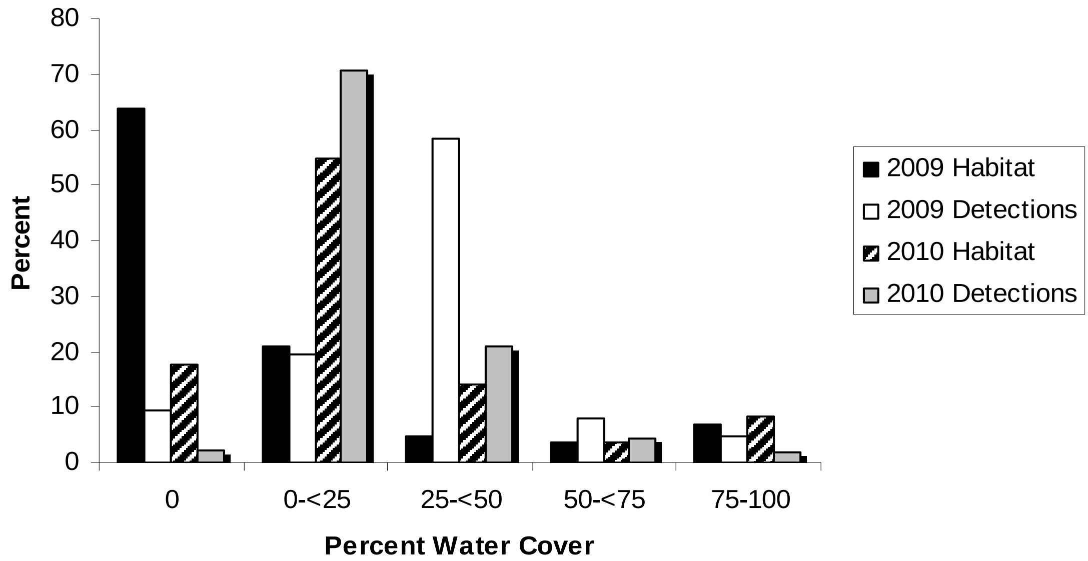

***Figure 4:** Percent of snipe detected in varying percent water cover in habitats in the lower Mississippi Flyway during 2009 and 2010.*

My abundance estimate of between 0.5 – 1.2 million wintering snipe in the lower Mississippi Flyway appears reasonable given that the current continental estimate is about 2 million (Brown *et al*., 2001; Delaney & Scott,2006), and taking in to account the importance of the Mississippi Flyway for concentrations of wintering snipe (Robbins, 1956; Tuck, 1972; Rundle, 1981; Twedt *et al.*, 1998). The variation in snipe abundance between years probably reflects habitat availability differences (Tuck, 1972).

My data indicate that based on my number of detections compared to other habitat types, row crop habitats and rice habitats have a comparatively high importance for snipe (Figure 2). More research is needed on how habitat and habitat factors influence snipe densities especially in the face of changing agricultural practices and land development. Because winter habitat has been indicated as being a limiting factor for snipe populations (Neely 1959), my data provides a starting point for future studies addressing the role of habitat and seasonal habitat changes have on wintering snipe.

Acknowledgements

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References

Akaike H. 1973. Information theory and an extension of the maximum likelihood principle. Pages 267-281 *in* International Symposium on Information Theory (B.N. Petrov, F.Csaki, Eds.). Second edition. Akademiai, Budapest.
Arnold K. A. 1994. Common snipe. Pages 117-125 *in* T.C. Tacha and C.E. Braun, editors. Migratory shore and upland game bird management in North American. Int. Assoc. Fish and Wildlife Agency, Washington, DC.
Brown S., Hickey C., Harrington B. & R. Gill. 2001. United States shorebird conservation plan. Manomet Center for Conservation Sciences. 2001. Manomet, Massachusetts. http://www.fws.gov/shorebirdplan/USShorebird/downloads/USShorebirdPlan2Ed.pdf, accessed 23 March 2011.
Buckland S.T., Anderson D.R., Burnham K.P., Laake J.L., Borchers D.L. & L. Thomas. 2004. Advance Distance Sampling. Oxford University Press, New York, New York, USA.
Burnham K.P. & D.R. Anderson. 2002. Model Selection and multimodel inference: a practical information-theoretic approach. Springer-Verlag, New York, New York.
Delany S. & D. Scott. 2006. Waterbird Population Estimates - Fourth Edition. Wetlands International, Wageningen, The Netherlands.
Fogarty M. J., Arnold K. A., McKibben L., Popischal L. B. & R. J. Tully. 1980. Common snipe Pp. 189-209 *in* G.C. Sanderson, editor. Management of migratory shore and upland game birds in North America. University of Nebraska Press, Lincoln and London.
Hoodless A., Draycott R.A.H. & K. Tucker. 1998. Winter habitat-use and diet of the common snipe (*Gallinago gallinago*) and guidelines for habitat management. Pages 57-63 *in* Fifth European Woodcock and Snipe Workshop - Proceedings of an International Symposium of the Wetlands International Woodcock and Snipe Specialist Group (Kalchreuter H., Ed.). Wetlands International Wageningen.
Marques F.F.C. & S.T. Buckland. 2003. Incorporating covariates into standard line transect analyses. Biometrics 59: 924-935.
Marques T.A., Thomas L., Fancy S.G. & S.T. Buckland. 2007. Improving estimates of bird density using multiple covariate distance sampling. The Auk 124: 1229-1243.
Mueller H. 1999. Common snipe (*Gallinago gallinago*) *in* The Birds of North America, No. 417 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.
National Audubon Society. 2011. The Christmas Bird Count Historical Results [Online]. Available http://www.audubon.org/bird/cbc. [1August 2011]
Neely W.W. 1959. Snipe field management in the southeastern states. Proceedings of the Annual Conference of the South Eastern Association Game and Fish Commissions 13: 288-291.
Robbins C.S. 1952. Wilson's snipe wintering ground studies, 1950-1951. Pages 47-50 *in* Investigations of woodcock, snipes and rails in, 1951. U.S. Fish and Wildlife Service Special Scientific Report Wildlife 14.
Robbins C.S. 1956. Wilson's snipe wintering ground studies, 1954-1955. Pages 47-54 *in* Investigations of woodcock, snipes and rails in 1955. U.S. Fish and Wildlife Service Special Scientific Report Wildlife 31.
Rosenstock S.S., Anderson D.R., Giesen K.M., Leukering T. & M.F. Carter. 2002. Landbird counting techniques: current practices and an alternative. The Auk 119: 46-53.
Rundle W.D. 1981. Habitat selection by fall migrant snipe in southeastern Missouri. Proceedings of the Annual Conference Southeastern Association of Fish & Wildlife Agencies. 35:20-26.
Thomas L., Buckland S.T., Rexstad E.A., Laake J.L., Strindberg S., Hedley S.L., Bishop J.R.B., Marques T.A. & K.P. Burnham. 2010. Distance software: design and analysis of distance sampling surveys for estimating population size. Journal of Applied Ecology 47: 5-14.
Tuck L. M. 1972. The snipes: a study of the genus *Capella*. Volume 5. Canadian Wildlife. Service Monograph Series. No. 5.
Twedt D.J., Nelms C.O., Rettig V.E. & S.R. Aycock.1998. Shorebird use of managed wetlands in the Mississippi Alluvial Valley. American Naturalist 140: 140-152.

2010-2011 French Woodcock report

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The 2010/11 season was really problematic in France. At the end of summer, we were worried about abundance of woodcock in autumn migration and wintering. It seemed that the severe drought registered in July-August in European Russia could have had an impact on the breeding success and/or the survival rate in summer: no Woodcock nest or brood was found by our Russian colleagues and the proportion of juveniles among birds ringed in North-West Russia was no more than 50 %. Our fears were confirmed by the indices of abundance (ICA and IAN, see after) and age-ratios estimated at the beginning of the hunting season. That is why, the French Woodcock network published on 2 December a bulletin to inform the administration and stakeholders on the situation. This was followed by a ministerial circular, signed on 17 December, to underline the necessity to take measures to limit Woodcock hunting bags. This recommendation was applied in 75 % of French *départements* where Woodcock hunting was banned or where bag limits were set or reduced.

From a meteorological point of view, after a record drought in Russia during the breeding period, the 2010/11season was characterized by an early cold snap in the last decade of November. The cold air flow reached Western Europe on 25 November in the peak of migration. In December, densities quickly increased, especially in the coastal regions. December was also very cold and January and February were overall mild and rainy.

<u>2010-2011 ringing season in numbers</u>

N. *départements*:	91
N. ringing sites:	1 566
N. ringers:	383
N. nocturnal trips (hours):	3 014 (6 330)
N. contacts:	22 650
N. ringed woodcocks:	5 546
Success rate:	26 %
N. direct retraps:	134
N. indirect retraps:	216
N. direct recoveries:	327
N. indirect recoveries:	593
Annual direct recovery rate:	6.6 %

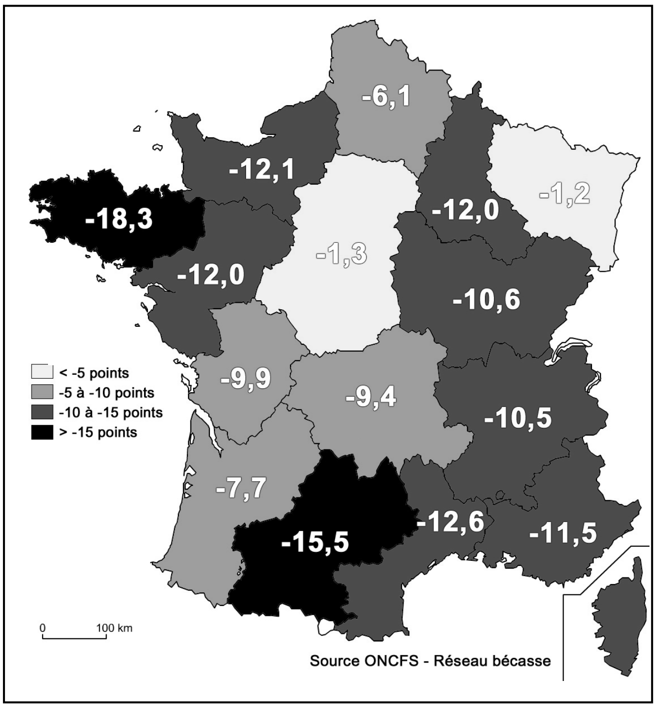


Figure 1: *Gaps between the proportion of juveniles in 2011/12 and the average of the 2003/04 to 2009/10 seasons.*

Ringing results

Quantitative ringing results

In total, 5 546 woodcocks were ringed in France during the 2010/11 wintering season. It is 1 154 less than in 2009/10! Of course, this can be explained by a general lower Woodcock abundance but can also be due to the desertion of woodcocks from internal to coastal regions, which practically closed the ringing season in half of France. The number of captures in littoral regions did not compensate their lack within the country. The success rate was 26 %, which is in the mean of the 2000s. In total, 22 650 woodcocks were found by the ringers, i.e. about 18 % less than in the last season.
In the south-western part of France, the number of captures was as high as in 2009/10, which shows that many woodcocks found refuge in this region from the beginning of December. Overall, we observed a decrease of the number of captures in all the others regions in comparison with the last season.
About a third of captures were made in December. Contrary to the previous seasons we did not observe an increase of captures in March.

Proportion of juveniles

The proportion of juveniles among ringed birds was 50.3 %. This value is 9 points below the mean of the 7 previous seasons (59.5 %). This is undoubtedly the major information for the 2010/11 season.
The deficit in juveniles was registered in the whole France (Figure 1). In Brittany and *Midi-Pyrénées,* the gaps are respectively -18.3 and -15.5 points with regard to the mean 2003/04 – 2009/10.
Since an important proportion of woodcocks migrating and wintering in France come from European Russia, the most probable hypothesis is that the bad weather conditions in the breeding sites in July-August had a negative impact on breeding success or survival for this part of the European Woodcock population.

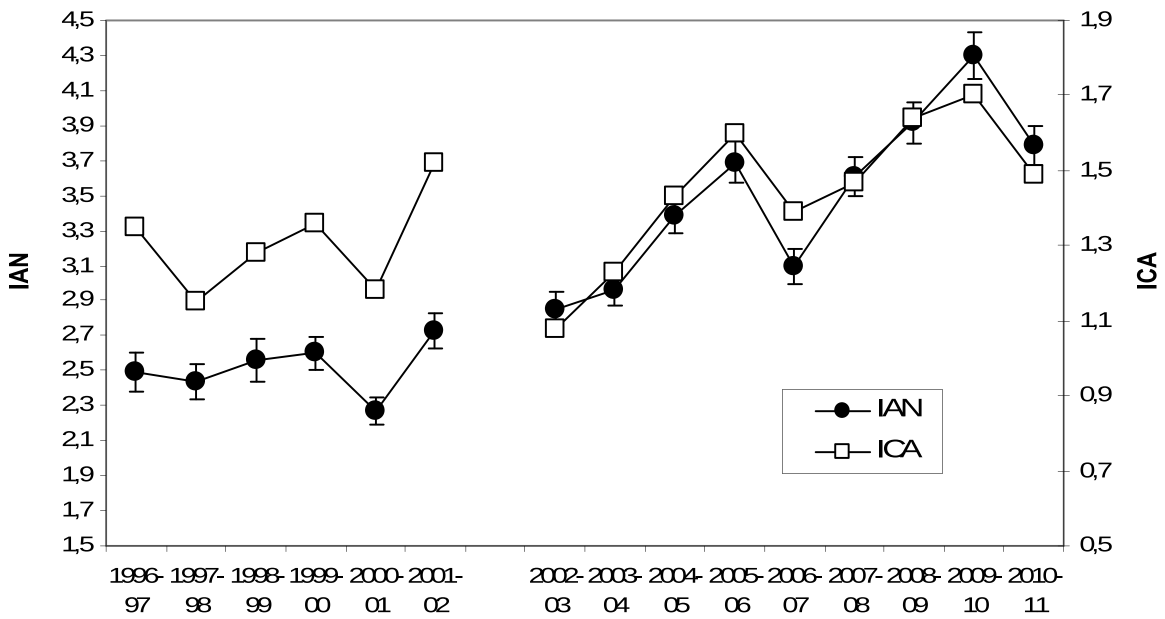


Figure 2: *Annual fluctuations of the number of contacts/h during ringing trips (IAN: nocturnal index of abundance) and hunting trips (ICA: hunting index of abundance; Source:* Club national des bécassiers*).Data have been divided into two periods due to a change in the method of calculation of IAN in 2002/03(see Newsletter 34).*

Monitoring of abundance during the migratory and wintering period

Two indices allow the monitoring of woodcock migratory and wintering numbers in France: the mean number of contacts/hour (IAN) registered during ringing trips and a hunting index [ICA: number of seen woodcocks / standardised hunting trip (duration = 3.5 hours)] collected by the *Club national des bécassiers*.

In 2010/11, IAN was estimated from 22 650 contacts recorded during 6 330 hours and ICA from a sample of 1 228 hunters and 31 271 hunting trips. For this season, IAN amounts to 3.79 and ICA to 1.49 (Figure 2). These values are both in the average of those of the 2000s, but clearly fell compared with the last season. However, interpretation of 2011/12 IAN and ICA are difficult because of the high concentration of birds in the coastal regions from which the large majority of data came from. Since the estimation is not weighted according to the area size of data collection this could have artificially overvalued these abundance indices.

From a statistical point of view, the increase trend of abundance indices is always confirmed for the last 9 seasons for IAN (p = 0.023) and the last 15 seasons for ICA (p =0.009). According to these results, we still consider that woodcock populations migrating and wintering in France are in a good conservation status for the study period.

The IAN monthly distribution shows that numbers remained low till mid-November (Figure 3). Because of a cold snap, IAN jumped to 4.9 in December, the peak of the season. Unusually, IAN decreased regularly in January and February.

Again in 2010/11, Woodcock migratory and wintering numbers were monitored in the course of the season. Data were collected every 10 days by electronic mail. In total, information collected in this way represents 82 % of the final field work time. Again, a quite accurate idea of the situation was provided in the course of the season in so far as the IAN and age-ratio values were very close to the final ones. Moreover, a joint analysis of ICA, also estimated in the course of the season by the *Club national des bécassiers,* supports IAN results. Four bulletins have been published from November to January.

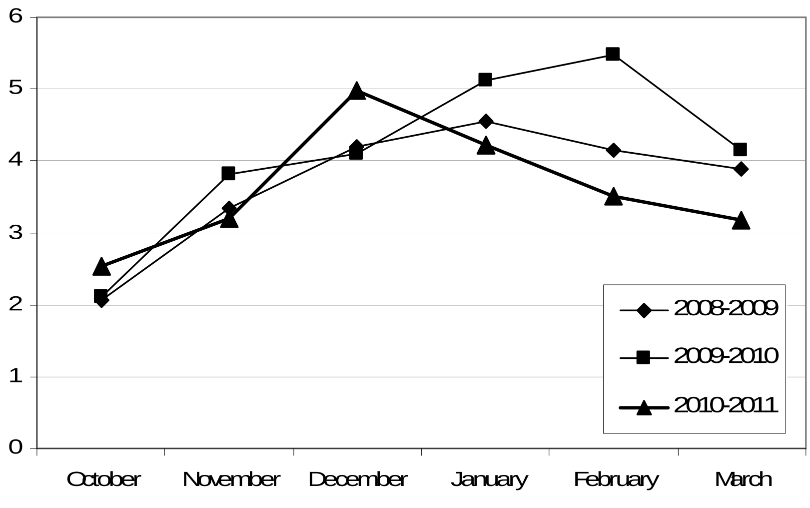


Figure 3: *Monthly fluctuations of IAN in 2008/09, 2009/10 and 2010/11.*

Roding results

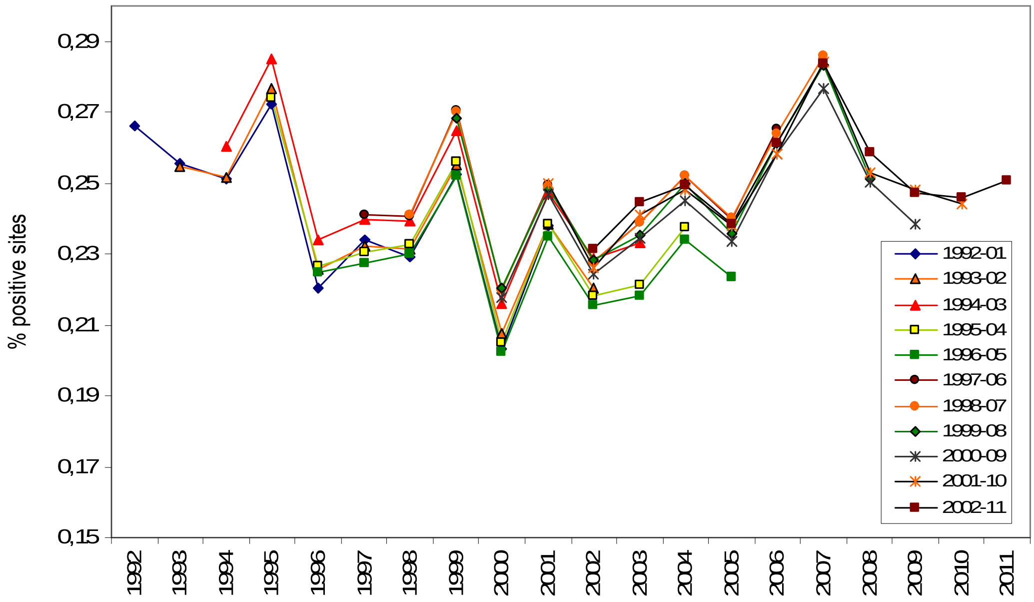
In 2011, roding censuses took place in 56 *départements* and 813 listening points were visited.

National occupation rate

This rate corresponds to the % of listening points at which at least one roding male was observed (= positive site). In 2011, the value was 23.8 %. This value is slightly above the 2010 one. On the other hand, a slight decrease was registered for the proportion of high abundance sites (n.contacts ≥ 5), with a value of 7.6 % *vs* 7.9 % in 2010. However, the 2011 value is largely above the 2009 one (6.6 %).

Breeding population trend

The population trend of the French breeding Woodcock population has been analysed for the last 10-year period. In total, 54 *départements* censused roding woodcocks without interruption from 2002 to 2011.The proportion of positive and high abundance sites show a great stability during the 2002-2011 period (p = 0.17 and 0.38, resp.).This trend recorded since spring 2009 is again confirmed in 2011 (Figure 4). After 20 years of monitoring, no disquieting sign appears about the status of Woodcock breeding numbers in France even if inter-annual fluctuations occurred.



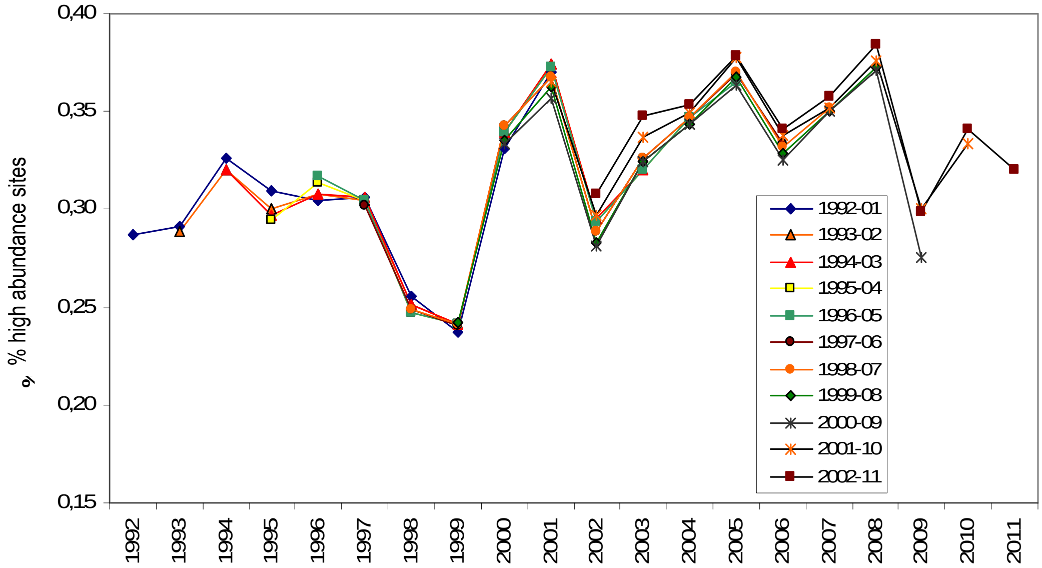


Figure 4: *Inter-annual variations of the proportion of positive sites and high abundance sites/positive sites for the10 available 10 year-periods.*

Conclusion

The 2010/11 Woodcock season in France was marked by a deficit of juveniles and a high concentration of birds in littoral regions following an early cold snap in November. From a biological point of view, this season was probably hard for Woodcock because of weather conditions.
Fortunately, hunting regulations were set in many French regions and they probably lead to the protection of a significant part of the wintering population.
In this context, the administration and stakeholders were made sensitive to the fragility of the species. Thanks to this awareness-raising and the will of stakeholders to aim at a sustainable use of this game bird, a national annual bag limit (30 woodcocks/hunter) accompanied by a compulsory bag notebook and marking strips, was set in France by a ministerial order from the 2011/12 hunting season.

Acknowledgements

This report is the result of an important field work carried out by members of the ONCFS/FNC Woodcock network. We thank all of them: professionals of ONCFS, *Fédérations départementales des chasseurs* and volunteers. We also thank the *Club national des bécassiers* for allowing us to use the data collected by Club members.

Evaluation of the 2010/11 Woodcock hunting season in France

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This report is the 17th to be published by the *Club national des bécassiers* (CNB; a French Woodcock Hunter Association). It is based on the same protocol as in the previous years.
In 2010/11, 1,228 CNB members sent information on their hunting trips and 1,364 participated in the wing collection (increase of 6 % compared with 2009/10). In total, 8,718 wings were analysed, *i.e.* a decrease compared with the 2 previous years which is due to a hunting ban during several days or weeks (depending on French regions) and/or to a bag limit reduction (down to 0 in some regions) due to an alert on a probable deficit in numbers because of a low breeding success. 7,457 birds were weighted and 1,334 were sexed. The data were collected in the major part of the Woodcock wintering area in France (Figure 1).

Hunting index of abundance (ICA)

The hunting index of abundance (ICA) used by CNB has been defined as the number of different woodcocks seen during a hunting trip, the standardized duration of which was 3.5 hours (Cau & Boidot, 2005)
In 2010/11, ICA was estimated from 31,271 hunting trips. Its national annual value is 1.49.
This value is lower than in 2009/10 (1.70) but not as low as we expected. The monthly variations of ICA show high values in December and January (2.02 and 1.68, resp.; Figure 2).
In 2010/11, a “mean” French Woodcock hunter made 25 hunting trips, saw 38 woodcocks and shot 8 of them.

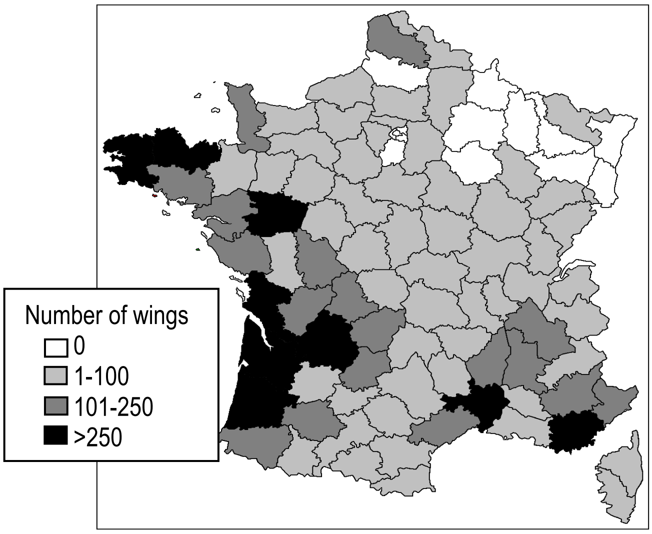

Figure 1: Distribution of the number of Woodcock wings collected in every French département *during the 2010/11 survey*.

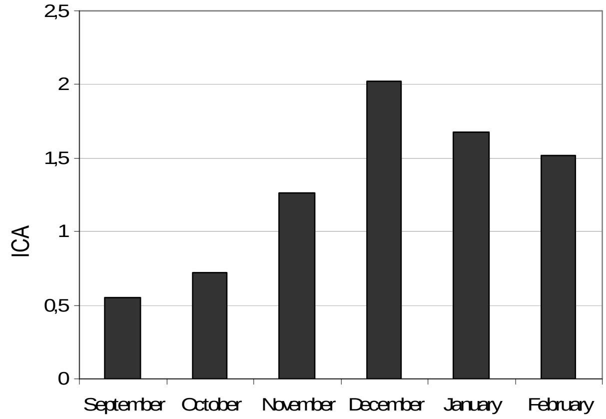

Figure 2: *ICA monthly variations in France for the 2010/11 hunting season.*

Juvenile/adult ratio

For 2010/11, the proportion of juveniles in the French Woodcock hunting bags is estimated at 58.0 %. This value is again lower than in the previous season and probably confirms a low breeding success. A decrease of 11 points is registered between 2008/09 and 2010/11.

An increase of the proportion of adults with an incomplete moult was noticed as in 2002/03. Among juveniles, an increase of birds with interrupted post-juvenile moult was also observed. This can be due to a delay in the breeding period or to feeding problems encountered (because of) due to drought.

Male/female ratio

In 2010/11, the proportion of Woodcock males in the CNB members hunting bags was 38 %. This value is exactly the same as in 2009/10 and shows a remarkable stability from one year to another.

Variations in weight

The mean weight of a woodcock shot in 2010/11 was 316 g (317 g in 2009/10). As usual, the weight of adults was slightly higher than that of juveniles (321 g *vs* 313 g). Adult females were the heaviest, 325 g in average. The mean weight of juvenile females and adult males was 314 g and 318 g, respectively. The mean weight of juvenile males reached 310 g. These are usual values.

Conclusion

The 2010/11 season was atypical, especially owing to the unusual proportion of juveniles and of birds with incomplete moult. The constant decrease of the age-ratio since 2008/09 has to be underlined. From a hunting point of view, 2010/11 was not so bad, with a high abundance in coastal regions but a very low one in eastern, southern and central regions. The impression of a bad season can be related to a delay of 3-4 weeks in the post-nuptial migration. When woodcocks finally arrived, many French regions were less suitable as migratory stopovers.

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We thank all volunteers who contributed to help us in the wing analysis and also the members of CNB scientific and technical commissions or report writers: J.C. Blanchard, P. Launay, , J.M. Desbieys, J.F. Cau, N. Lefeuvre, J.P. Lepetit and J.L. Cazenave.

2010-2011 French Snipes report

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Ringing results

The French Snipes ONCFS/FNC network gathers 104 active snipe ringers spread over 43 French *départements.* In total, 1 564 snipes were ringed in 2010 by the network: 1 419 common snipes (*Gallinago gallinago)* and 145 jack snipes (*Lymnocryptes minimus*). A great snipe (*Gallinago media*) was also ringed on 8 September 2010 in the Centre of France.

Plumage collection

In addition to ringing, an analysis of Common Snipe and Jack Snipe plumage (wing and/or tail feathers) collected during the hunting season is carried out every year to improve our knowledge on the fluctuations of the proportion of juveniles in the shooting bag and to get information on the phenology of migration.
In total, the plumages of 3 738 common snipes and 763 jack snipes were gathered in 2010/11 mainly by the CICB (International Club of Snipes Hunters) members and by the *Fédérations départementales des chasseurs* of *Cantal*, *Lozère* and *Gironde*. This collection is the lowest one of the last 4 years for both species. If catching effort did not vary and if the number of collected plumages is positively correlated with snipe abundance, this drop probably reflects lower snipe numbers in migration and wintering than in the previous seasons.

Common Snipe

Geographical distribution of analyzed plumage

As in the last years, data collected in 2010/11 were analysed after dividing the total sample into two parts corresponding to two flyways: a Fennoscandian one and a continental one (Rouxel, 2000; Figure 1). The sizes of each sample are similar: 1 937 plumages for the Fennoscandian flyway and 1 800 plumages for the continental flyway.

Temporal distribution of analyzed plumage

Under the same assumption as in the previous reports (i.e. the number of collected plumages (*ncp*) is positively correlated with real numbers), the post-nuptial migration started relatively early, at the beginning of September (Figure 2). Then the numbers stabilized during almost 2 months and a half, which can be linked to a continuous migratory flow with a more intense period from mid-October to mid-November. Even if the decrease is always marked from mid-December, wintering numbers are rather high compared with those in autumn. As in the previous year, one reason could be a concentration of birds in the coastal regions (Figure 3) because of cold snaps registered in the second half of December.
The course of migration and wintering was different from one flyway to another (Figure 3). In regions concerned by the Fennoscandian flyway, a constant presence of birds was observed all along migration period with small fluctuations in the first half of September and the last half of October. In December and January, numbers did not decrease much and the levels in the second half of January were similar to those of end-November. One explanation could be the desertion of birds from continental regions because of repeated cold snaps, as shown by data collected inland. In these regions, migration was more marked. After a rather fast start in September, migration was really active from the beginning of October to mid-November. Then numbers quickly collapsed from mid-November to remain at low levels till end-January.

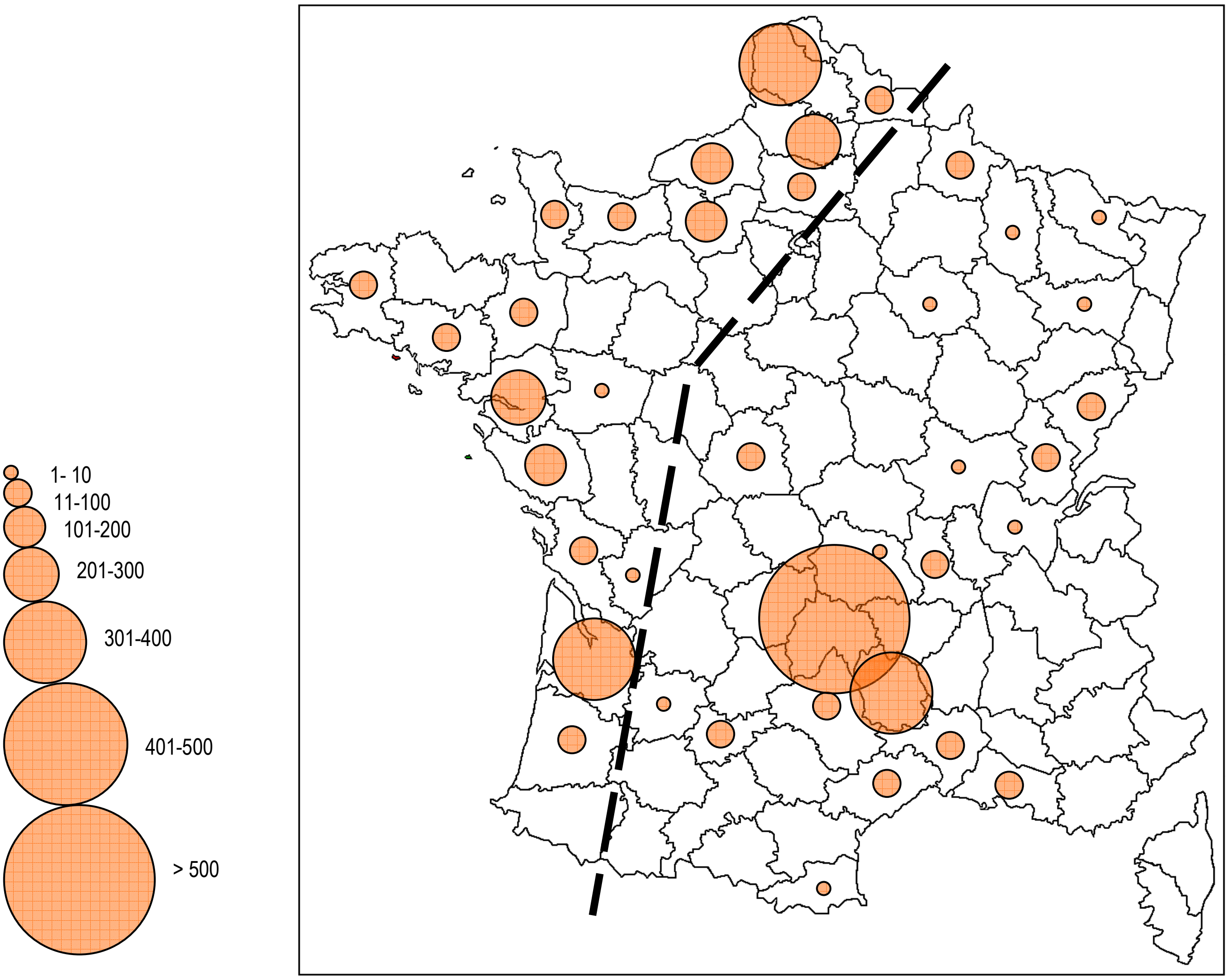

Figure 1: *Geographical distribution of numbers of common snipes whose plumage was collected in 2010/11 and limit between the two sub-samples corresponding to a distinct migratory flyway.*

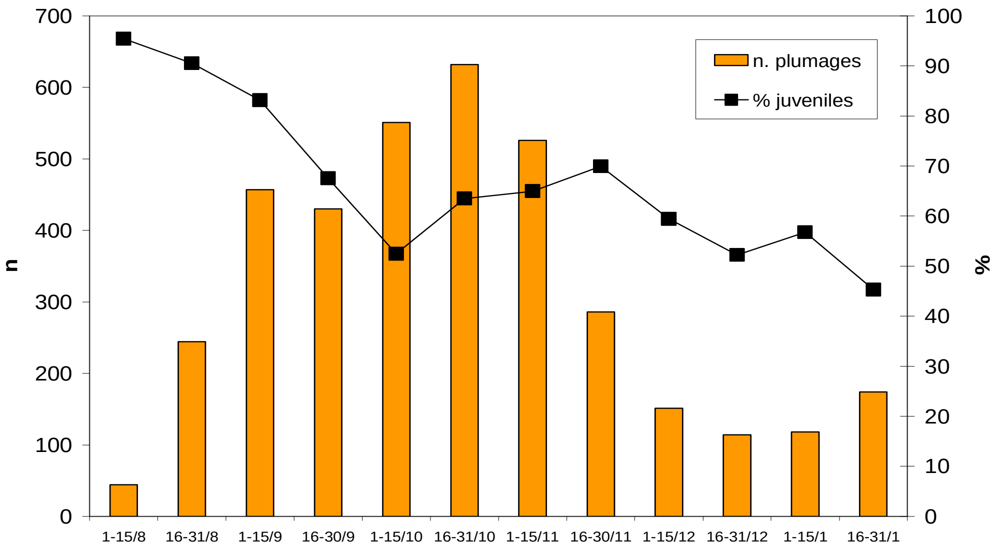

Figure 2: *Temporal distribution (per 15 day-period) of collected plumage and of the proportion of juveniles for the whole Common Snipe sample.*

The comparison of variations in the post-nuptial migration chronology of common snipes from one season to another shows the pattern of the 2010/11 autumn-winter (Figure 4). The peak in the second half of October which was more marked than in the previous seasons and the relative weakness of numbers at the end of September indicate a one month delay in migration. This pattern is similar to that of 2007/08.

Proportion of juveniles

For the whole collected plumages (3 648), the proportion of juveniles amounts to 66.1 % (age-ratio = 1.9). If we do not take August into account (as recommended by Devort, 1997), the proportion of juveniles is 63.9 %. These values are among the lowest registered since 1986/87 (no data from 1999/00 to 2003/04); Figure 5). Only the 1995/96 and 2005/06 values are below for all data (65.4% and 62.6%, resp.) and 1988/99 and 2005/06 values for data without August (62.4% and 60.7%, resp.).

Juveniles represent 64.0 % of birds in the Fennoscandian flyway (n = 1 894) and 68.3% % in the continental flyway (n = 1 754). The difference is statistically significant for the whole data set [Fisher exact test (p = 0.007)] (and suggests that a low reproductive success has impacted the Fennoscandian flyway more than the continental one. Without August data, the difference is still clearer [Fisher exact test (p < 0.0001)].

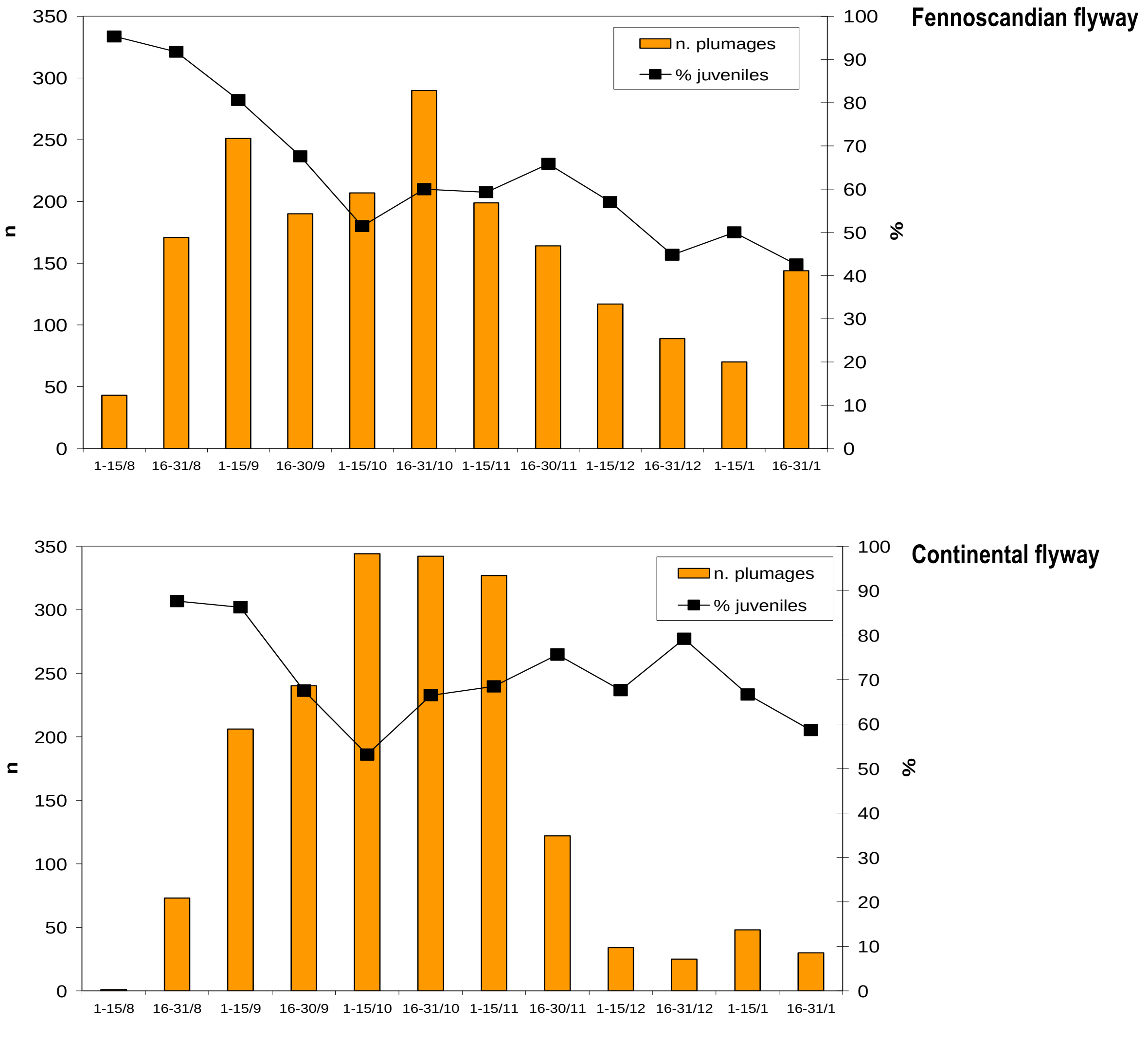

Figure 3: *Temporal distribution (per 15 day-period) of collected plumage and of the proportion of juveniles for Common Snipe in each flyway.*

As usual, a significant decrease in the proportion of juveniles was observed from August to January [Cochran-Armitage test (p<0.0001)]. The two flyways follow the same pattern with a significant constant decrease, however more pronounced for the Fennoscandian flyway.

The low 2010/11 age-ratio value appears when intra-seasonal variations of the proportion of juveniles in the 5 last seasons are compared (Figure 6). The 2010/11 values are clearly below those of the 4 other seasons. Curiously, the 2010/11 pattern is close to that of 2006/07 with no satisfactory explanation. Once August is ended, in the course of which almost all observed birds are juveniles, age-ratio variations show a great heterogeneity from one season to another.

The proportion of juveniles in 2010/11 appears 7.8 points below the average of the 1986/87 – 2009/10 period. Consequently, a low breeding success in spring-summer 2010 seems likely, especially in Fennoscandia.

Proportion of males/females

Sex was defined for 1 111 adult birds and the proportion of males was 32.3 %. If we take into account all birds (juveniles + adults) for which sex determination was possible (n = 3,230), the proportion of males reached 37.2 %. Again, a high deficit in males appeared in 2010/11.

No difference was observed among flyways according to whether or not juveniles were taken into account (Fisher exact test; p = 0.126 and 0.652, resp.).

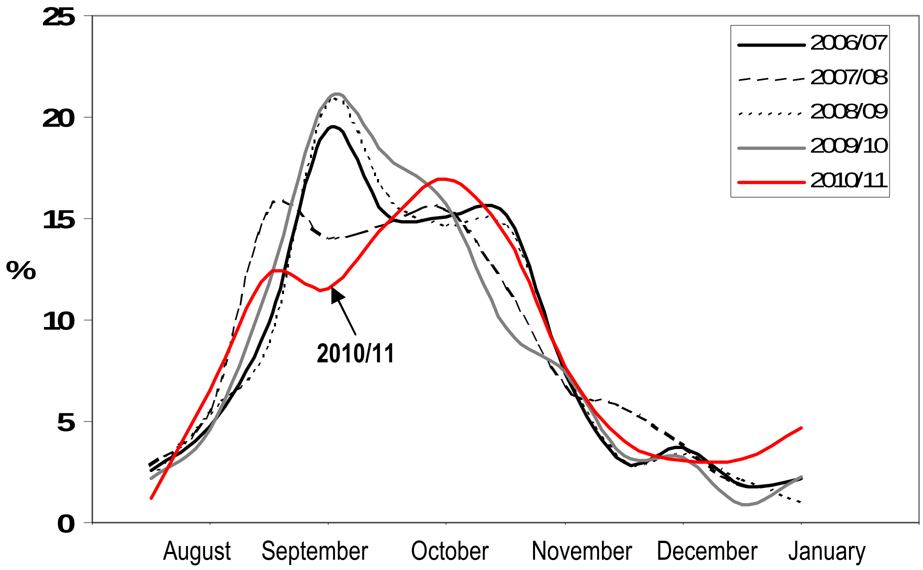

Figure 4: *Intra-annual variations of the proportion of Common Snipe plumages collected in 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11.*

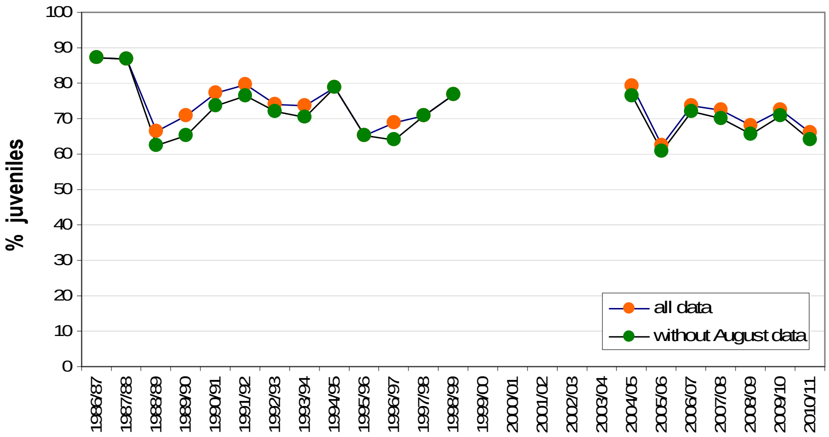

Figure 5: *Inter-annual variations of the proportion of juveniles among Common Snipe plumages collected in the 1986/87 - 2010/11 period for all data and for a sub-sample without August data (No collection in the 1999/00 - 2003/04 period).*

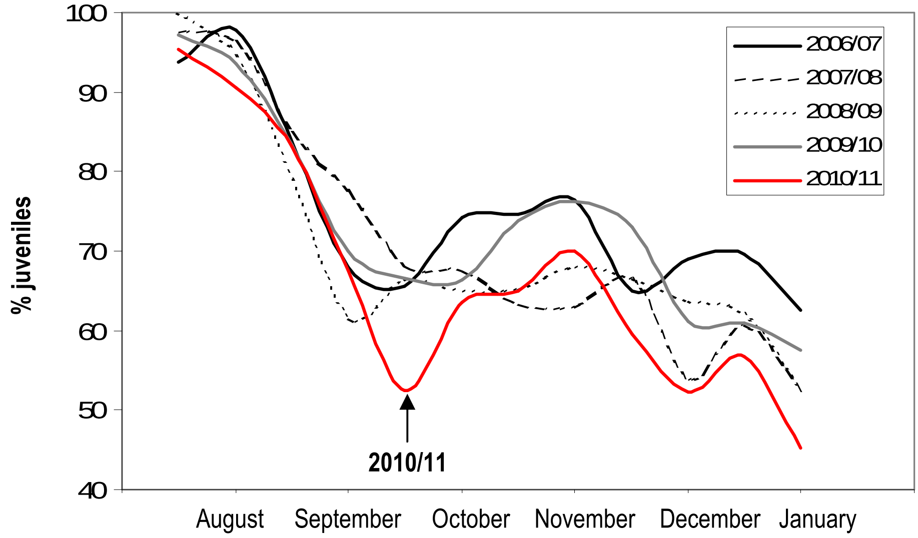

Figure 6: *Intra-annual variations of the proportion of juveniles for the Common Snipe in 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11.*

Jack Snipe

Geographical distribution of analysed plumage

In 2010/11, 32 *départements* participated in the Jack Snipe plumage collection (Figure 7). As for every season, we defined a "coastal flyway" and an "inland flyway". Two remarks have to be made: on the one hand, the difference between sample sizes in each flyway is more important than usual (422 plumages for the "coastal flyway" and 341 for the "inland flyway") and, on the other hand, the "coastal" sample size is larger than the "inland" one contrary to previous seasons.

Temporal distribution of analysed plumage

Under the same assumptions as for Common Snipe data analysis, the pattern of 2009 migration was slightly different from that of the previous seasons: the peak in the second half of October was present but arrival of birds clearly started earlier than usual, i.e. at the beginning of October. The constant decrease till end-December was similar to the usual pattern (Figure 8).
The relative early migration in autumn 2010 only concerned the "coastal" flyway (Figure 9) characterized by a quick arrival of jack snipes in the first half-October. By contrast, the "inland" flyway showed a standard pattern for this species with a peak around the end of October. The weather conditions observed in September in arctic and sub-arctic regions do not explain the early arrival of birds*. A presentation of variations in Jack Snipe post-nuptial migration chronology shows that the 2010/11 season differs from the 4 previous ones (Figure 10). The regularity in the timing of the migration peak is slightly modified. However, a well-marked single migration peak is always the rule even if the 2010/11 is slightly time-spread.

Proportion of juveniles

Age determination in Jack Snipe can be made by examination of tail feathers (Devort *et al.*, submitted). In 2010/11, the proportion of juveniles amounted to 60.8 %. This value is similar to those of the 2 previous seasons (60.9% and 60.2 %, resp.; Figure 11) and probably means again a low breeding success in spring 2010.
The proportion of juveniles was 63.1 % for the "coastal flyway" and 57.9 % for the "inland flyway". The difference is not significant [Fisher exact test (p = 0.182)]. The temporal distribution of the proportion of juveniles along the season shows high inter-seasonal variations but no special trend can be found [Cochran-Armitage test (p = 0.972); Figure 12)].
Disparity in intra-seasonal variations of the proportion of juveniles for the 5 last seasons is further reinforced by the 2010/11 data (Figure 12). The almost cyclical age-ratio variations in 2010/11 establish a new pattern which confirms the probable random nature of this variable in migrating and wintering jack snipes.

*Source: *http//www.cdc.noaa.gov/Composites/Day/index.html*

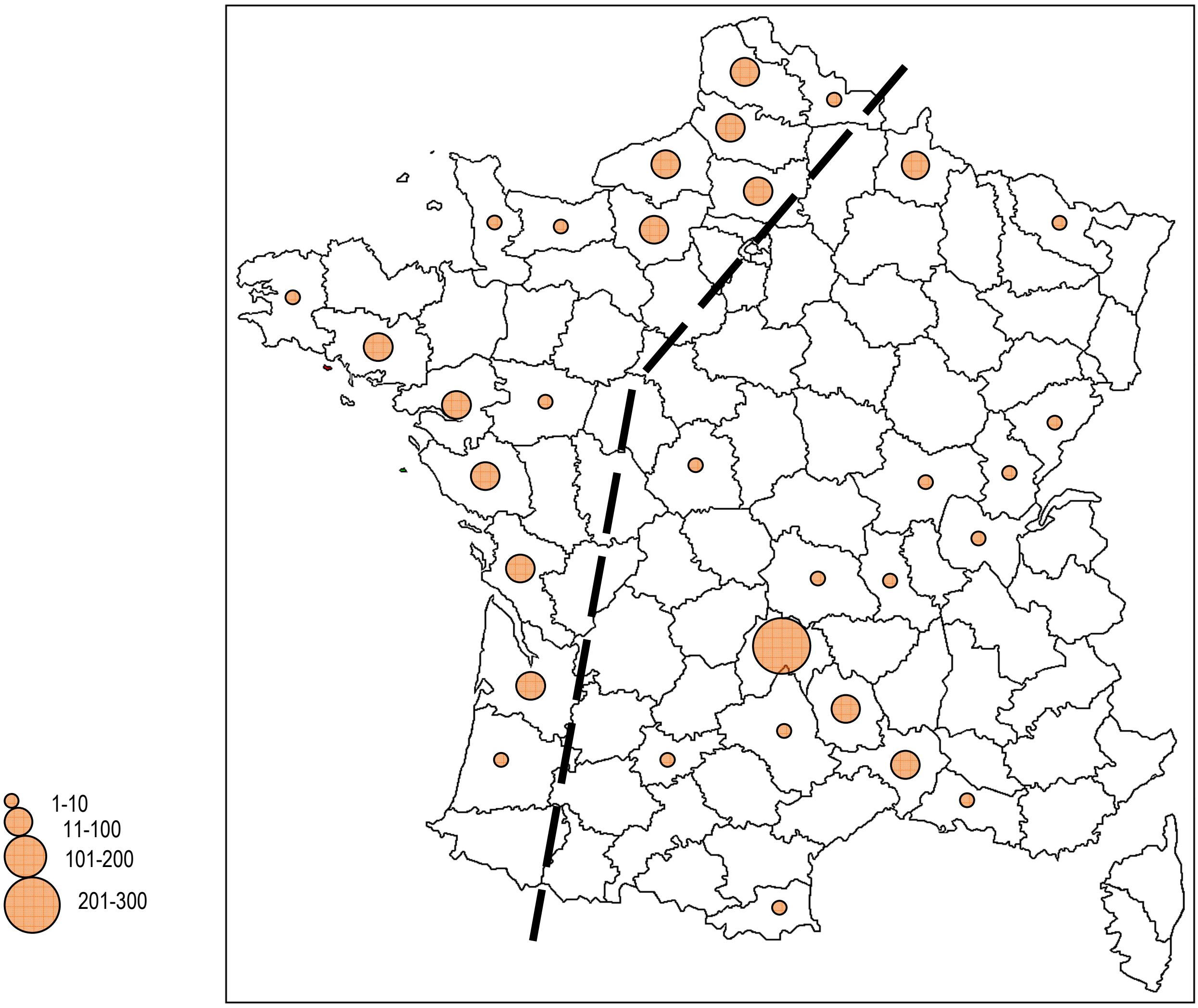

Figure 7: *Geographical distribution of numbers of jack snipes whose plumage was collected in 2010/11 and limit between the two sub-samples.*

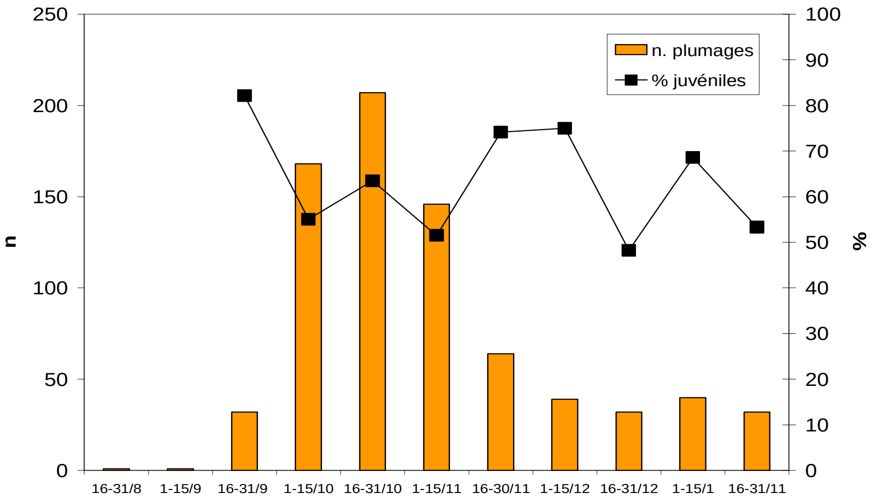

Figure 8: *Temporal distribution (per 15 day-period) of collected plumage and of the proportion of juveniles for the whole Jack Snipe sample.*

Proportion of males/females

According to criteria used in the past year (wing length < 115 mm = female; wing length > 117 mm = male; correction of 1.7 mm because of wing drying), the proportion of males in the whole sample raised to 37.7 %. As for Common Snipe, unbalance in favour of females seems to be confirmed. The difference between flyways was again marked (34.5 % for the “coastal flyway” and 42.2 % for the “inland flyway”) but not significant [Fisher exact test (p = 0.0593)].

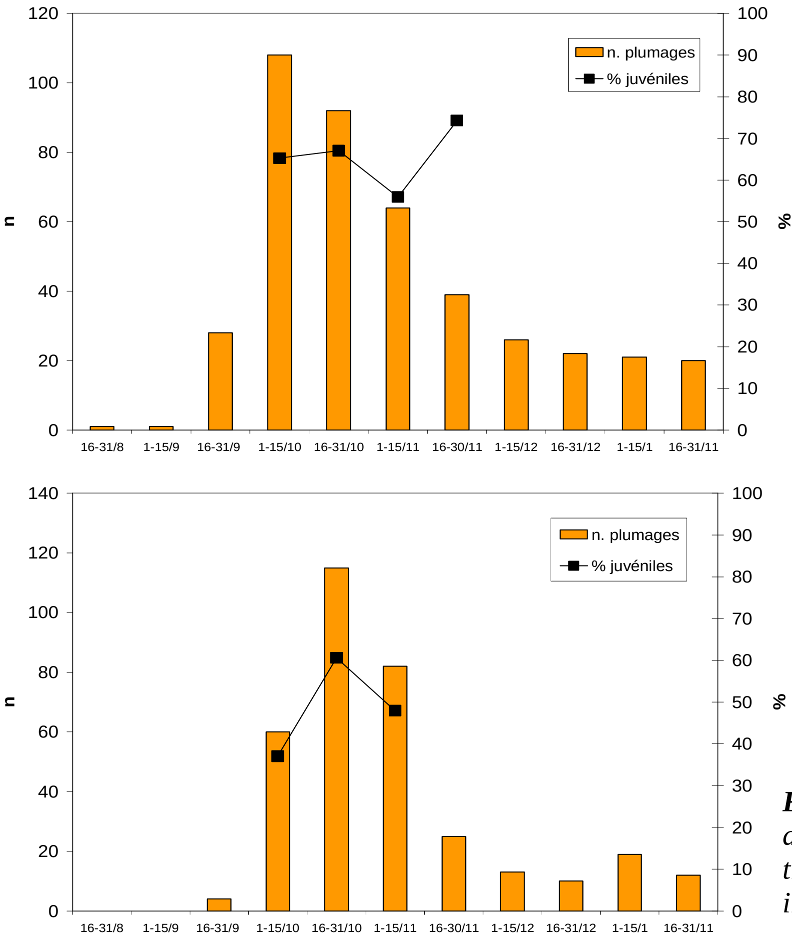

Figure 9: *Temporal distribution (per 15 day-period) of collected plumage and of the proportion of juveniles for Jack Snipe in each “flyway” (for n ≥ 30).*

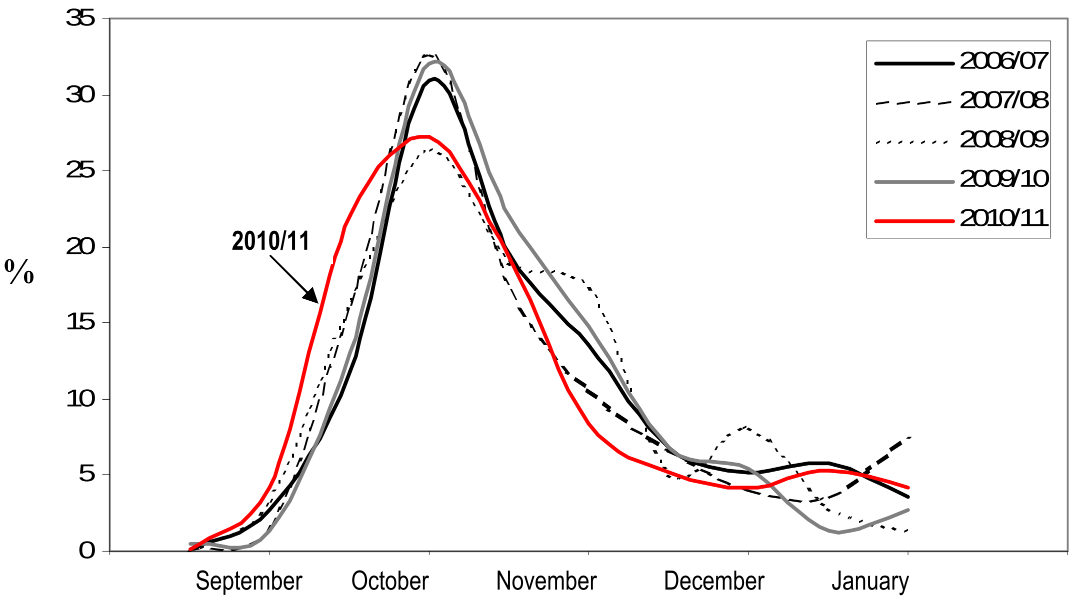

Figure 10: *Intra-annual variations of the proportion of Jack Snipe plumages collected in 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11.*

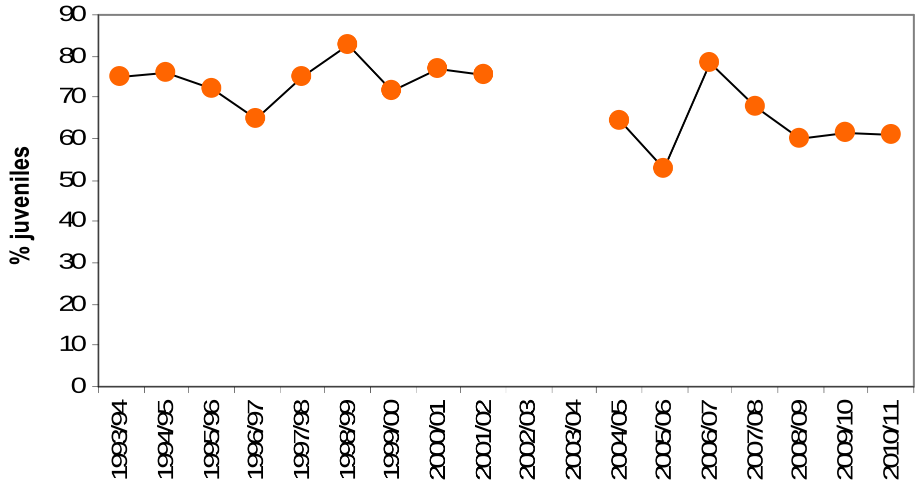

Figure 11: *Inter-annual variations of the proportion of juveniles in Jack Snipe plumages collected during the 1993/94 - 2010/11 period (No collection in 2002/03 and 2003/04).*

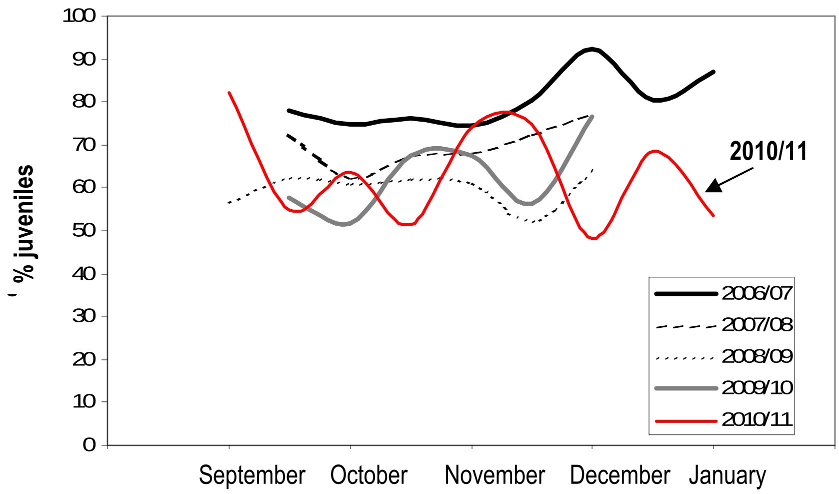

Figure 12: *Intra-annual variations of the proportion of juveniles for the Jack Snipe in 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11.*

Monitoring of hunting bags

In the absence of reliable abundance indices, the inter-annual evolution of hunting bags in reference territories is one of the tools for estimating the demographic trend for Common Snipe and Jack Snipe migrating and wintering in France. The assumption is always the same: hunting bags are directly positively correlated with numbers in the field.

The *Club international des chasseurs de bécassines* (CICB) has a network of 27 hunting territories mainly located in the north-west of France and where data are collected without interruption since the 2000/01 season. Details of annual hunting bags are shown in Table 1. The annual mean total hunting bag in the 27 sites is about 4,500 common snipes and 1,020 jack snipes.

The 2010/11 season is characterized by low bags level. These are the lowest registered since 2000/01, both for Common Snipe and Jack Snipe. The mean bag per site was 131.3 and 26.6, respectively (Figure 13). The 2010/11 season prolongs, and emphasizes the bad series observed since 2006/07.

During the last 11 seasons, 2 periods seem to appear for Common Snipe: a relatively constant bag increase till 2005/06 followed by a marked decrease accentuated by the 2010/11 season. For the whole study period, the decrease trend is close to being statistically significant (Page test; $p = 0.064$).

A similar pattern is observed for Jack Snipe but the decrease started early, in 2003/04. Confirmation of this trend in 2010/11 leads to a significant bag decrease for this species since 2000/01 (Page test; $p < 0.01$).

Season	*Common Snipe*	*Jack Snipe*	Total
2000/01	4,003	738	4,741
2001/02	3,783	1,324	5,107
2002/03	4,373	1,036	5,409
2003/04	5,309	1,431	6,740
2004/05	5,718	1,220	6,938
2005/06	5,578	1,283	6,861
2006/07	4,090	953	5,043
2007/08	4,575	865	5,440
2008/09	4,311	855	5,166
2009/10	4,200	807	5,007
2010/11	3,546	719	1,265
Mean and total	4,498.7	1,021.0	60,717

Table 1: *Details of hunting bags per season for 27 reference sites.*

As usual, the Common Snipe/Jack Snipe ratio is always remarkably constant (Figure 14). In 2010/11, the Common Snipe represents 83.1 % of the total Snipe hunting bag. Average for the 2000/01 – 2010/11 period is 81.6 % (74.1 % - 84.4 %).

Analysis of bag data collected in the 27 reference territories does not prompt us to be optimistic. A decrease trend is observed for Jack Snipe and is almost proved for Common Snipe. Of course, bias exists in our measurement tool: variations in catching effort, habitat changes in reference sites, more or less suitable water levels during migration, weather conditions that disrupt migration,…..However, this decrease of Snipe numbers observed in reference territories requires our attention.

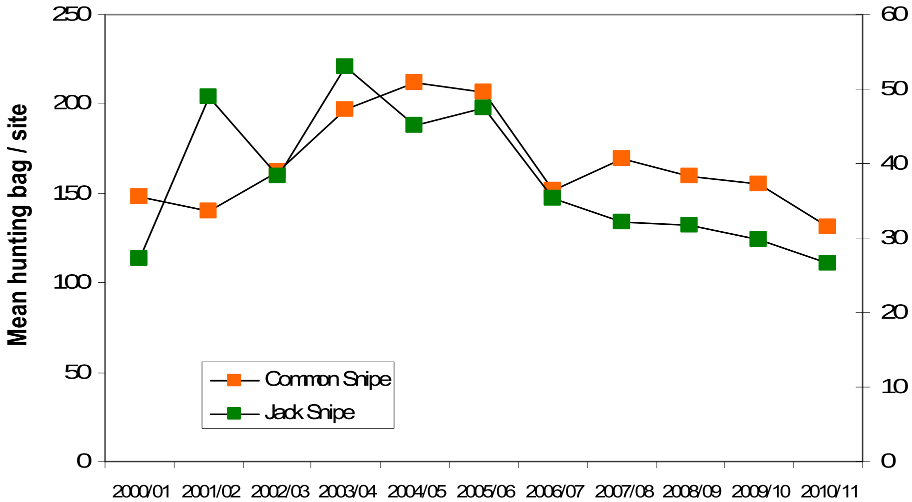

Figure 13: *Average of Common Snipe and Jack Snipe hunting bags for a reference site for the 2000/01 - 2010/11 period.*

Figure 14: *Proportion of Common Snipes in the total Snipe hunting bag (Common Snipe + Jack Snipe) collected on 27 reference sites from 2000/01 to 2010/11.*

Conclusion

The main point of the 2010/11 season is certainly the relative weakness of Common Snipe and Jack Snipe wintering and migrating numbers. From a hydrological point of view, 2010/11 did not present a marked deficiency and we can think that the distribution of birds was more homogeneous than in the previous season. However, cold snaps in December and heavy snow falls in December-January likely disturbed bird behaviour and hunting activity. The effect was probably significant. Finally, the proportions of juveniles suggest a rather low, but not catastrophic, breeding success in spring-summer 2010. These results must lead us to be vigilant about the demographic situation of these 2 Snipe species. Now, the question is whether the decrease trends will be confirmed in the coming years or whether we have reached the "trough of wave".

Acknowledgements

This report is the result of an important field work carried out by members of the CICB and by the ONCFS/FNC Snipes network. We thank all of them: volunteers, *Fédérations départementales des chasseurs* and professionals of ONCFS.

References

Devort M. 1997. La Bécassine des marais. Eléments pour un plan d'action. CICB & OMPO, Paris & Confluences, Bordeaux, France ; 103 p.

Rouxel,R. 2000. Les bécassines du paléarctique occidental. Publ. OMPO. Ed. Eveil Nature, Saint-Yriex-sur-Charente, France. 304 p.

Every year, Common Snipe and Jack Snipe plumages collected by the CICB are analysed by confirmed Snipe ringers during a 2-3 days session.

Notes on breeding snipe on São Jorge Is. (Azores, Portugal)

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Latitude and sedentarism are known to affect the breeding biology of bird species. In the northern hemisphere, southern and/or sedentary populations of a partial migratory species tend to breed earlier. Sedentary populations might also have longer breeding seasons.
Despite the wide distribution of the common snipe (*Gallinago gallinago*), its breeding phenology is only well described for the British Isles (50-60ºN, 10ºW-2ºE). There, the nesting season spans from early March to early August, with a peak of first egg date in late April (Mason & Macdonald, 1976), and predation and trampling by cattle are the major causes of nest losses (Mason & Macdonald, 1976; Green, 1988).
The Azores (36-39ºN, 25-31ºW) harbors the most southern breeding population of common snipe (Figure 1). Currently, the species is known to breed on the majority of the nine islands of the archipelago; the exceptions are Graciosa and Santa Maria Is. (Equipa Atlas, 2008). The last assessment estimates were between 378 and 418 breeding pairs in the archipelago (Equipa Atlas, 2008), almost half of them on São Jorge Is. (180 to 193 pairs) which makes this island one of the best places for studying the breeding biology of the species in this insular region.

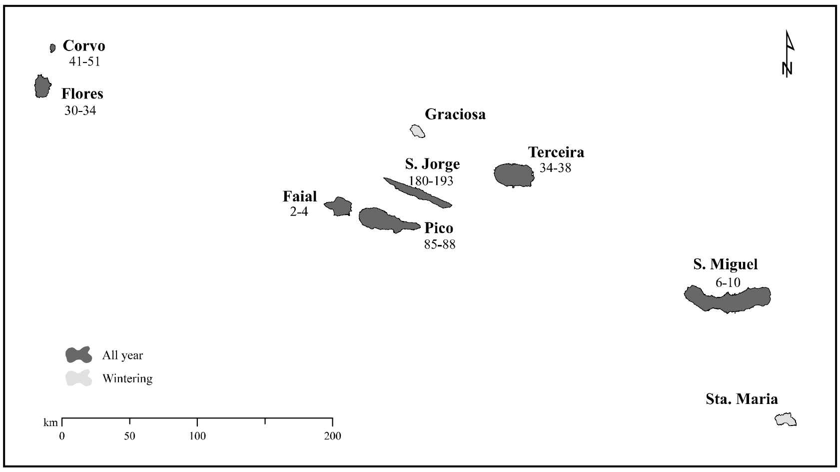

***Figure 1:** Distribution of the common snipe in the Azores. Estimated number of breeding pairs under the name of each island (adapted from Equipa Atlas, 2008).*

In this work, we present preliminary results of the characterization of the breeding biology of the common snipe on São Jorge Is. (Azores, Portugal). Due to its southern location, we expect the timing of breeding events to occur earlier than that described for northern populations. In the Azores, the land is used mainly for cattle grazing and several predators are known to cause nest losses in other ground breeding bird species, therefore the impact of these factors in the snipe breeding population needs to be evaluated. In this work, we describe some parameters related to the breeding success of the species on São Jorge Is.

Methods

São Jorge Is. (38º24'N, 28º33'W) is located in the central group of the Azorean archipelago (Figure 1). Roughly, the island is a plateau with an average altitude of 700 m and very steep cliffs towards the ocean. The highest point is Pico da Esperança at 1052 m. The 246 km^2 of its surface area are mainly covered by pastures (45.97%), non-indigenous forest (26.37%), and endemic vegetation (14.71%) (Cruz, da Câmara Pereira *et al.* 2007).

Between February and August 2011, a nest/brood survey was conducted on the island. The areas where the occurrence of the common snipe was locally known, as well as other areas with suitable habitat for the species, were visited at least once a month. During each visit, an observer prospected exhaustively the area, crossing several times the terrain on foot. The geographic location of each nest and brood was recorded with a GPS navigator.

Nests were classified as 'laying', 'incubating', 'hatched', or 'predated', and the total number of eggs was recorded. The incubating nests and those found during the laying period were monitored till the end of incubation. After hatching, the number of unhatched eggs and the occurrence of dead chicks in the nests were recorded. The laying dates of the first eggs (first egg dates) were estimated from the hatching dates, considering an egg laying-rate of one egg/day and 19 days of incubation (pers. obs.).

When their hatching date was unknown, chicks found during the survey were aged according to Tuck (1972), and the first egg dates were estimated considering the same parameters used for a 4-egg clutch.

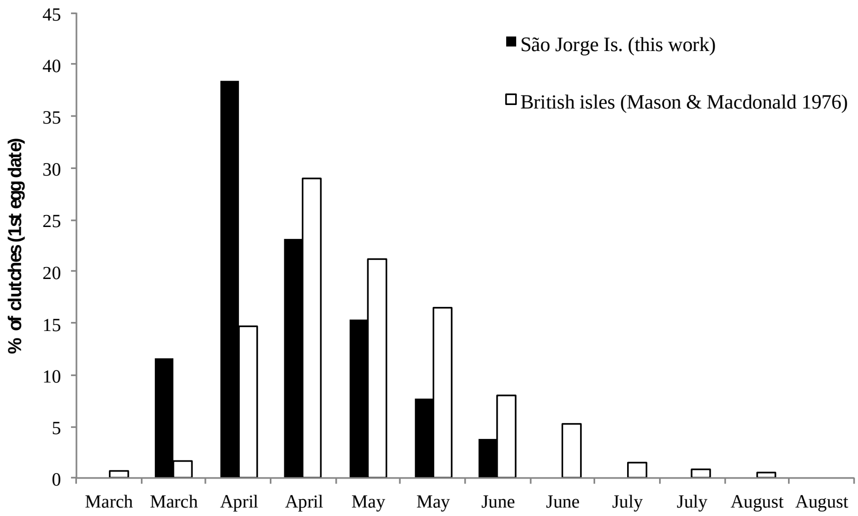

Figure 2: *Fortnightly distribution of snipe clutch frequency (first egg date) on São Jorge (n=26, 2011, this work) and in the British Isles (n=582, 1939-1971, Mason & Macdonald, 1976).*

Results and discussion

Breeding phenology

In February 2011, when we started the fieldwork, the common snipes were already displaying (chipper-calls and drumming flights). However, the first nests were only discovered on early April. A total of 22 nests and 4 broods were found during the field season. Considering that none was a replacement clutch, the corresponding breeders represent between 13.5 and 14.4 % of the local breeding population according to the last assessment (Equipa Atlas, 2008). According to the estimates of first egg dates for the 26 clutches (Figure 2), the nesting season extended from the second fortnight of March to June. The fortnight distribution of first egg dates peaked in early April. By the end of April, 73.1 % of the clutches had already been started.

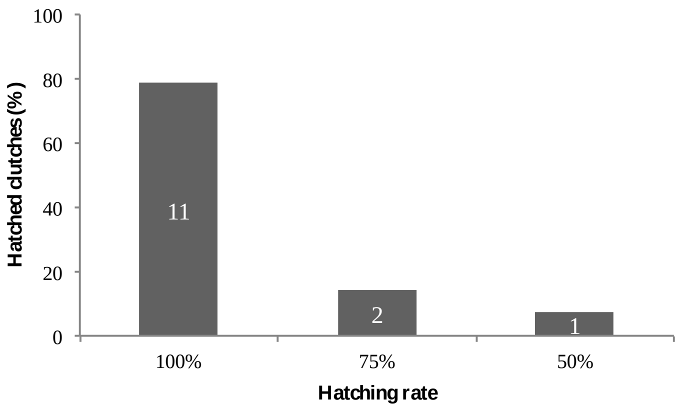

***Figure 3:** Distribution of hatched nests per classes of hatching rate (n inside columns).*

The first clutches were started relatively late, considering the early displaying activity. However, most of them initiated till the end of April. For the northern populations of the British Isles (Mason and Macdonald,1976), the peak of first egg dates occurred during the second fortnight of April, and by that time only 46.0 % had been started since the beginning of the nesting season in early March. These results suggest a shift of 15 days for the first egg dates in the Azores, and corroborate our hypothesis of breeding events occurring earlier in the archipelago. The duration of the nesting season, however, was surprisingly short given that in the British Isles nests are found till early August (Mason and Macdonald, 1976).

Breeding success

We were able to monitor 19 nests (of the 22 discovered) till the end of incubation. Of these, 26.3 % (*n*=6) did not survive to hatching. The cause of nest failure were desertion (*n*=3), nest predation (*n*=1) and cattle trampling (*n*=1).

In the 3 cases of desertion we did not find signs of predation of the incubating bird, in or near the nest, however we cannot exclude this hypothesis.

In a study performed on a common snipe breeding population in the United Kingdom (Green, 1988), 60% of the nest losses were attributed to predation. In the present study, only one nest showed evidences of predation. The abundance of potential nest predators on São Jorge Is. is unknown, but they are known to be the cause of high nest losses on other Azorean islands for several ground breeding bird species (Neves, Panagiotakopoulos *et al*., 2011). Among potential nest predators present on São Jorge are cats, rats, starlings, gulls, buzzards, short-eared owls, and herons.

Despite the constant presence of grazing cattle, only one nest was trampled. This represents 20% among nest losses, a similar result to that observed in the United Kingdom (Green, 1988).

The 14 clutches that survived to hatching comprised 4 eggs. The mean number (± SD) of eggs hatched per clutch was 3.71 ± 0.61. In 78.6 % of the hatched clutches, the four eggs hatched completely, only for 3 nests was the hatching rate below 100% (Figure 3). Despite the overall high hatching rate, in 4 nests one hatchling, with the yolk totally absorbed, was found dead.

References

Cruz, J. V., R. M. da Câmara Pereira, *et al.* 2007. Carta de Ocupação do Solo da Região Autónoma dos Açores. Ponta Delgada, Secretaria Regional do Ambiente e do Mar: 54.

Equipa Atlas. 2008. Atlas das Aves Nidificantes em Portugal (1999-2005). Lisboa, Assírio & Alvim.

Green, R. E. 1988. Effects of environmental factors on the timing and success of breeding of common snipe *Gallinago gallinago* (Aves: Scolopacidae). . Journal of Applied Ecology 25: 79-93.

Mason, C. F. & S. M. Macdonald. 1976. Aspects of the breeding biology of the Snipe. Bird Study 23(1): 33-38.

Neves, V., Panagiotakopoulos S. *et al.* 2011. Predation on roseate tern eggs by European starlings in the Azores. Arquipelago Life and Marine Sciences 28: 14-23.

Tuck L. M. 1972. The Snipes: a study of the genus *Capella*. Ottawa, Canadian Wildlife Service.

2010/11 Woodcock hunting season in mainland Portugal

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This report presents the results gathered by the "National Association of Woodcock's Hunters" (ANCG) for the 2010/2011 Woodcock (*Scolopax rusticola*) hunting season in mainland Portugal. Similarly to what happened in previous hunting seasons, hunting was allowed from 01/11/2010 until 13/02/2011, on Sundays, Thursdays and national holidays, with a bag limit of three birds/hunter/day. For comparison, some results obtained in the 2009/2010 hunting season (the first with similar information available) will be also presented.

Hunting trips

We received a total of 273 hunting trip reports, performed by 15 different hunters in 12 districts (Figure 1; Table 1). Although, overall, these values represent an important increase when compared with those from the previous hunting season, for most of the districts the number of reports is still small. The districts best represented were Viana do Castelo (n=130) and Évora (n=81), followed by Vila Real (n=23). The mean (± SE) hunting trip duration was 3.6 h ± 0.07 h (n=271).

	ICA				
	Mean	Median	Minimum	Maximum	SE
2009/2010 (n=71)	1,30	1,00	0,00	5,83	0,15
2010/2011 (n=273)	1,09	0,88	0,00	7,00	0,07

Table 1: *Hunting index of abundance (ICA = woodcocks seen / hunter / hunting trip) in 2009/2010 and 2010/2011 hunting seasons (n = number of hunting trips analysed).*

Figure 1: *Distribution of the number of Woodcock hunting trip reports obtained from some of the mainland Portugal districts (in grey), during the 2010/11 hunting season.*

The frequency distribution of hunting trips according to the number of hunters per hunting trip (Figure 2) was not similar between 2009/2010 and 2010/2011. The latest showed similar percentages between hunting trips with one hunter and hunting trips with two hunters. The frequency distribution of hunting trips according to the number of dogs used per hunter and hunting trip was similar between hunting seasons (Figure 3): in the majority of hunting trips, hunters used more than one dog (maximum two) per hunter.

The hunting index of abundance (ICA) corresponds to the number of different woodcocks seen, per hunter, during a standard hunting trip of 3.5 hours. The ICA mean value (± SE) for the 2010/2011 season was 1.09 ± 0.07, which is not statistically different (U=8524; p=0.13) from that obtained in 2009/2010 (1.30 ± 0.15; Table 1). Figure 4 shows the variation in the ICA value by decade along the 2010/2011 season; after a slight increase between the second and third decade of November, the abundance experienced a sharp increase in the first decade of December, probably due to the occurrence of higher migratory numbers; the level of abundance subsequently declined, but remained stable until the end of the hunting season. In the second decade of February, the high value of the standard error reflects a considerable variation in the outcome of journeys made then.

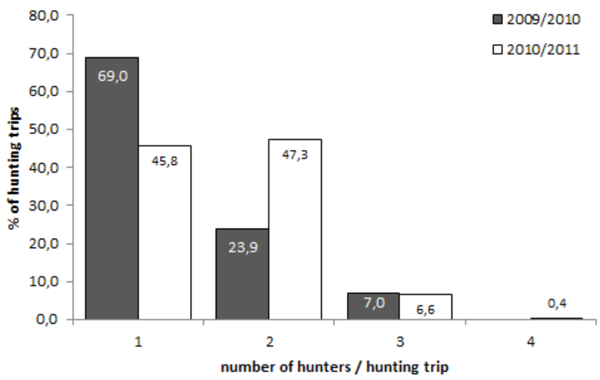

Figure 2: Frequency distribution of hunting trips according to the number of hunters participating, for both hunting seasons.

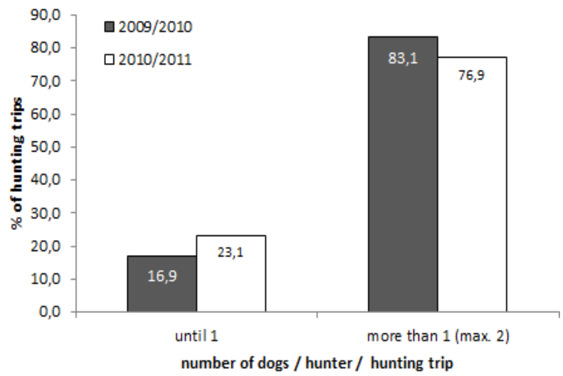

***Figure 3**: Frequency distribution of hunting trips according to the number of dogs used per hunter and hunting trip, for both hunting seasons.*

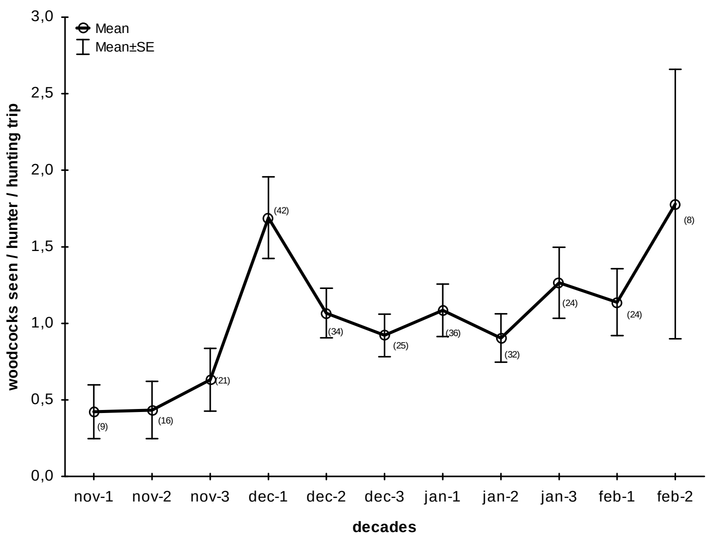

***Figure 4:** Decade variation in the hunting index of abundance (ICA - number of different woodcock seen, per hunter, during a hunting trip) in mainland Portugal for the 2010/11 hunting season. Number of hunting trips between parentheses.*

Wing collection

A total of 195 wings were analysed, collected in 13 districts (Figure 5) by 16 different hunters. The age class [young (< 1 year old) or adult (> 1 year old)] was determined by wing examination, according to Ferrand & Gossmann (2009)*. The sex was determined by gonad examination for 95 birds and 168 birds were weighted (Table 2).
The percentage of young birds was 53.85% (53.33% in 2009/2010) and the percentage of males was 48.42% (48.28% in 2009/2010).
The mean weight of a woodcock in the 2010/11 season was 300.4g; the corresponding values for females and males were 311.0g and 304.2g, respectively (Table 3).

Discussion

The 2010/2011 results seem to confirm that the majority of the Portuguese Woodcock hunters prefer to hunt with more than one dog per hunter. Concerning the number of hunters per hunting trip, the result is different from that observed in the previous season, pointing to a similar percentage of cases of one hunter and two hunters per hunting season. Given the larger sample size gathered in 2010/2011, this result is probably a more reliable characterization of reality.
The percentage of young birds (around 53%) was not different from the previous season. The same was observed for the percentage of males (around 48%).
The global ICA mean value, 1.09 woodcock seen/hunter/hunting trip, though not statistically different from that estimated for the previous season (1.30), seems to confirm that the abundance tended to be lower during the 2010/2011 season. The sharp increase in the ICA value in the first decade of December was probably due to the most important migratory event during the 2010/2011 season.
The contribution of a higher number of hunters is still needed. We will continue our efforts to stimulate and instruct more hunters to participate.

Acknowledgements
We would like to thank to all the hunters who provided information.

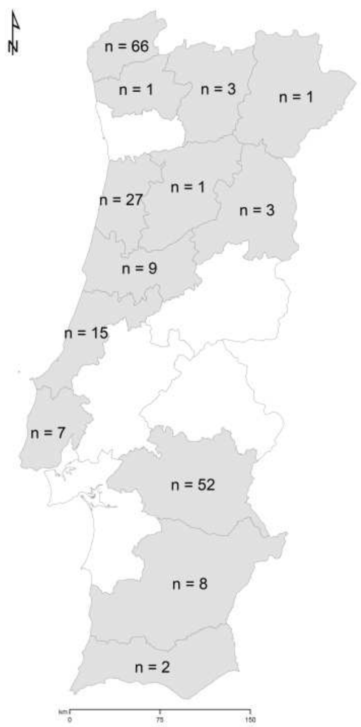

Figure 5: *Distribution of the number of Woodcock wings collected in some Portuguese districts (in grey) during the 2010/11 hunting season.*

		Age		
		Adults	Young	Total
Sex	Females	29	20	49
	Males	22	24	46
	Indeterminate	39	61	100
	Total	90	105	195

Table 2: *Frequencies of age and sex classes among the bagged woodcocks, analysed in the 2010/11 hunting season in mainland Portugal.*

		Weight (g)				
	n	Mean	Median	Minimum	Maximum	SE
All birds	168	300.4	300.0	240.0	390.0	2.1
Females	47	311.0	305.0	255.0	375.0	4.0
Males	45	304.2	300.0	260.0	390.0	4.5

Table 3: *Weight of woodcocks bagged in the 2010/11 hunting season in mainland Portugal.*

***Ferrand, Y. & Gossmann, F. 2009**. Ageing and sexing series 5: Ageing and sexing the Eurasian Woodcock *Scolopax rusticola*. Wader Study Group Bull. 116(2):75-79.

Woodock ringing in Vormsi Island (Estonia) in 2010 and 2011

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Following an agreement between the Estonian Ringing Center (Karel Kaisel) and *Il Comitato per il Santuario della Beccaccia Isola di Vormsi (Estonia)-ONLUS (*Marco Panzacchi), field works were carried out in October 2010 in Vormsi Island. From 2005 to 2009, meadows suitable for ringing were located. Ringing operations were organized in 6 of them from 22 to 28 October 2010 and from 20 to 27 October 2011on a 273 ha area. In 2010, weather conditions were variable from one day to another but, in 2011, warm weather stopped migration. In 2010, 22 woodcocks were captured with a handnet and spotlight from 71 contacts (success rate: 31 %). Birds were aged, weighed and measured. Mean nocturnal abundance index (IAN) raised to 2.57 (0.5 – 3.5). The proportion of juveniles was 59 %. This low value was probably due to drought during the breeding period. Several birds were very fatty and mean weight for all birds was 397.3 g (340 – 480). Twelve woodcocks weighed more than 400 g. Mean weight for juveniles was 384.6 g and for adults 415.5 g. Two ringed birds were recovered: one in *Pas-de-Calais* (France) on 6 December 2010, one in Northamptonshire (UK) on 28 January 2011.In 2011, 15 woodcocks were ringed. The proportion of juveniles was 46.6 % (all from early broods). This low value seems to us abnormal. The mean weight was 357 g (320 – 400) which is lower than in 2010. Birds were also less fatty. Mean weight for juveniles was 353.6 g and for adults 360.0 g.

Both in 2010 and 2011, censuses were carried out during daytime in surrounding forests.

We wish to acknowledge our Estonian partners Karel Kaisel and Jaanus Aua, without forgetting our co-field workers.

"Scolopax Overland" project

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"Amici di Scolopax" is an association founded in 2001 which aims to study habits of Woodcock (*Scolopax rusticola*) with special reference to migration. The new "Scolopax Overland" project completes those already in progress (ALIregALI Project, TempoReale Project , WORM Project). The objective is to provide additional information on Woodcock migration by a satellite monitoring. The project partners are: University of Padua - Veneto Agriculture (Company of the Veneto Region) and the Office Migratory Birds (Italian Federation of Hunting). This initiative is shared with members of the Spanish *Club de Cazadores de Becada.*

Captures were carried out at night in March 2011 with the aid of a halogen headlight and a net mounted on a telescopic rod. Biometric data were registered for every woodcock. Birds were fitted with a 9.5 g solar-powered PTT satellite transmitter. Two woodcocks were equipped in the Campania region (southern Italy) but, unfortunately, have already stopped the signal emissions during the pre-nuptial migration. A third woodcock was equipped on 17 March in the vicinity of the city of Galzignano Terme (PD) in the Veneto region. Migration departure occurred on 4 April to the north-east. In the following 20 days, this bird travelled about 1400 km crossing Slovenia, Austria, Slovakia and Poland, before arriving in Belarus on 24 April. From 28 April, satellite signals were regularity received from an area of about 3 km-radius considered as its breeding site. This woodcock is now (24 November 2011) travelling to its wintering site. It left Belarus on 13 November and signals were received on 15 November from the Czech Republic, which proved that it travelled approximately 600 km in 2 days.

In 2012, 5 to 8 woodcocks are planned to be equipped with a PTT satellite transmitter. Captures will be distributed in Lombardy and Veneto, in Lazio-Umbria and in Campania.

Recent Woodcock and Snipe publications

AMAR A., GRANT M., BUCHANAN G., SIM I., WILSON J., PEARCE-HIGGINS J.W. & S. REDPATH. 2011. Exploring the relationships between wader declines and current land-use in the British uplands. Bird Study 58: 13-26. (concerned species: Common Snipe *Gallinago gallinago*)

BLOKHIN Y.Y. 2010. Breeding area, habitats and numbers of Common Snipe in European Russia. Bird Census News 23 (1-2): 125-140.

BRIAND F.X., NIQUEUX E., BROCHET A.L., HARS J. & V. JESTIN. 2011. Unusual H5N2 avian influenza virus escapes current detection. Journal of Clinical Microbiology 49 : 2376-2377. (concerned species: Common Snipe *Gallinago gallinago*)

CARDIA LOPES P.M.G. 2011. Population Genetic Structure and Phylogeographic Analysis of Eurasian Woodcock (*Scolopax rusticola*) in the Western Paleartic. PhD Thesis, University of Porto (Portugal) - 28 June 2011. 193 pp.

DOHERTY K.E., ANDERSEN D.E., MEUNIER J. OPPELT E., SCOTT LUTZ R. & J.G. BRUGGINK. 2010. Foraging location quality as a predictor of fidelity to a diurnal site for adult female American woodcock *Scolopax minor*. Wildlife Biology 16: 379-388.

GUZMÁN J.L., FERRAND Y. & B. ARROYO. 2011. Origin and migration of woodcock *Scolopax rusticola* wintering in Spain. European Journal of Wildlife Research 57: 647-655.

KLAASSEN R.H.G., ALERSTAM T., CARLSSON P., FOX J.W. & Å. LINDSTRÖM. 2011. Great flights by great snipes: long and fast non-stop migration over benign habitats. Biology Letters 7: 833-835 - first published online 25 May 2011. doi: 10.1098/rsbl.2011.0343

PÉRON G., FERRAND Y., GOSSMANN F., BASTAT C. GUÉNÉZAN M. & O. GIMENEZ. 2011. Nonparametric spatial regression of survival probability: visualization of population sinks in Eurasian Woodcock. Ecology 92(8), 1672-1679.

PÉRON G., FERRAND Y., GOSSMANN F., BASTAT C. GUÉNÉZAN M. & O. GIMENEZ. 2011. Escape migration decisions in Eurasian Woodcock: insights from survival analyses using large-scale recovery data. Behav. Ecol. Sociobiol. doi:10.1007/s00265-011-1204-4

STEWART A., FRAWLEY V.R. (EDS) & A. ANDERSEN (ASSOC. ED). 2010. The Proceedings of the Tenth American Woodcock Symposium, Roscommon, Michigan 3-6 October 2006. Allen Press, Inc., Lawrence, KS. 237 pp.

TRUCCHI E., ALLEGRUCCI G., RICCARDUCCI G., ARADIS A., SPINA F. & V. SBORDONI. 2011. A genetic characterization of European Woodcock (*Scolopax rusticola*, Charadriidae, Charadriiformes) overwintering in Italy. Italian Journal of Zoology, i*First*, 1-11.

WLODARCZYK R., MINIAS P., GOGGA P., KACZMAREK K., REMISIEWICZ M. & T. JANISZEWSKI. 2011. Sexing Common Snipe *Gallinago gallinago* in the field using biometric data. Wader Study Group Bulletin 118(1): 10-13.

ZIMMERMANN G.S., LINK W.A., CONROY M.J., SAUER J.R., RICHKUS K.D. & G.S. BOOMER. 2010. Estimating migratory game-bird productivity by integrating age ratio and banding data. Wildlife research 37: 612-622. (concerned species: American Woodcock *Scolopax minor*)