

EURASIAN WOODCOCK

Impact of Female Harvest on the Demography of the Species

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Photo: Jean-Lou Zimmermann. 29 May 2026, 22:08.

Unpublished: Roding and territoriality. Fight between two colour-ringed male Eurasian Woodcocks.

The white-ringed male (aged 5 or older) chases the blue-ringed male (aged 3) in a graceful ascending spiral.

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Executive summary

For Europe, the available data point to a clear operational finding: woodcock harvests involve females more often than males, and this bias should be treated as a priority management risk.

Because reproduction depends on maintaining a sufficient number of adult females, this overrepresentation in the harvest can directly affect the species' capacity for renewal.

This diagnosis rests on several converging sources: long-term personal series, national data and results published in several European countries. They all point the same way: females are persistently overrepresented among the birds harvested.

Three key findings

1. The sex ratio at birth is probably close to balance: around 50% males and 50% females. The population therefore does not appear to produce a surplus of females.
2. At the European scale, the proportions reported range from 51% to 65% females depending on the series and protocols, and eight of the twelve series compiled exceed 58%. The pooled estimate across the nine series with a known sample size is 58.7% females (95% CI: 58.3 – 59.1%): the imbalance is therefore structural, not marginal.
3. By way of illustration, applied to European harvest estimates (2 to 3 million per year) and assuming the low hypothesis of 58.3% females in the harvest, this imbalance would correspond to an annual surplus of 332,000 to 498,000 females relative to males: the issue is therefore demographically significant.

Local series: Gironde and Gironde-Landes

Over 25 hunting seasons, the systematic autopsy of 275 woodcock shot by the author in Gironde reveals an average sex ratio of 27% males to 73% females, with relative stability from one year to the next.

This result is consistent with a second dataset, compiled between 2015/2016 and 2020/2021 from 300 woodcock autopsied in Gironde and the Landes with three specialist hunters.

In this second sample, the average observed sex ratio is 24% males to 76% females, again with little variation between seasons.

These two independent series therefore lead to the same finding: females are persistently overrepresented in the harvest.

Explanatory mechanism

The compiled observations suggest that females are the first to arrive on post-breeding migration and the last to leave on pre-breeding migration.

They more often frequent areas rich in food resources and sit tighter to the dogs' point than males.

This behavioural difference, already reported in the literature and confirmed by the series presented here, may result in recurrent excess mortality among potentially breeding females.

Demographic implications

Given the biology of the species — polygamy, the female's exclusive role in incubation and chick rearing, a short breeding window and limited productivity — repeated excess female mortality must be regarded as a direct signal for the breeding stock. For management, this means a precautionary approach and an adjustment of harvests for as long as this bias persists.

Robustness of the finding

The strength of this finding rests on the convergence of several independent sources: personal series over 25 seasons, national CNB data, results from several European countries, and complementary evidence from Swiss studies based on bioacoustics and DNA sexing.

Priority actions

- Immediate: integrate the sex bias of the harvest as a management indicator in its own right in the monitoring protocol, by generalizing autopsy of harvested birds and DNA sexing on representative samples of birds captured during ringing.
- Short term: shorten the hunting period by adjusting opening and closing dates, so as to reduce female exposure at the start and end of the season.
- Short term: reduce and harmonize downward the number of hunting days per week at national and European scales, to limit the cumulative pressure on females.
- Short term: revise the maximum permitted bag (PMA) per season downward for as long as the available data confirm an overrepresentation of females in hunting bags.
- Medium term: increase the area of reserves favourable to stopover and wintering, in order to locally reduce female vulnerability in the most frequented areas.
- Medium term: better regulate hunting tourism by introducing a single PMA at the European scale.

In conclusion, the evidence gathered is sufficiently convergent to justify a prudent management decision now. The issue is no longer merely to document the sex bias of the harvest, but to draw concrete consequences for monitoring, hunting effort and regulations, in order to durably preserve the stock of breeding females and to try to slow the decline of the species.

THE STUDY

Approach and legitimacy

Woodcock hunting is an exciting sporting pastime that durably attaches the hunter to the bird, the woods and the work of the woodcock dogs.

It soon becomes clear that this pleasure is fragile: it then becomes necessary to know the conservation status of the species being hunted.

Drawing on 55 years of hunting notes (1970-2025) and 25 years of uninterrupted research (2000-2025) on the species and its environment, the author has assembled a body of long-term, standardized knowledge and observations on *Scolopax rusticola*.

Introduction

This observational study aims to identify and document the sex ratio of the harvest on the basis of series of autopsies and sexings from regional, national and European sources, demographic mechanisms, observations from long time series, converging results and established ecological knowledge.

The Eurasian Woodcock (*Scolopax rusticola*) is a forest-dwelling wader widely hunted in Europe. Several syntheses report a long-term decline in its abundance or in indices of its presence on its migration and wintering grounds. In this context, the levels of cumulative pressure may exceed the species' capacity for resilience. Hunting harvest is a potentially important component of mortality, all the more so because a systematic bias mainly affects females. Indeed, in the woodcock the absence of visible sexual dimorphism makes sorting at the moment of shooting impossible, so the harvest is not intentionally biased. Moreover, the sexes differ in their migratory phenology, in their behaviour when hunted with pointing dogs and in their choice of wintering sites. Such a bias, if lasting and of high magnitude, is liable to reduce the breeding stock and to interact with other pressures (climate warming and extreme events, droughts, habitat change and destruction, predation, accidents, disease).

1. What is known about the Eurasian Woodcock

The number of individuals making up the European breeding population is not known. Estimates range between 4 and 6 million. The polygamous nature of the species complicates interpretation in terms of numbers of pairs.

European harvests are likewise estimated with uncertainty. According to Y. Ferrand and F. Gossmann (ONCFS Woodcock network), they were on a downward trend of 25% over 17 years (3 to 4 million in 2000, 2 to 3 million in 2017).

As the reliability of two key indicators of the conservation status of game species has not been validated, and given the declining trend of the species, a study of the impact of harvest by pointing-

dog hunting in Europe, using the same protocol over an especially long monitoring period, was called for.

2. Sex ratio of the harvest: local series, Gironde and Gironde-Landes

In the woodcock, the absence of visible dimorphism makes it impossible to identify sex at the moment of shooting.

To remedy this, since the late 1990s the author has autopsied* almost all the birds he has shot in Gironde. This is the only reliable method, together with laboratory DNA analysis of feathers, of determining their sex.

** Note: Few hunters perform autopsies (fewer than 2% in France), and the percentage is even lower in the other countries concerned.*

From 2000/2001 to 2024/2025, across 275 woodcock shot and systematically autopsied by the author, the sex ratio averages 27% males to 73% females. This is a constant, and variation between seasons is small (Figure 1 below).

Sex distribution by age. Among these same 275 birds, the distinction between adults and juveniles of the year reveals a marked contrast (Table 1 below).

Table 1 — Sex ratio by age class. Gironde series, 25 seasons (275 autopsied birds)

Age class	Sexed sample (n)	Females	Males	Females (%)	95% CI (Wilson)
Adults	61	28	33	45.9%	[34.0 – 58.3]
Juveniles of the year	214	173	41	80.8%	[75.0 – 85.6]
Whole series	275	201	74	73.1%	[67.6 – 78.0]

95% confidence intervals calculated by the Wilson method. In adults, the sex ratio does not differ from parity (two-sided exact binomial test, $p = 0.61$). In juveniles of the year, the departure from parity is highly significant ($p < 0.0001$), as is the difference between the two age classes (Fisher's exact test, $OR = 4.97$; $p < 0.0001$).

The bias observed over the whole series therefore comes almost entirely from juveniles of the year, who make up 77.8% of the birds shot. In adults, the sex ratio of the harvest is close to balance. This result shifts the point of application of the bias: it is not primarily the resident breeding females that are overexposed, but young females, before their first breeding attempt.

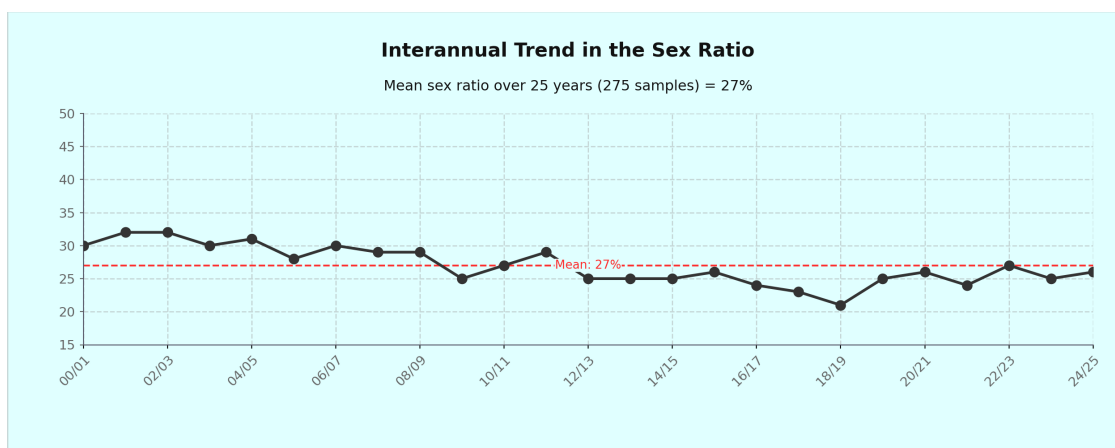


Figure 1 — Interannual trend in the sex ratio. Gironde series, 25 seasons (275 birds). Mean: 27% males.

To complement this series, 300 woodcock shot in Gironde and the Landes (2015/2016 to 2020/2021) were sexed by autopsy in collaboration with three specialist hunters.

The sex ratio obtained averaged 24% males to 76% females, with little inter-season variation (Figure 2 below). Results consistent with the Gironde series.

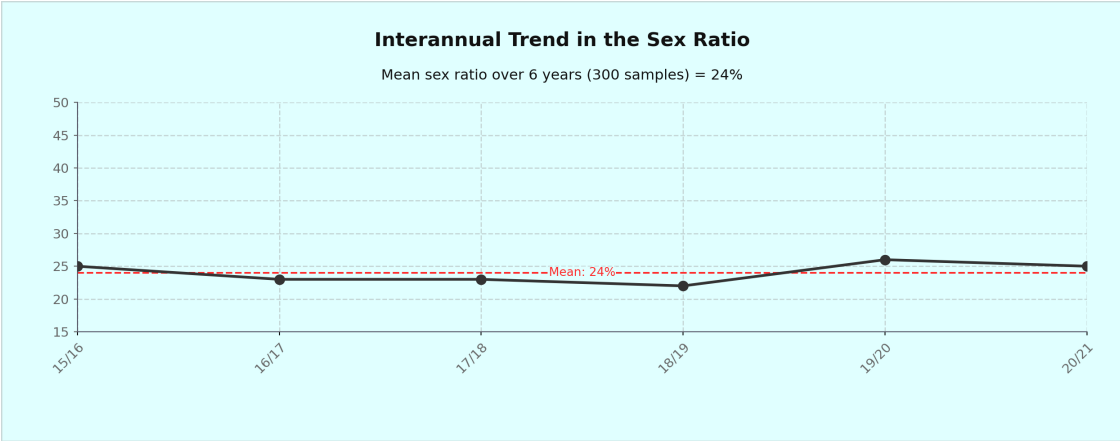


Figure 2 — Interannual trend in the sex ratio. Gironde-Landes series, 6 seasons (300 birds). Mean: 24% males.

Comparison: for the Woodcock network of the Gironde Hunters' Federation (2006/2007–2015/2016, random autopsy), the sex ratio averaged 33% males to 67% females.

Even for a polygamous species, sex-differentiated harvests can durably affect population viability. It was relevant to look more deeply at the mechanisms and demographic implications.

3. Sex ratio of the harvest: national data (CNB) and European compilation

In France, few hunters' federations or organizations record the sex ratio of the woodcock shot. The CNB provides a long series (1996/1997–2024/2025). According to the CNB synthesis (29 seasons), the average national harvest sex ratio is 39.4% males to 60.6% females (n = 47,247), with limited variability between seasons.

Historical comparison: the percentage of females in the harvest is up from that recorded in the 1976-1992 series (42% males to 58% females), Fadat C. (2009). – La vie de la Bécasse des bois [The Life of the Woodcock], p. 221. In this source, no region shows a proportion of males above 50% in the harvest.

For the other countries concerned, the harvest sex ratio remains poorly documented in lasting, accessible monitoring schemes, which limits comparisons at the European scale. However, various sources report harvests biased against females in Europe (Table 2 below).

Table 2 — Proportion of females in woodcock harvests in Europe (post-breeding migration and wintering countries)

Country	Females (%)	Sexed sample (n)	95% CI (Wilson)	Period	Source
Denmark	53.0%	327	[47.5 – 58.3]	2012-2014	Christensen et al. (2017)
Spain	65.0%	218	[58.6 – 71.2]	2004-2006	Braña F. (2024)
France	60.6%	47,247	[60.2 – 61.0]	1996-2024	CNB (29 seasons)
Italy	51.4%	13,478	[50.6 – 52.2]	2010-2019	Tuti et al. (2021)

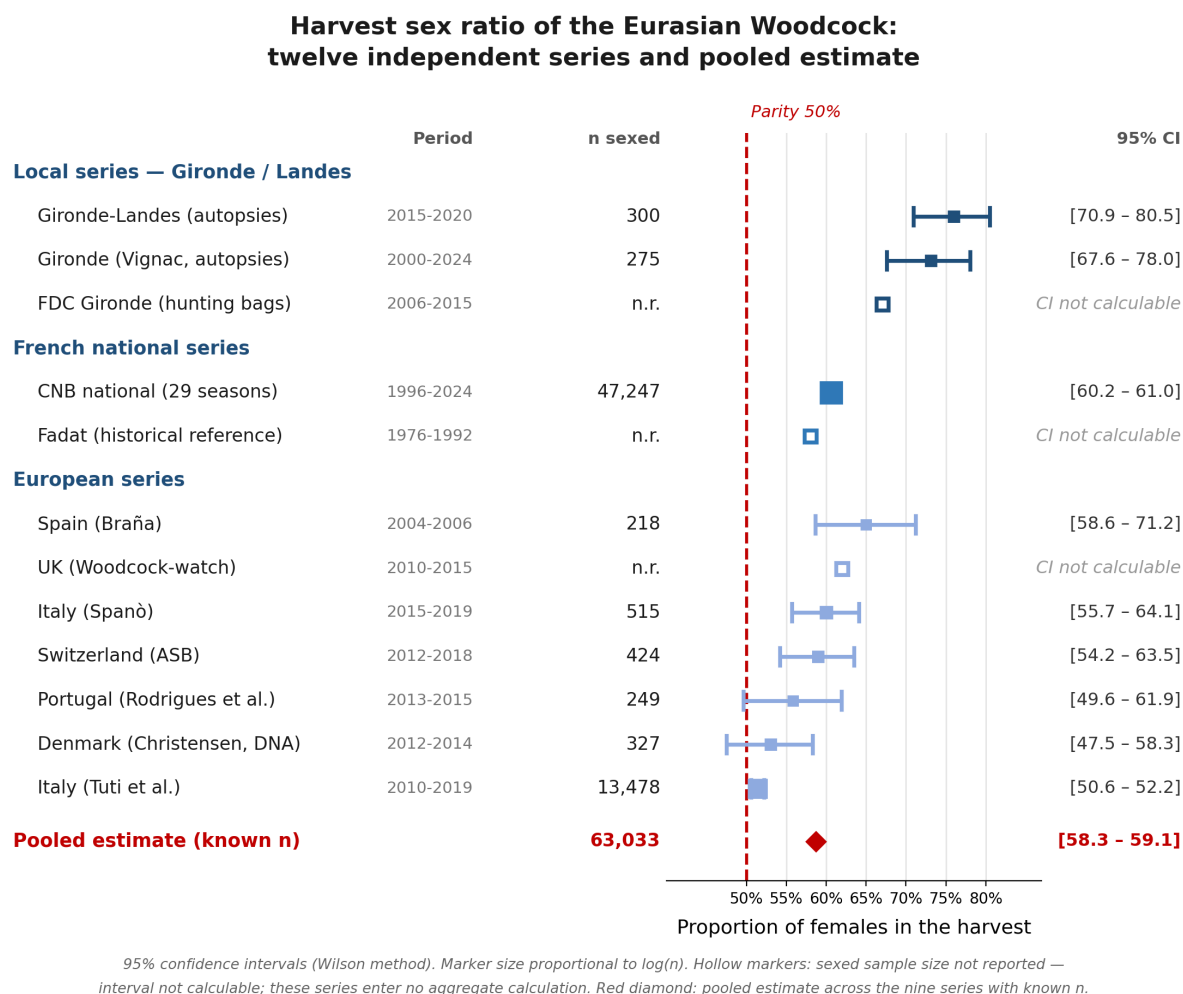
Country	Females (%)	Sexed sample (n)	95% CI (Wilson)	Period	Source
Italy	60.0%	515	[55.7 – 64.1]	2015-2019	Spanò S.
Portugal	55.8%	249	[49.6 – 61.9]	2013-2015	Rodrigues et al. (2015)
United Kingdom	62.0%	n.r.	not calculable	2010-2015	Woodcock-watch
Switzerland	59.0%	424	[54.2 – 63.5]	2012-2018	ASB
Greece	n.r.	n.r.	—	—	—

n.r.: not reported. 95% confidence intervals are calculated by the Wilson method, which is suited to proportions far from 0.5 and to small samples (Wilson E. B., 1927). The two Italian series are presented separately: their proportions and sample sizes are too far apart to justify aggregation. The Greek value is not documented and enters no aggregate calculation. The Danish series is the only one in the table fully sexed by DNA analysis.

Note: Heterogeneity of European protocols highlighted by the Italian study of Tuti et al. (2021):

- 1. No validation against Aradis 2015, which is cited but not applied.*
- 2. Only 40.41% (n = 13,478) of the birds shot were sexed (out of n = 33,355), according to an unstated selection criterion.*
- 3. With the same protocol used by the CNB over the same period (2010-2019), the Italian sex ratio is 10% lower than the French sex ratio, and the age ratio 8% higher.*

Figure 3 — Summary: harvest sex ratio of the woodcock, twelve independent series and pooled estimate



Forest plot. Series are grouped by geographic scale and ordered by decreasing proportion. Marker size is proportional to the logarithm of the sexed sample size. Hollow markers indicate series whose sample size is not reported: no confidence interval can be calculated for them, and they enter no aggregate calculation. The red diamond is the pooled estimate across the nine series with a known sample size ($n = 63,033$; 58.70%; 95% CI [58.32 – 59.09]). The series furthest from the mean are those of Tuti et al. for Italy and Denmark, the closest to parity, and the Gironde series, the most unbalanced.

4. Illustrative estimate of the excess of females in the harvest

In 2017, Ferrand Y. and Gossmann F. (ONCFS Woodcock network; Faune Sauvage no. 315) estimated European harvests at between 2 and 3 million per year. Taking, by way of illustration, the female share of the harvest at the lower bound of the pooled estimate (58.3%), the annual excess of females harvested in Europe relative to males would be of the order of 0.332 to 0.498 million (Table 3 below).

Table 3 — Illustrative estimate of the annual excess of female harvest in Europe, under a low hypothesis of 58.3% females

Total European harvest / year	Female harvest (58.3%)	Male harvest (41.7%)	Excess of females over males
2 million	1.166 million	0.834 million	0.332 million

Total European harvest / year	Female harvest (58.3%)	Male harvest (41.7%)	Excess of females over males
2.5 million	1.458 million	1.042 million	0.415 million
3 million	1.749 million	1.251 million	0.498 million

As Table 3 shows, and given the potential order of magnitude of the excess female harvest, it was relevant to look more deeply at the mechanisms and demographic implications that give rise to these differences.

5. Behavioural differences by sex

On a sample of 90 birds shot (45 females, 45 males) between 2008 and 2018, the author recorded field observations of their behaviour in front of his pointing dogs according to sex.

- Males appear more elusive when hunted and often frequent atypical spots.
- Females “hold tight” to the dogs’ point more often: on average in 70 to 75% of situations, against fewer than 45% for males.
- Females arrive first at the stopover and wintering areas, and are the last to leave them for the breeding sites.
- Females occupy the best habitats, the best known and easiest to hunt, probably the richest in earthworms.

These elements bring out the causal mechanism: in pointing-dog hunting, hunter specialization (territories, dogs, hunting effort) may accentuate the overrepresentation of females in the harvest.

Earlier results documented by Fadat C. (1976–1992; *La vie de la Bécasse des bois*, pp. 222-223) also confirm variability of the sex ratio according to hunting method. Harvests taken with pointing dogs were already, at the time, more female-skewed than those taken in driven hunts.

- Harvest sex ratio, pointing dogs: 42% males, 58% females.
- Harvest sex ratio, driven hunts: 58% males, 42% females.

Today in Europe*, the great majority of woodcock are taken by pointing-dog hunting. Females are overrepresented there. Failing to take the resulting imbalance into account is likely to continue weakening the species’ capacity for survival.

** Harvests in Europe: about 90% by pointing-dog hunting, about 8% by shooting at the roding flight (mainly in Russia), 1 to 2% poached at the evening flight, and negligible for driven shoots.*

6. Sex-ratio comparisons: departments and national

A gap of about 13 to 15 points is observed between the local series (73-76% females) and the national CNB series (58-63%). This gap calls for explanatory hypotheses.

- The Gironde and Gironde-Landes series come from birds shot by specialist hunters. Females are indeed more vulnerable to pointing-dog hunting. A sample drawn from specialists may yield higher proportions of females than a broader but heterogeneous sample.

- In the departmental protocol, the birds shot are systematically autopsied, versus partial autopsies at the national level.
- It is possible that females migrate and winter farther south and southwest within the wintering range. This local hypothesis is taken into account in the study, which adopts 60.6% as the sex-ratio value for France, even though the autopsies performed are random.

7. State of knowledge: sex ratio at birth

The link between the sex ratio in the harvest and the sex ratio at birth remains little, if at all, documented for *Scolopax rusticola*. This gap is a major blind spot in the hunting management of the species.

In this connection, the CNB's "wing reading, biometrics, biology" commission recently stated that it had no empirical estimate of the sex ratio at birth and considered 50/50 plausible. (La Mordorée no. 303, special issue no. 7, 2022, p. 33).

"One obscure point remains: we do not know the sex ratio at birth. We may think it is statistically 50%, but truly without any certainty since no study has ever been carried out to that end. Unless the constancy of the sex ratio observed each year is revealing of a larger proportion of females at birth".

Two general syntheses of the literature on the sex ratio of wild birds are cited (Decoux, 1997; Batellier et al., 2004). They describe, at the interspecific scale, sex ratios close to balance, with possible fluctuations.

For the woodcock, these elements support the reference hypothesis of a sex ratio at birth close to 50/50, without excluding local or interannual variation.

8. Sex ratio at birth in Switzerland

A study conducted in Switzerland (ongoing) provides evidence on the sex ratio at birth of young birds sexed by DNA. It is carried out in the Neuchâtel Jura by the ornithologists Jean-Lou Zimmermann and Serge Santiago.

The aim is to help document the decline* of a breeding woodcock population in the Neuchâtel Jura.

** Decline of breeding populations also reported in several countries (France, Spain, Italy, United Kingdom, Switzerland) according to the sources cited in the bibliography.*

Their protocol combines tens of thousands of data points collected from the birds' arrival at their breeding site until their departure on post-breeding migration, at a rate of 150 to 200 outings per year depending on the year.

These data come from monitoring of the roding display by individually identifying males using bioacoustics (bioacoustic monitoring began in 2002), supplemented from 2012 by mist-net capture of some individuals during and after the roding period.

All captured woodcock are ringed with a colour-ring code, which facilitates later individual checks from photos without recapture. Age is defined by plumage criteria and sex is determined by DNA analysis of feathers.

Over the period 2012-2025, 72 young birds (JNP and JNT) born in Switzerland were sexed by DNA after capture (already independent birds). Observed sex ratio: 57% males to 43% females.

Method: sexing by DNA analysis of feathers carried out at the University of Lausanne by Lucas Fumagalli.

The available sample size ($n = 72$) remains limited and must be interpreted with caution. It nonetheless provides a useful first order of magnitude in the absence of other published series.



Photo: Jean-Lou Zimmermann, 2015. Adult female captured by J.-L. Zimmermann and S. Santiago in Switzerland and fitted with colour rings so that she could be identified in flight without recapture. She was shot, again in Switzerland, less than two years after this photo. She confirms the woodcock's fidelity to its breeding sites and its short life expectancy, especially among females.

9. Analysis of the result

This result ($n = 72$) suggests a sex ratio at birth in favour of males (+ 13 points), without yet allowing the conclusion that it holds for the whole breeding range. While monitoring this indicator, at the current state of knowledge a sex ratio at birth close to 50/50 remains plausible for *Scolopax rusticola*; going further and estimating it as favouring one sex or the other would be most hazardous. Additional standardized, multi-site series will be needed to test possible systematic variations.

The data compiled over several decades suggest a marked contrast between a probably balanced sex ratio at birth (reference hypothesis) and a harvest sex ratio systematically biased against females, especially young ones (factual). This bias, consistent across several sources, constitutes a plausible mechanism for the progressive reduction in the number of breeding females. Its relative contribution to the observed decline must be assessed quantitatively by modelling.

The detailed statistical validation of this finding — tests of departure from parity, confidence intervals and comparisons between series — has been carried out but is not reproduced here. It is the subject of a separate working note, not attached to the present version, which can be provided after review by a statistician.

10. Interpreting the harvest sex-ratio bias

The central question is whether demographic compensation is possible in the woodcock to counterbalance an excess mortality induced by sexually biased harvests.

In *Scolopax rusticola*, the male takes part neither in incubation nor in chick rearing. Annual production of young therefore depends exclusively on the number of females of breeding age and on the quality of reproduction. In this context, a lasting decrease in the number of females is expected to be unfavourable to the dynamics of the species. This point is particularly important for a polygamous species in which the male does not directly take part in incubation and rearing of the young.

The possibility of multiple broods and the spatiotemporal variability of productivity remain insufficiently documented at the scale of the breeding range. The available evidence suggests breeding concentrated in a relatively constrained seasonal window in the main part of the breeding range (e.g. May–July), which could limit the capacity for interannual catch-up.

The available data on breeding phenology and productivity indicate an average production of about two fledged young capable of post-breeding migration per female per season at the European scale. They do not by themselves settle the question of demographic compensation without a modelling framework.

In the current state of knowledge, in the face of repeated excess female mortality, it is not possible to validate either the possibility or the extent of any demographic compensation.

11. Demographic consequences and implications

In species whose quantity and/or quality of reproduction depends on the number of adult females, sexually biased harvests may:

- progressively reduce the breeding stock;
- lower overall productivity;
- interact with other sources of mortality (predation, accidents, disease, habitat change, droughts, climatic extremes and climate change) by reducing the population's resilience margin.

Beyond the expected direction of the effect, the operational question concerns its magnitude and the levers available to reduce it. This magnitude depends essentially on the proportion of females harvested.

Expected consequences: even if the annual effect is moderate, the lasting bias in the harvest (at least 50 years) may produce cumulative effects in the medium term on the female stock and overall productivity.

12. Implications and key messages for management

Set side by side, the hypothesis of a near-balanced sex ratio at birth and a harvest sex ratio clearly biased against females may contribute to degrading the conservation status of the woodcock in Europe. The extent of this contribution is not fully quantified.

In the short term, this lever can potentially be acted upon through proportionate measures, in view of their expected effectiveness, within an adaptive management framework, making it possible to act without banning woodcock hunting.

Priority actions

1. Immediate: integrate the sex bias of the harvest as a management indicator in its own right in the monitoring protocol, by generalizing autopsy of harvested birds and DNA sexing on representative samples of birds captured during ringing*.

** Note: Today in France, still, no woodcock captured during ringing is sexed. This is a gap that is hard to accept.*

2. Short term: shorten the hunting period by adjusting opening and closing dates, so as to reduce female exposure at the start and end of the season.

3. Short term: reduce and harmonize downward the number of hunting days per week at national and European scales, to limit the cumulative pressure on females.

4. Short term: revise the maximum permitted bag (PMA) per season downward for as long as the available data confirm an overrepresentation of females in hunting bags.

5. Medium term: increase the area of reserves favourable to stopover and wintering, in order to locally reduce female vulnerability in the most frequented areas.

6. Medium term: better regulate hunting tourism by introducing a single PMA at the European scale.

13. Scope, sources, limitations and outlook

Nature of the approach

The present work compiles data from long-term hunting monitoring and from scientific and technical sources. It also draws on observations from monitoring programmes (ringing, sexing, bioacoustic monitoring) carried out by observers committed to knowledge of the species.

It is a longitudinal observational study, aiming to bring out regularities and mechanistic hypotheses from long time series and converging sources, rather than an experimental study.

Sources used

- Personal series of harvest sex ratio obtained by autopsy over several decades.
- National and European sex-ratio data from hunting bodies and publications (see Bibliography).
- Research and syntheses on sex ratio at birth and on sex differences in behaviour under pointing-dog hunting.
- Unpublished observations from a Swiss programme based on described methods (bioacoustics, mist-net capture, colour ringing, DNA sexing).

The convergence of results across territories, periods and independent sources is a fundamental element of robustness of the conclusions proposed, while calling for harmonized protocols to allow quantitative comparisons.

Scope of the conclusions and outlook

The conclusions fall within a framework of population biology and conservation ecology. They put forward a plausible demographic mechanism (harvest sex-ratio bias) that may contribute to the observed dynamics.

The literature and the series presented suggest that harvests durably biased against females could affect population viability by reducing the breeding stock.

The harvest bias, confirmed over fifty years, must be considered alongside other mortality and variation factors (predation, accidents, disease, climatic conditions, habitat change and destruction) within an integrated adaptive management approach.

These results would benefit from being complemented by demographic modelling work integrating the sex ratio at birth and the sex ratio of harvests and captures, together with standardized monitoring at the European scale.

The aim is to help inform public decision-making by drawing attention to an indicator that is still under-exploited: the potential effect of a lasting imbalance in the harvest at the expense of females.

Methodological note on the use of artificial intelligence

This study was prepared with the support of an artificial intelligence tool (Claude, Anthropic), used for: typographic correction and formatting of the document; calculation and verification of the confidence intervals shown in Tables 1 and 2 and Figure 3; production of the summary figures and tables.

The field data — twenty-five seasons of almost systematic autopsies — are the author's own, as is the collection protocol. The questions asked, the hypotheses adopted, the interpretation of the results and the management conclusions are the author's sole responsibility. Artificial intelligence was used as a calculation tool and writing aid, not as an autonomous source of data or opinion. Third-party sources cited were retained on the strength of their publication; independent verification was not possible in every case.

14. Conclusion

The data compiled in this report indicate that woodcock harvests, particularly those taken by pointing-dog hunting, are durably biased against females. The finding is robust despite sampling limitations, owing to the convergence of independent series, because it takes into account the representativeness of the samples and the uncertainties on demographic parameters. The scientific priority is now to standardize sexing (harvest and captures) and to integrate this information into explicit modelling (sex / age), within adaptive management scenarios.



Photo: Jean-Lou Zimmermann, 2017. In Switzerland, a late-hatched young female captured and fitted with colour rings by J.-L. Zimmermann and S. Santiago. The harvest of this juvenile the following year in Switzerland illustrates once again the short life expectancy of the woodcock, especially among females.

Acknowledgements

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I do not forget Silvio Spanò, “Grand Monsieur della beccaccia” in Italy. We worked together for a long time for the preservation of the species and the defence of the practice of hunting it with dogs. He left too soon.

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