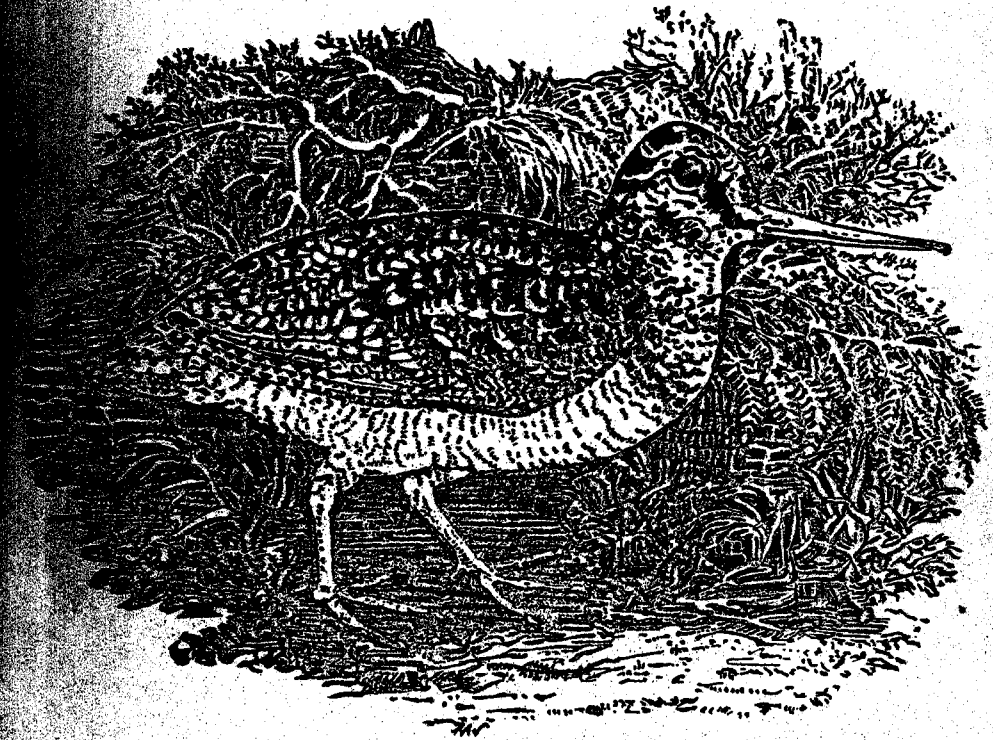


INTERNATIONAL WATERFOWL RESEARCH BUREAU

**WOODCOCK RESEARCH GROUP**



**NEWSLETTER NUMBER TWO**

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Introduction

The Woodcock wing collection began in 1975/76 with a special effort in Ireland and France (some careful planning) and a good try in the UK and Denmark. Smaller collections were made in Italy and Iran (the latter an independant examination). Collectors are being recruited for next season in Switzerland, and collections planned in W.Germany and Sweden. We hope that a really massive and widespread collection will be made in every country where there are Woodcock and WRG members from now on.

Dr. Clausager has very kindly provided reprints of his paper on methods of determining the age and sex of Woodcock, and these can be sent on request. We will prepare and include suggestions on sampling methods, if this is needed. The French report shows one idea for improving the value of a collection. In the last Newsletter, John Swift described his style of analysis and also stressed the importance of collections in 13 countries where - as far as we know - nothing has yet been done.

The WRG welcomes another member (G. J. M. Hirons, UK) who is starting a 3-year programme of research on Woodcock breeding behaviour and productivity.

This issue of the Newsletter has obvious gaps - you will see whether you remembered to send in your annual report. We want to have news from every member not later than 30 June in future, before the holiday season begins.

Brian Stronach  
Research Branch  
Forest & Wildlife Service  
Sidmonton Place  
BRAY  
Co. Wicklow  
Ireland

Monica Vizoso Shorten  
12 Hayward Road  
OXFORD  
England

Research Reports and News

Swedish Report

Prof. Vidar Marcström writes:

This year I have done little research on Woodcock because of lack of money and above all because I have a rather comprehensive programme on Tetraonids and Goshawks. We have reared a few more Woodcock and studied their behaviour. I have written a paper on the reproduction of the European Woodcock, to be published soon, and am planning to do some physiological studies on the Woodcock this autumn (1976). I have at present no plans for Woodcock work next year.

We have released a few reared birds, but otherwise organised wing-tagging has not been performed to any extent. I think that it may be difficult to arrange any more comprehensive research programme on the Woodcock in Sweden for the next few years.

(The Swedish Society for the Conservation of Nature has suggested that the Swedish Ornithological Association, Runebergsgatan 8, S-114 29 Stockholm, should act as that country's correspondent for the WRG. Dr. Kjell Engström, Chairman of the SOA, has agreed, and we await further news from Prof. Marcström.)

Late News from Sweden (20.08.76):

'VM confirms that he is investigating enrolment of SOA members to collect and transmit to WRG Swedish data on Woodcock. He warns that the present economic situation is causing funds to be diverted to other species.

Ringling: In 1975 six Woodcock were ringed in Sweden. One Swedish-ringed bird was recovered in France, and one foreign-ringed (Helgoland 1967) Woodcock was recovered in Sweden. More ringling will be encouraged, with co-operation of SOA.

Annual Bag: In the early 1970's the annual bag was roughly estimated to be 2,300 to 2,600 Woodcock. After introduction of the late summer shooting season, when roding birds were shot during July - early August, the bag was 4,000 in 1973/74 and 7,600 in 1974/75; figures for 1975/76 not yet available but probably slightly less. Figures are only estimates; the season runs from 1 July; 1974 brought intense roding activity.

Wing Collection: This is difficult to organise in Sweden, and previous attempts have met with little success, but appeals will be placed in hunting magazines this year. All birds shot July - early August are adult males, and later chance killings average 1 - 2 per hunter - there are very few concentrations and little deliberate Woodcock hunting then.'

Italian Report

Dr. Alberto Chelini writes:

I was officially nominated as Italian Representative of the WRG only on 31 December 1975, which was rather late to take full advantage of the Italian open season for Woodcock which reaches a peak in late November. Nevertheless, I had already arranged with some friends to collect some wings and heads. I have written two articles on the matter which were published in Il cacciatore italiano (official organ of the Italian Federation of Hunting) which has a very wide distribution to communal offices, and in Diana, the most popular hunters' magazine in Italy (circulation about 50,000). These describe the WRG and its aims, and ask hunters to send wings.

I sent a copy of Mrs Vizoso's "discussion paper" presented at the IWRB meeting at Husum (07.12.74) to a friend who is Vice-President of the newly-formed Italian Woodcock Club; this was translated and published in Diana 11 (June 1976).

I wrote to the President of the Woodcock Club, Mr. Ettore Garavini, to establish co-operation in collecting wings and heads. He has kindly asked me to be the co-ordinator for contacts between the Club and the WRG. Prof. Silvio Spano (A scientist of the Institute of Zoology, Genova University) directs the research activities of the Woodcock Club, which are to concentrate on: breeding distribution, migration data, hunting statistics, ringling and the collection and age-sorting of wings. He will collect members' reports and send data to me. Next October I shall write more articles for hunters' magazines, and with this preparation we should get good results next season. During last season I collected 64 wings (Italy 41, Turkey 19, Greece 4); results are enclosed. (Editors' note: Dr. Chelini sent full particulars but an abridged version only is shown below.)

Country	Region	Date	Total	Adults	Immatures
Italy	Sardegna	01.12.75	8	5	3
"	Lazio	12.75	2	2	-
"	Calabria	12.75-01.76	20	2	18
"	Sardegna	12.75-01.76	6	2	4
"	Molise	08-15.02.76	3	-	3
"	Calabria	05.02.76	2	2	-
Greece	-	05-12.12.75	4	3	1
Turkey	Samsun	13-15.02.76	2	-	2
"	"	15-20.02.76	17	4	13
Total			64	20	44

Danish Report

Dr. I. Clausager writes:

I have not been able to do much work on Woodcock during the past year, as Pheasant studies and administrative work now take up most of my time; during the coming hunting season, however, I hope to gather a quantity of useful material.

Ringing of Woodcock in Denmark: In 1975 the total number of Woodcock ringed was 60 (including 13 pulli). In the period January - April 1976 we ringed 43 fullgrown Woodcock. The first foreign recovery of a Danish-hatched Woodcock was reported in 1976, when a pullus ringed on 02.06.75 at Magleby Forest, E. Zealand, was shot at Little Gidding, Huntingdonshire, England on 5 January.

The hunting season, 1975: Information from sportsmen all over the country suggests that in most parts of Denmark the season was excellent. Only in the most western parts of Jutland, where normally many Woodcock are bagged, was the influx much smaller than usual and the bag and the number caught for ringing there was less than normal - 17 birds ringed or about half the average number. Migration through Denmark in the autumn of 1975 was regular, without any peaks; the autumn was very mild and many birds stayed for a long time. The exact figure for the total bag of Woodcock in 1975 is not yet available but in 1974 the total was 17,000 and the average yearly bag is 18,500.

The age-ratio in the Woodcock bag, 1975: The total sample of wingfeathers I was able to collect from Woodcock bagged in 1975 came from 476 birds, and the monthly sample and age-ratio was as follows:

Period	Adult	Immature	All	Immature:Adult
October 1975	27	102	129	3.78 : 1.00
November 1975	103	153	256	1.49 : 1.00
December 1975	48	43	91	0.90 : 1.00
1975	178	298	476	1.67 : 1.00

The over-all ratio is much lower than it was in 1970 (2.5) and in 1971 (2.7). Breeding output may have been less in 1975, or the migration routes may have been different. Information from Ireland also indicates a low proportion of immatures in the bag. I hope that all countries will co-operate in the collection and planned analysis of these data, for we need widespread and large-scale sampling if we are to analyse the reproduction and migration of the Woodcock. In Denmark I have had great success from announcements in sportsmen's magazines and distribution of questionnaires. Copies of my paper on age- and sex-determination methods are available from the co-ordinators of the WRG.

Observations of Woodcock in a pasture: In the period 25.11.75 - 22.01.76 Woodcock were recorded 12 times in an open pasture about 300 m from the nearest forest area during darkness. Mostly single birds were seen but sometimes two were seen together and one night perhaps three. Grass in the pasture was only a few inches high. I concluded that the birds were there throughout the night, as they were recorded just after dark, about midnight and just before daybreak. The birds often flew up as the car approached, but when they did not we could follow them for some minutes with a spotlight. They tried to evade the light by walking, seeking cover, or flushing. We succeeded in getting within 5 - 10 m of some, and one was caught in a hand-net on 28.12.75. With a little more experience we could probably have caught more.

The birds seemed restless when they were discovered, and I wondered whether they were feeding or roosting. Two - three were found just after sunset during a snowfall, followed by a moonlit night, and the next day while the snow was still lying I searched the area and found that the Woodcock had probed very intensively, which suggested that they had been feeding most of the night. I took some good pictures of the probe-marks. My observations lead me to believe that feeding in pasture is normal behaviour for Woodcock on winter nights. The restlessness of the birds, their presence on the more swampy parts of the pasture (where food content was probably high) and the finding of so many probe-marks suggests that they behave like American Woodcock as reported by Dyer & Hamilton 1974, 5th American Woodcock Workshop Proceedings. After 15 January temperatures fell, but it took some days before ground froze in swampy parts of the pasture and the last Woodcock seen was there on 22 January. From 10 February temperatures rose again and a Woodcock was on the pasture on 12 February: after that date no more were seen there.

Woodcock kept in captivity: I have been successful in persuading 3 captive Woodcock to take 'artificial' food. One lived for more than 4 months in spite of having been injured in a collision before I received it; one had a damaged bill which made feeding difficult and died sooner; and the third was killed by a Stone Marten after a month. At first I fed the Woodcock on earthworms, but when frost came it would have been impossible to collect enough to satisfy the birds each day and I began to mix slices (strips) of meat, liver and fish with the worms. Soon the birds took everything. It was a problem to keep the food unfrozen until I placed a heating lamp over the food and water. It took a few days for the birds to become accustomed to the red glow from the lamp, but after a while they would eat and then stay for several minutes in the heated area with puffed feathers. I calculated that a Woodcock needs about 150 g of earthworms each day to survive: this is a lot to collect every day, even when worms are easily found. By mixing some worms with 'artificial' food every day, and offering the mixture in a box (40 X 70 X 10 cm) I succeeded in changing the Woodcocks' feeding habits so that they survived on 'artificial' food alone when it was impossible to get earthworms for them.

Note: Earthworms can be stored alive for several weeks in a box filled with moist fresh bog-moss.

Editor's note: For those planning to keep Woodcock in pens or cages, the following reference will be useful:

Stickel, W. H., Sheldon, W. G. & Stickel, L. F. (1965) Care of captive Woodcocks. J. Wildl. Manage. 29(1):161-172.

In this case the captives are American Woodcock (Philohela) kept in small pens (a little more than a metre square, 1½ m high) or in cages even smaller. The birds were kept for several months. Pens with earth floors became foul very quickly; cages, with floors of expanded metal over a drip pan, still took 2 hours to clean. Trays of water were fixed outside the cage-front, 10 cm above the ground, and worms were placed inside the cage in a tray filled with peat. The authors have this to say about Woodcock as captives: **PRO** no social intolerance, endure hot or cold conditions well, tolerate food shortage for several days and regain lost weight quickly, feed well in captivity, recover from a wide range of minor injuries and infections. **CONTRA** food troublesome and costly, exceptionally difficult problem of sanitation, live on foul floor and get foot infections, prone to injure themselves, need protective caging, emotional and aesthetic appeal makes experimental work repugnant. A square scissor-action net is needed to overcome difficulty in removing birds from cage without injury, and Woodcock should not be carried loose in bags or boxes but rolled in a soft (muslin) bag and tied with tape: they can be kept for 3-4 hours like this.

Swiss Report

Extract from Dr. D. Fraguiglione's letter (28.04.76):

Wing collection: I wanted to meet Prof. Fadat so that I could recruit collectors in Switzerland who would follow methods identical to those he uses in his demonstrations to French collectors, so that comparisons will be valid. I went to France this month for the meeting of the Club National des Bécassiers and was present at Prof. Fadat's demonstration: we discussed the matter. I will publish an appeal in Diana and call a meeting to explain the methods of work and how to collect wings, determine sexes and ages, and so on. I will let you know how things go.

(Previously, Dr. Fraguiglione wrote a short article in Diana 3 (March 1976):74 which, in spite of some errors of fact, drew attention to the existence of the WRG. He has also prepared an account of Woodcock reproduction, which has appeared in La Mordorée and has an extensive bibliography to accompany off-prints. Official hunting records for 1975 show 1,261 Woodcock shot in Switzerland, mostly in the Tessin canton.)

French Report

Charles Fadat (Section Becâsse, Office National de la Chasse) writes:

This year the endeavour has been aimed at the strengthening and improvement in quality of the network of hunter-watchers. This network consists of about 60 correspondents distributed over the whole of France, but especially in the west, south-west and south (regions in which Woodcock shooting is more frequent). New corresponding-members have been recruited, and quality is improved by ensuring that every member is able to record weights, take measurements of bill, wings and tail, and also make dissections to determine the sex of the bird, search for the bursa of Fabricius, collect gut contents and even to collect parasites.

For this purpose, local meetings of 6-8 corresponding-members are organised under my direction and, thanks to birds preserved in a deep-freeze, each of them is able to practise and to get used to this kind of work. Direct and personal contacts are absolutely necessary in order to make sure that standard methods will be used for measurements, taking of datum lines, and dissections; such contacts are especially important for explanation of the purpose of the operation, which is not always clear to sportsmen.

To reduce the errors in measurements, each hunter-watcher receives:

- a) a small letter-balance, sensitive to 5 g, for weighing.
- b) a graduated ruler with a stop-piece for wing and body-length measurements.
- c) a small ruler cut on the zero point, for bill measurements\*
- d) envelopes on which the mensurations and observations to be done are summed up. These envelopes are then used as containers for wings and feathers from the tail.
- e) an instruction chart for mensurations and dissections.

All this material (balances, rulers, envelopes) is supplied by the Office National de la Chasse (O.N.C.). The O.N.C. appoints 'Conseillers Cynégétiques Régionaux' who provide technical advice on game, and these will be concerned in the future classification of the network. It will probably take two more hunting seasons to complete the organisation of the network.

We hope that the results will enable us, annually, to take stock of the Woodcock shooting season, i.e. number of birds shot, sex-ratio, age-ratio, and migratory movements of the different populations. After several years, we hope to have data on the relative variations of these different parameters.

One hopes that all countries will do the same thing, and that is my essential wish.

\* Bill measurements: The method used in France differs from the general one. It consists of putting the zero in the labial commissure instead of on the forehead base (start of cere). Charles Fadat considers that this gives better definition of the length to be measured. It does make comparisons with other workers' results impossible,

unless both methods are used and recorded. During his demonstration meetings, he found that even with the same bird and the same ruler errors of more than a millimeter could be caused by personal variation in spite of using the labial commissure-bill tip measurement; hence his insistence on precise method and personal instruction.

Prof. Fadat has confined himself to Woodcock research for O.N.C. since 1 January 1976. His programme is: 1) to delimit the wintering grounds used predominantly by young, adult males or adult females and to search for ecological or physiological reasons why any difference occurs; 2) to gather scientific data for comparison of populations thought to be distinct; 3) to compare the age ratio of Woodcock shot on wintering grounds with that found on breeding grounds; 4) to make a parasitological study with a view to identifying the origin of birds shot on wintering grounds from 'natural markers', first using parasite contents of birds already known (from ringing) to come predominantly from breeding grounds in one zone then applying any useful results to more problematic cases; 5) to use comparative serology to identify 'races'; 6) to use radio telemetry in studies of behaviour and ecology, both on wintering grounds and breeding grounds; 7) to assess the breeding population of Woodcock in France and its distribution.

Research in BRD (West Germany)

Extracts from Günther Nemetschek's report (12.09.75):

After completing his Diplomarbeit on Woodcock last year, Herr Nemetschek joined the Institut für Wildforschung und Jagdkunde and started new and more extensive research on Woodcock with funds for at least one more year.

Between 1972-75 the following subjects were studied: breeding behaviour at nests, brood biotopes, breeding season (start and duration, pair formation flights, male display flights including voice recognition), migration. A very faint photocopy of the entire thesis in German was kindly provided, but only a summary can be given here:

Observations were made covering the continuous period of mating display on breeding grounds in Lower Saxony. The role of roding in connection with breeding behaviour was studied. The through migration was observed in about 40 areas by forest keepers and questionnaires were distributed. First Woodcock were seen in 1973-74 in the second pentade of March. Return migration data not available 1973 but in 1974 migrants seen until the end of April. Regional weather conditions affect the course of migration: obvious changes in conditions and intensity of flights were linked. Males interrupted return migration once or more for mating display in suitable biotopes, presence of females determining this. Roding continued after the migration period: greatest intensity noticed in June. Morning roding always started at the same light intensity, but in May the evening roding started before sunset when light intensity much higher. Inactive intervals correlated with length of day and night. Clearly marked temporal pattern of display flights characterised by interruptions when males alighted to search for food. Male calls consist of any three elements

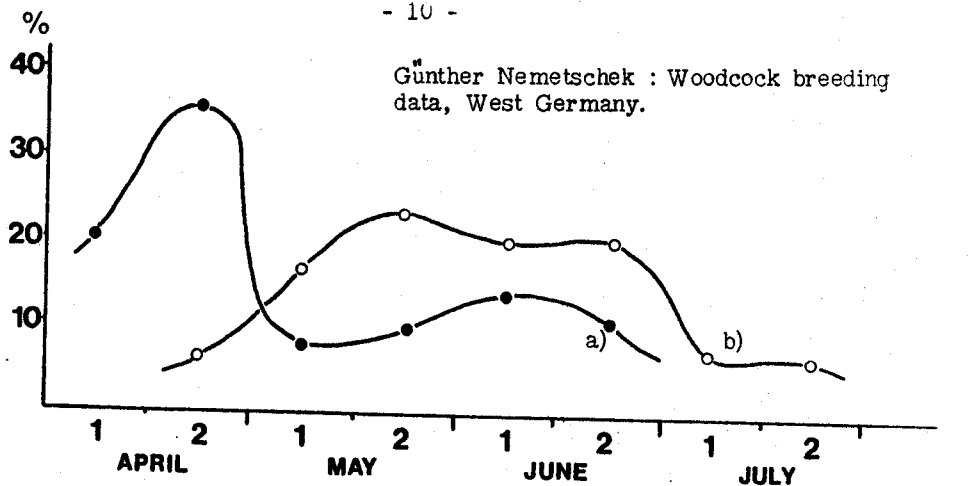
regularly repeated, deviations from pattern noted. Males considered to be territorial: some recognisable individuals seen to fly several times tried to drive away other displaying males. Roding served to find receptive females, mainly (but not entirely) acoustic method, sight also used. Possible that females fly up during day and go to meet males. Most paired flights during 1973-74 were observed late March-early April then numbers of females observed declined sharply. Most eggs found in second half of April, broods most frequent in May. Possible that some females in Lower Saxony breed twice but evidence inconclusive. Biotope selected for display and brood-raising similar - broadleaved and moist.

Work in progress at the time of this report: analysis of biotopes, distribution of Woodcock in Western Germany, appeals to foresters and hunters to notify him of nests and broods found, calculations of numbers of Woodcock related to their distribution, autumn migration studies, preparation of a publication on spring migration.

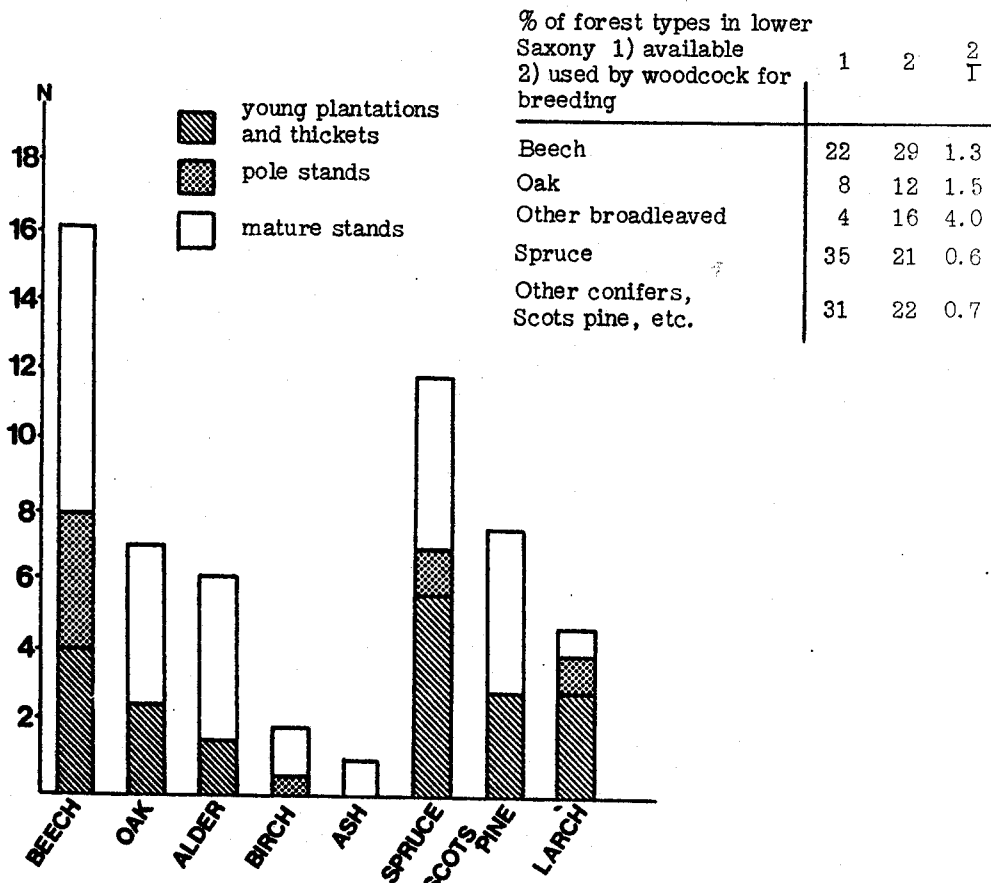
Dr. Keil (Leiter of Vogelwarte Hessen) planned to start a 3-year programme on Woodcock in 1975, but no details are known about this. No further news has come from Dr. Kalchreuter. Drs. Berndt and Winkel (Vogelwarte Helgoland) have published a long review of H. Bettmann's 'Die Waldschneepfe', arguing that the author has inconclusive evidence to defend the shooting of roding birds, and an article on the need to reduce or eliminate shooting pressure on Woodcock in Germany if the species is to become a common and widespread breeder once again (see Bibliography).

Annual bags of Woodcock in BRD 1969/70 - 1973/73

Region	69/70	70/71	71/72	72/73	73/74
Baden-Wurtttemberg	1,618	1,438	1,378	978	1,406
Bayern	3,961	3,106	2,326	1,494	1,740
Bremer	23	31	73	26	52
Hamburg	18	61	3	10	56
Hessen	1,490	1,545	1,180	1,081	1,141
Niedersachsen	10,628	10,945	8,855	7,676	9,388
Nordrhein Westfalen	5,183	4,960	4,685	4,875	4,547
Rheinland	1,472	1,206	1,100	1,029	934
Saarland	106	57	151	122	101
Schleswig Holstein	4,788	3,990	3,372	3,059	5,050
Total	29,339	27,339	23,123	20,350	24,055



Percentage of clutches (a) and broods (b) found during each 2 weeks of the season.



Number of clutches and broods found in various forest types. Total found : 57.

Late news from G. Nemetschek in West Germany (18.08.76):

Situation of Woodcock research in Western Germany:

1) From October 1975 a special one year research programme is being carried out at the Institut für Wildforschung und Jagdkunde, Göttingen, (Prof. Dr. A. Festetics), by GN. The main points of the programme are:

- a) The dispersion of Woodcock in Western Germany. To discover this all woodlands will be studied systematically to determine the occurrence of Woodcock. This will be done by interviewing each of about 3,500 foresters concerned. The results will be used to plot a map of Woodcock distribution.
- b) A contribution to the ecology of Woodcock. We want to investigate interrelationships between biotopes and the occurrence and frequency of Woodcock.
- c) Estimation of frequency distribution in Western Germany. This is done by establishing classes or grades of frequency of occurrence.
- d) Studies of negative factors influencing the Woodcock population. Beside hunting these include forestry activities, drainage, etc.
- e) Migration and possible wintering of Woodcock in Germany. At present, little or nothing is known of this.
- f) Further studies of Woodcock courtship flight, continuing earlier research by GN.
- g) This year we are going to start collecting wings from bagged Woodcocks, as in other European countries, to look at age ratios.

2) Vogelwarte Helgoland:

Woodcock data, gathered since 1957, are being analysed in co-operation with the Institut für Wildforschung und Jagdkunde, Göttingen. Two papers (8,12) are in press; Dr. D. Moritz is preparing another.

3) Dr. E. Bezzel, Staatliche Vogelschutzwarte Garmisch Partenkirchen, is mapping the spread of Woodcock in Bavaria.

4) Dr. Keil, Staatliche Vogelschutzwarte für Hessen, Rheinland-Pfalz und Saaland, is working on the population dynamics of Woodcock in selected areas. This is a three-year programme, to be finished next year.

5) Dr. Kalchreuter made suggestions about the preservation of Woodcock in two articles based on opinion rather than research. He appears to support spring hunting.

6) Berndt and Winkel reviewed Bettmann's 'Die Waldschnepfe' and Kalchreuter's 'Zur Populations-dynamik der Waldschnepfe (*Scolopax rusticola*) nach Europäischen Ringfunden' and criticised both publications (1). They also published some thoughts about spring hunting, which they think must negatively affect the Woodcock population (2).



7) Bettmann published a short article about Kalchreuter's papers and, once again, his position regarding spring hunting (3).

8) Dr. Deppe, Berlin, worked on a study of the breeding population and the onset of breeding in Woodcock in Northern Germany (5).

9) Dipl. Biol. E. Scherner has produced a status report on Woodcock in a woodland in Southern Saxonia (Solling Mountains) (11).

10) Wadsack compiled a report on the hunting of Woodcock in Tunisia. I am pleased to say that as a result of the protests of the various European 'Naturschutz' organisations, the hunting of Woodcock by foreign visitors was stopped. The local hunters are not very interested in this bird as the cost, in relation to the bag return, is very high (13).

In 1975 17 Woodcock were caught and ringed by the Vogelwarte Helgoland, Inselstation Helgoland, and at least one by the Vogelwarte Helgoland, Wilhelmshaven.

In the BRD in 1974/75 the bag of Woodcock was 22,480, a little less than in the previous season but still within the normal range. I expect that the bag will drop slowly as hunters begin to realise that spring hunting has its negative effects on the Woodcock population. The number of birds shot in autumn and spring differs quite a lot between the individual states of Western Germany. The number of Woodcock bagged in the 1975/76 season is not yet known.

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Romanian News

From a questionnaire completed by Mircea Maties and Dr. Dan Munteanu:

Research: Both the above are collecting data about Woodcock in Romania. They published three articles in 1976 on hunting statistics, habitat and migration.

Ringling: No recoveries within Romania. The following were ringed;

06.04.67	Romania, Bucuresti.	ring no.	139 N Romania.
--.10.69	Romania, Constanta.		? N Romania.
21.10.69	Romania, Constanta.		1203 N Romania.

No known work on age or sex determination, no analysis of sex ratios or age classes in killed samples, no known work on sub-species or parasites of Woodcock.

Habitat: changes in availability: there has been a history of forest reduction for hundreds of years but new plantations have reversed the process and, especially in the Danube Delta, have proved to be a great attraction for Woodcock.

No work has been done on analysis for toxic chemical residues in Woodcock. Food analysis from gut contents - only the work of Kiss & Sterbetz. No work on breeding biology and behaviour: known only that Woodcock nest in the Romanian Meadow, chicks hatching between mid and late April (jud. Ilfov, com. Plataresti, in Babadag woods). No work on methods of finding nests and broods, capture and marking, causes of mortality and their relative importance.

Management: Woodcock hunting is not very popular in Romania, about 200 - 300 of the 60,000 hunters hunt this bird. Woodcock are not imported or sold on the market. The season is from 1 September - 30 April, which includes migration and nesting times. Hunting is not stopped during severe weather. Hunting with nets or hooks is illegal, the rare Woodcock netted are caught by ornithologists (less than 25 members

of the Romanian Ornithological Centre). Most popular hunting method 'the trap in the evening, in those areas where the Woodcock is passing by' - (shooting à la passée ?); dogs (rarely used) when birds hunted in woods. No special reservations for migrant Woodcock, but general protection afforded in reserves such as Retezat National Park, the Bucegi Mountains, Keys of Turda, Pietrosul Rodnei (Rodna Mountains), Scarisoara-Beltoara (West Carpathians), and in hunting reserves such as Negrasii (Arges) and Bolanu (Olt). The hunting of Woodcock is forbidden in general in protected zones in different hunting areas of the country. Habitat improvement is not aimed specifically at Woodcock, but planting of Populus canadensis in the Tulcea region of the Danube Delta seems to concentrate and hold Woodcock.

Statistics: There is no overall collection of hunters' bag records in the country. Some hunters keep personal records: General Manu's annual totals 1895-1948 vary between 2 and 164.

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UK Report

Grahame des Forges writes:

I have attempted to establish a Woodcock Group within the UK. A short Newsletter with an introduction by Monica Vizoso and a number of suggestions for study was prepared. The Newsletter received editorial notice in Bird Study and British Birds which between them reach most serious ornithologists in the UK and was noticed in several other publications. It was offered free on receipt of a stamp and about 40 people responded. Correspondence followed (to be summarised in the next edition) but it was obvious that very few amateur ornithologists were attempting to study the bird and no professional responded except J. Swift in connection with the wing collection.

Use of thermistor to record incubating behaviour: I was able to record presence/absence of an incubating bird on a nest found on 6 April. The thermistor was supplied by Grant Instruments, Toft, Cambridge, England; type FF with 15 m lead. I chose this type as having the quickest reaction to temperature change and also a flexible lead from the glass bead which I thought would enable the bead to be positioned between the eggs just clear of the bottom of the nest. In fact the bead quickly became imbedded in the nest lining and at the same time proved difficult to manage, so I now believe a bead partly enclosed in a metal tube (type ES) will be easier to use, as the tube can be pushed under the rim of the nest, parallel to the ground. The reaction time is 6 seconds as opposed to 1 second in type FF but this should not be significant. It was found by checking the recorder when the sitting bird was flushed that the time lag was 2½ minutes - due to slow cooling of the eggs and the thermistor being covered by nest material. The lead from the thermistor was connected to a clockwork-driven continuous chart recorder adapted by R. Riley. Grants supply more modern recorders (at a price) but the dry-marking process, although free from some of the disadvantages of using ink, makes a considerable noise and does not provide a continuous line on the chart. Further experience with the system described here may well show whether it is possible to detect the onset of hatching without disturbing the bird. A short note on the findings at this nest will be offered for publication in British Birds. (See British Birds 68(10) October 1975 : 421-428 for previous study.) During the last 16 days of incubation the record shows that the bird a) left the nest 5-7 times in a 24 hour period, the average period of absence in 81 instances being 29 min (range 12-46 min); b) always left shortly before sunrise, average of 13 departure times 45 min before sunrise (range 39-52 min before sunrise); c) always left around sunset, average of 15 departure times 14 minutes before sunset (range 38 min before-10 min after sunset); d) did not leave the nest during the night.

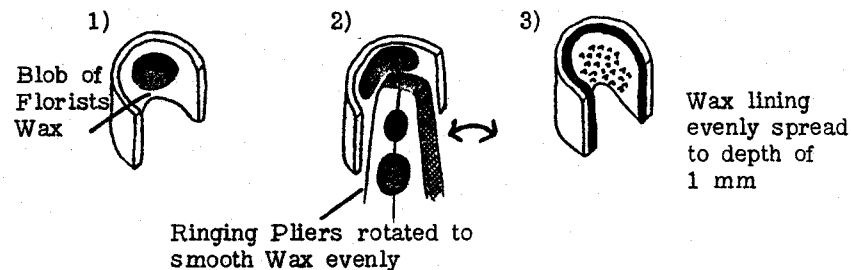
Appeal for visual method for aging young Woodcock: Can someone describe how young Woodcock can be aged approximately by appearance as opposed to weighing or measuring? Those who have reared young Woodcock recently may be able to add to older accounts and take the guesswork out of this business.

Monica Vizoso Shorten writes:

Wax lining for rings placed on newly-hatched chicks: The BTO Ringing Committee are reluctant to permit general use of this on Woodcock pulli before trials have shown it to be harmless for the bird. Because of the difficulties in ringing Woodcock pulli and re-capturing them at regular intervals under natural conditions, we asked R. & J. Jackson to test the method during their work on Vanellus vanellus. They very kindly did so, and sent the following report:

- 1) Conclusions: Due to adverse dry conditions prevailing throughout the breeding season, the results of the experiment are inconclusive, although in our opinion treatment of rings with florists wax does not appear to have any adverse effect on the development of the pullus or leg growth.
- 2) Method: Green florists' wax was applied in an even coating inside 'D' rings placed on the legs of a sample number of Lapwing pulli, during the period 2-10 May 1976, in order to reduce the internal diameter of the ring and thus minimise ring loss. (N.B. We have never encountered ring loss using 'D' rings on pullus Lapwing previously, but the species was being used as a test). As far as possible the wax was applied evenly to an overall 'depth' of 1 mm. The average measurement of a day-old Lapwing pullus tarsus at its broadest part (from 30 measured) was found to be 2.2 mm X 3.1 mm, therefore the effect of reducing the internal diameter of the 'D' ring was that the ring barely moved up and down the tarsus, but was nevertheless free to allow development.
- 3) Results: 14 one day-old pulli were ringed using the method - one from each of 10 broods of 4 or 3 and one complete brood of 4. Normally one would have expected to re-capture most of these individuals at least twice during the 30-35 days following ringing, up to the free-flight stage. However, due to the dry adverse conditions, an extraordinary number of pulli failed to survive (this had nothing to do with the experiment as those ringed in the normal manner fared no better). By 10 days from hatching the average tarsus had developed to 2.4 mm X 4.2 mm and from two individuals recaptured at this age the wax had pushed up and over the edges of the ring, the legs had developed normally and there appeared to be no adverse effects. Only one of the 'waxed ring' individuals was recovered subsequently, 23 days after hatching, and there was no trace whatsoever of wax on the ring, and the tarsus had developed normally.
- 4) Opinion: We would prefer to see a further season's work under more normal weather conditions before expressing a firm opinion, as the re-capture data are too few, but from what we have seen so far we would not consider that adverse effects result from application of the wax, and it would appear to be an ideal preventative against ring loss.
- 5) Hint on application: We found that if a small blob of wax was placed internally in the half-open ring, and then smoothed over the whole internal surface evenly with the outer edge of ringing pliers (see diagram), followed by ring application in the normal way, a more easy application resulted. Prior preparation was not favoured. The process took little time in the field.

Editor's note: The best opportunity to ring a complete brood of Woodcock is at the nest, especially if a low meshed screen has been placed round the nest before hatching (c. 2 m away) while the sitting bird is off. 'E' rings may possibly be lost from newly-hatched pulli - and every one matters. ANYONE REARING PULLI IS ASKED TO TEST WAX INSIDE RINGS FROM DAY 1 AND REPORT IN DETAIL.



Wing collection: John Swift undertook the recruitment of collectors, analysing the results, correspondence, and preparation of a report which was circulated to all collectors and summarised in The Field (27.05.76, page 977). The essential points from his report were as follows: 1975/76 was the first season when the quantity of wings collected in the UK warranted analysis. The Table shows regional results of age analysis of 446 wings. Very few were collected from Scotland and Wales.

Region	No.	Sample values imm : adult	Population values 0.95 confidence range*	Significant differences with:
1 South West	114	2.16 : 1.00	3.17-1.42 : 1	4,5,6
2 North West	37	1.31 : 1.00	2.36-0.60 : 1	6
3 North East	24	1.00 : 1.00	2.04-0.33 : 1	
4 East Anglia	133	0.99 : 1.00	1.36-0.65 : 1	1,6
5 Midlands	63	0.75 : 1.00	1.16-0.67 : 1	1,6
6 South	75	0.39 : 1.00	0.60-0.31 : 1	1,2,4,5

\* If chance factors alone are operating: but even if younger birds are more easily shot, this would apply equally in all regions.

Analysis by phases of the shooting season must be delayed until larger samples are collected. Appeals for more collectors in 1976/77 have appeared in various sporting publications, and there are plans to set up a network of regional collectors. In the meantime it is interesting to speculate on the reasons for the relatively high proportion of immature Woodcock shot in the west and the low proportion in the south. The problem of persuading people to determine the sex of shot birds remains unsolved.

Woodcock Inquiry in UK, 1975: In the summer of 1975 the Game Conservancy designed a questionnaire asking sportsmen about Woodcock on their shoots, and this was distributed in WAGBI's magazine (Annual Report Issue) and by other means. 53 replies were received. These showed that the 1974/75 season yielded slightly fewer Woodcock than average on the shoots surveyed: the largest bags being 84 (East Anglia) and 83 (Wales); in an average season only 8/43 took 50 or more Woodcock. Most Woodcock were said to be shot in December (weeks 3 & 4), January (week 1) and November (week 3). Organised Woodcock shoots were uncommon, and the majority of replies showed that less than 20 Woodcock were taken per 1,000 acres over the entire season. In 49/50 cases the birds were not sold to game dealers. Questions about willingness to offer facilities for research (both during the hunting season and the breeding season) brought an enthusiastic response, and most respondents agreed to collect wings for us. A summary is given in The Game Conservancy Annual Review 7 : 67-70 (Spring 1976). The inquiry will be repeated this year. Preliminary records indicate that larger bags of Woodcock were taken during the 1975/76 season in some regions.

Ringling: During 1975 the WRG appealed to UK ringers for a greater effort to ring Woodcock, especially pulli. While we wait to see the official results for 1975, these are the totals it is hoped to exceed:

1973 total 59 - 24 pulli, 35 juv/adult  
1974 total 61 - 23 pulli, 38 juv/adult

In each year there were 7 recoveries: 1973 saw the first recovery in Britain of a Woodcock ringed in the Channel Islands, and others had been ringed in Sweden, West Germany, Estonian SSR and Denmark. In 1974 a Woodcock ringed in Sweden and another ringed in Holland were among the recoveries. (Details published in Bird Study 22(1975) and 23(1976) as special supplements, Spencer, R. & Hudson, R. Report on Bird-ringing for 1973, ditto 1974).

New appointment for Woodcock research: The Natural Environment Research Council approved a grant to The Game Conservancy in 1976 for a 3-year study of 'The breeding behaviour of a solitary wader (Scolopax rusticola) and factors reducing productivity'. Mr. G. J. M. Hirons has been appointed and will begin work this autumn. A practical method of assessing the number of breeding Woodcock on an area is one of the ultimate aims, another is the better understanding of mortality factors amongst young Woodcock before the opening of the hunting season. Graham Hirons has recently completed a study of Tawny Owls and their prey, for a D.Phil. degree at Oxford, under the supervision of Dr. H. N. Southern. We wish him every success in his difficult task, and trust that members of WRG with experience in this field will communicate with him.

**\*\*Mystery wing tag\*\*** A Woodcock shot in East Anglia (UK) during the 1975/76 season carried a tag with no number or return address, marked NGF. Identification, please, to G. des Forges, Bowders Farmhouse, BALCOMBE, Haywards Heath, Sussex, England.

## Irish Report

Results of wing collections and February dissections : Brian Stronach :

More people were involved in the wing collection programme this year and together with the February dissections 1,359 birds were examined. This is an advance on previous years but the sample is still too small to be meaningful at a county level.

Table 1.	Period	AD : IMM	AD♀ : IMM
	Nov.	1:0.48 (185)	1:1.16 (52)
	Dec.	1:0.57 (326)	1:1.07 (29)
	Jan.	1:0.64 (404)	1:1.12 (17)
	Feb.	1:0.56 (398)	1:1.09 (233)
	Mar.	1:0.30 (17)	-
	Overall	1:0.55 (1,359)	1:1.10 (332)

Table 1 shows the adult-to-immature ratios for the months November-March. The figures in parenthesis indicate the sample size. During the same months further birds were dissected giving the ratio of adult females to immatures. Table 2 presents information collected from the main regions for the February collection, indicating adult-to-immature, adult female-to-immature ratios and the overall sex ratio.

Table 2.	Region	AD : IMM	AD♀ : IMM
	Cork	1:0.69 (166)	1:1.36 (118)
	Donegal	1:0.75 (35)	1:1.25 (27)
	Mayo	1:0.42 (98)	1:1.10 (42)
	Overall	1:0.56 (398)	1:1.09 (233)

Overall sex ratio i.e. females to males: - 1:1.07

These larger samples confirm that our adult to immature ratios are low, lower than in most other areas and much lower than in Denmark and South-West Britain, two areas where we have reliable and accurate information. There is a slight rise in the monthly figures from November to February. The March sample is too small to be meaningful. The monthly results and those for February show little difference. The ratios of adult females to immatures are also low, approximately one adult female to one immature. Using these data the overall sex ratio was 1:0.1.07 (females to males), this confirms our findings from earlier data that there is almost parity between the sexes.

These data suggest that few immature birds winter in Ireland. Information from both Denmark and South-West Britain also suggest that there are immature concentration areas. We need more information from these areas.

Finally, if our European wing collections are to be of any value in determining the state of our population, we must aim to collect weekly regional samples of a meaningful size. Monthly samples could quite easily mask the more intricate movements of the age classes.

Mist Netting of Woodcock in Ireland : John Wilson :

Montague Brown (circa. 1890) in his book 'Practical Taxidermy' refers to a method of live-capturing Woodcock by stretching a fine net across a ride line or glade and flushing the birds from cover into the net. Using the more sophisticated mist-net (12m. long, 4 shelves, 61mm. mesh) positioned across forest roads and ride lines it is possible to intercept and net Woodcock at dawn as they return to their daytime cover.

This short paper reports on a six week mist netting exercise undertaken between the 4th February and 2nd April 1976 in a thicket/early pole stage coniferous plantation in Co. Wicklow, Ireland (Gr.Ref. T 19 92).

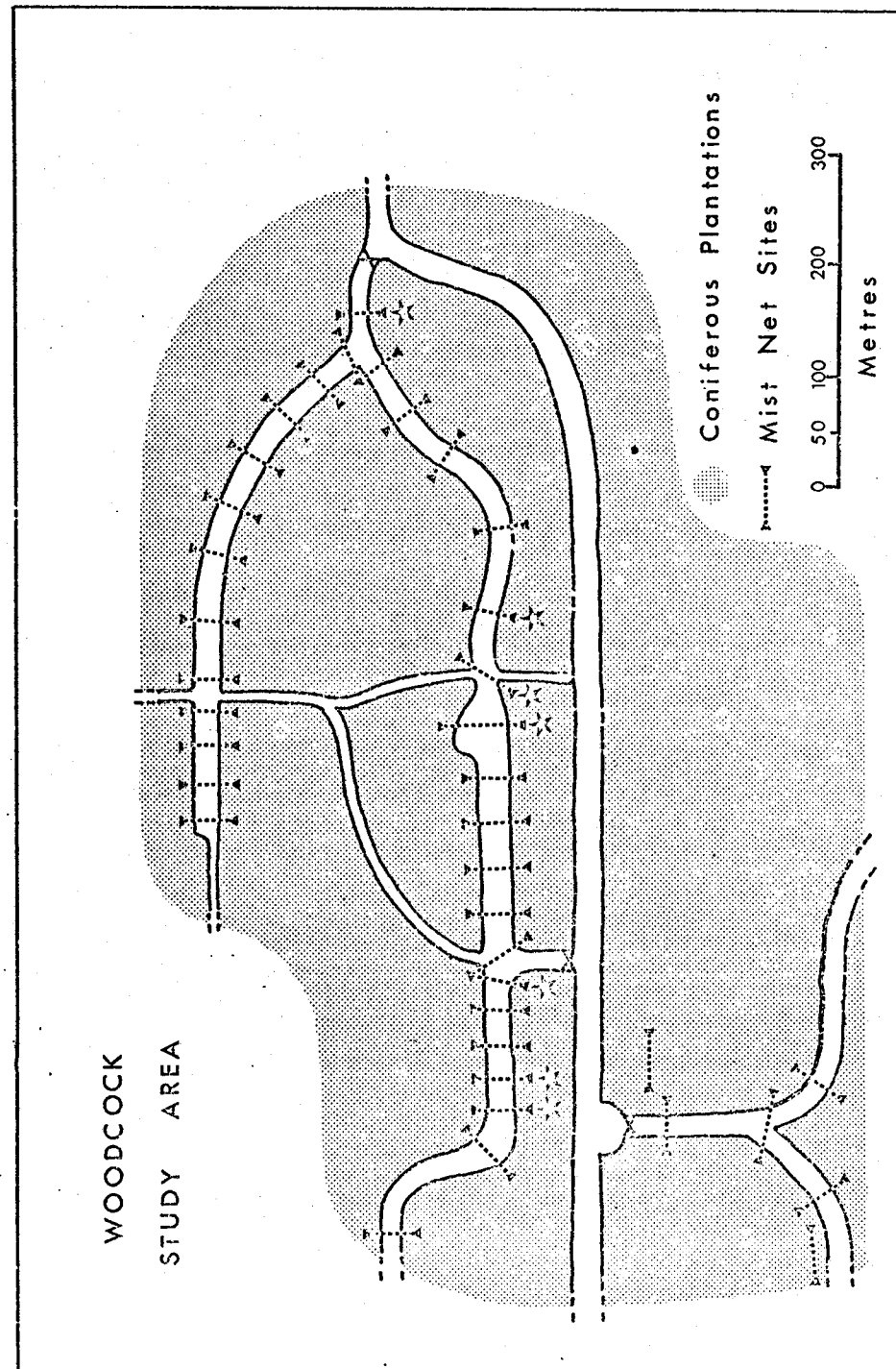
Map 1 outlines the study area showing the system of forest roads and ride lines which dissect the area. Plotted on the map are the locations where mist-nets were placed. The bamboo poles which support the nets were set back into the tree cover which consisted mostly of Norway spruce *Picea abies* and Sitka spruce *Picea sitchensis*. To ensure adequate coverage of the ground a distance of 30m. to 40m. was the average distance chosen between mist net sites. Each net was left in position for approximately 10 trap mornings and then moved to a new site. In this way each net site was covered twice in a period of 36 trap mornings with a rest period of 10 to 12 mornings in the interval. Table 1 summarises the mist-netting details.

Table 1.

Nets set per day	Net mornings	Woodcock netted	Re-captures	Total handled	Woodcock per net-morning	Woodcock per net per net-morning
18	36	29	6	35	0.97	0.05

Each morning the nets were opened before dawn and furled for the remainder of the day after each net had been inspected.

The success of this method relied on field observations which showed that in many cases the approach of Woodcock to their chosen landing site is at first steeply descending with a final flattening out of the approach run to glide 5m. to 10m. to landing. The final glide approach is most important as this takes place at 1m. to 2m. above ground level and explains why the majority of birds are caught in the bottom two shelves of the nets. On average the bottom two shelves are 0.5m. and 1.75m.



above ground level.

It also became clear that certain locations proved attractive to Woodcock, i.e. a net would catch two or more Woodcock - indicated by asterisk on map 1. The maximum number caught in a net was 4.

This short exercise has relied entirely on the ordered configuration of forestry plantations in Ireland and it is not yet clear whether this method can be used where the habitat is fragmented e.g. hazel, Corylus avellana, scrub in the west of Ireland. Much of our tree cover is in the form of ordered plantations and with sufficient man power and nets large numbers of Woodcock could be mist-netted.

Similar successes of this type were recorded at two other sites in the west of Ireland resulting in a total winter catch of 104 Woodcock, excluding retraps.

Woodcock Research at Dublin University : John Rochford :

In October 1975 I started on a three year programme of research into aspects of Woodcock population biology at the Department of Zoology, Trinity College, Dublin, in co-operation with the Forest & Wildlife Service of the Department of Lands. The aspects to be studied were principally Population Structure and Breeding Biology.

Although I commenced work rather too late in the year to make full use of the 1975/76 shooting season, some work on the structure of the wintering population was carried out and during the spring and early summer 1976 study areas were surveyed and equipment for use in the breeding studies was perfected.

From the collection of Woodcock carcasses supplied by hunters to the Department of Lands, a sample ( c.120 ) was taken, representing as far as possible the entire range of the species in winter in Ireland and upwards of 20 characters were measured or recorded for each individual. Apart from the usual range of measurements, such as weight, wing length, bill length, etc., others, such as tarsus length, bill depth, width of first primary, etc. were taken. These data are currently being studied using a principal co-ordinate analysis in the hope that they will reveal some combination of morphometric features to distinguish between the sexes. Tissue samples were collected from the same group of birds (4 samples, pectoral muscle, liver, heart and brain, per individual) for electrophoretic analysis to try to differentiate 'races' in the Irish wintering/hunted population. Specimens taken in Ireland and Sweden in the breeding season will be used to provide a reference line.

In order to study the behaviour of known breeding ♀♀, both on and off the nest, and also the pre-fledging mortality of juveniles it was decided to make use of radio-telemetry. Small radio transmitters were obtained from the U.S. and during the spring and early summer trials were carried

out with these. The construction of such miniaturised transmitters is being perfected and we are currently working to improve the life, range (considerably reduced in woodland) and housing of the transmitters as well as the directional properties of the receiving antennae. It is hoped to have all the equipment ready and operational by early spring 1977.

News from Countries outside Europe:

Iran: We received an analysis from Mr. Colin Kennedy (lately Shoot Manager for Iran Shikar) of 133 Woodcock shot between 26 December 1975 and 20 January 1976 at 6 localities. The Game Conservancy kindly made this available, and it shows such an unusual age ratio that we reproduce it here:

125/133 birds were aged: 21 adults/104 immatures or 4.95 immatures: 1 adult.

Weight averages: Adult 334 g. (range 315-350 g) N 21  
Imm. 297 g. (range 250-365 g) N 103  
Wing averages: Adult 200.8 mm (range 185-250) N 21  
Imm. 198.3 mm (range 170-248) N 104

Tail averages: Adult 87.2 mm (range 81-99) N 21  
Imm. 87.0 mm (range 72-97) N 99

Bill averages: Adult 77.5 mm (range 68-91) N 19  
Imm. 73.19 mm (range 66-80) N 103

The tarsus was not measured, nor was the bursa searched for.

India: Mr. H. Abdulali reports that Woodcock nest in the Himalayas and winter in the shola forests of SW India, some 1,400 miles away. There are hardly any records of its occurrence in the intermediate area. Although it is shot regularly in the Nilgiris, shooting returns for the past 45 years show a bag ranging from 216 in 1934/35 to only 4 in 1972/73. There is no sporting magazine in this country which could carry a circular to sportsmen, but if the Game Associations agree, copies can be attached to licences. It may be possible to collect and examine some wings, and to get someone to study the Woodcock biotope and foods in the Nilgiris. When cataloguing a collection of Woodcock from India, Mr. Abdulali found differences within his very small sample which suggested there may be two races there. An exchange of material between Ireland and India has been suggested.

CHEMICAL RESIDUES IN WOODCOCK WINGS : THE AMERICAN EXPERIENCE.

It has been suggested that Woodcock wings collected in various parts of Europe for age analysis could also be used to indicate areas where the birds were being contaminated by toxic chemicals. Although we have no evidence that Woodcock are currently picking up any serious contamination, members may like to have a brief summary of the American experience in this field.

Dr. W.H. Stickel of the Patuxent Wildlife Research Centre in Laurel, Maryland, very kindly provided relevant reprints and a very thorough and careful account of his views. Extracts are given below:

Many of the birds taken by hunters are migrating. Even in breeding areas there are likely to be migrants during the shooting season. On wintering grounds, birds may have arrived months ago or only a few hours ago. One would think that residues would be meaningless in respect to geographic origin. When lightly contaminated birds arrive in an area of contaminated feed, their residues reflect the increased contamination within days - a fair sample of birds taken on an area of high residues will reflect these high residues in a general way. Any one bird, however, might just have arrived from an area of higher or lower residues. Thus one cannot get anything better than general, regional differences from hunter-killed migratory birds.

To tie residues to an area, one has to sample in a breeding area, preferably not long before migration, and preferably by sampling well-grown young of the year. Eggs and hatchlings are likely to represent residues that the mothers brought back north with them; when or where parent birds pick up residues such as DDE or the polychlorinated biphenyls they will still have much left by the time of breeding.

We get our Woodcock wings all sorted by age and sex by the management men and we can have all the pools of them (5 of 25 per State) analysed easily at a commercial laboratory. Even so, when I look at the results I have doubts about the wisdom of continuing. I would give Woodcock-wing monitoring a low rating for cost-effectiveness. All you get from it is general, non-specific indications of residue levels. If there are trouble spots, you can miss them entirely.

We take the wings as they come in from the hunters (cut off near the body), remove the distal joint, remove the feathers, and grind them up in pools of 25. As the wings vary in dryness, one has to go by dry weight or lipid weight to express residues. Chemical methodology and analysis by electron capture gas chromatography are described in 5). Different laboratories follow different methods and get different results - if co-operators were to have their analyses done at various local laboratories results improve when methods can be standardised, but they still vary. This variation becomes critical when you wish to compare one area with another or one year with another. Even the true, natural variability of

residues is great. It is typical for distributions to be badly skewed, with a long thin tail of high readings. The only answer is to use a sufficient number of rather large pools to represent each time and place. Readings for pools are said to be normally distributed; this permits the use of normal-curve statistics. (See Zitko et al., 1974, Pesticides Monitoring Journal 8(2) : 105-109). Much of the monitoring that has been done all over the world is of little more than descriptive value because it has not been done in such a way as to permit a statistical comparison.

I believe that you would be wise to have a few birds from any possible trouble areas analysed on an exploratory basis, to see if you have problems that require further study. If you find problems, go after them as specifically and economically as you can, for residue work soon becomes horribly costly. In the U.S., an adequate organochlorine analysis of an environmental sample, with PCBs separated, will run between \$50 and \$100. Yet one needs quite a few analyses for each time and place if good comparisons are desired.

Another factor to consider is that the use of persistent chemicals is already on the downswing. DDT and dieldrin, the only pesticides commonly represented in environmental samples, are banned or in reduced use in most northern nations. PCBs are under heavy attack and replacements are being urged. There isn't much else that we know enough to analyse for. Mercury is also on the decline, and it requires an entirely different sort of analysis. Dr. Donald White feels sure that wing-monitoring for cadmium would not work. All told, the time is not favourable for beginning a monitoring scheme.

Monitoring has a strong appeal to most people who have not had to fight its demands, costs and shortcomings. People have no idea how little it really tells you and how hard it is to obtain comparability. It seems far better to sample a little here and there, searching for trouble spots, but avoiding setting up a system.

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Extract from (1) above: Wing residues as indicators

Our data allow quantification of both wing-to-breast-muscle and wing-to-carcass relationships. Calculation of the mean difference and its 95% confidence interval makes it possible to predict accurately residue levels in breast-muscle or carcass from amounts found in wings for this group of 40 Woodcock. Of course, how these relationships might be altered by variations in overall residue levels is not known.

Wing, muscle and carcass samples contain different percentages of fat. For our sample these values ( $\pm 1$  standard error) are: wing, 14.4  $\pm$  0.3 percent; muscle, 1.9  $\pm$  0.1 percent; and carcass, 9.3  $\pm$  0.6 percent. To compensate for this variable, calculations were made on lipid weight data. Nevertheless, results show significant differences among the three tissues for DDD, DDT and PCBs. Therefore, quantification is needed beyond the determination of a significant correlation coefficient if wing residues are to be used to predict residue levels in other tissues.

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We have failed to discover any major papers of scientific interest published since the last Newsletter. Please send complete references and an abstract of any which we have missed. Shorter, semi-popular and review-style articles are referred to in the text, and a few more below:

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## REVIEW OF CLUBS & PERIODICALS

### Club della Beccaccia (Italy):

The first issue of this club's periodical "La Regina del Bosco" appeared in January 1976. It contains 32 pages of illustrated reports on such topics as the formation and statutes of the club, suggestions for a programme of research, the need to prohibit shooting "all'aspetto", the proposed ringing station at Conero where Woodcock migration may be studied, features thought by various authors to denote the age and sex of a Woodcock without the need for dissection (no mention of Clausager), a general review of migration in various parts of Italy in 1975, and several pages on Woodcock-hunting men and dogs. The Club della Beccaccia has an amicable relationship with the French Club des Bécassiers, whose President, M. Louis Guizard, writes a message of welcome. Mr. Ettore Garavini is President of the Italian club. Membership is open to foreigners (10,000 L. per annum) and the Secretary is Dr. Mario Marzilli, v. Centofanti 11, CALCI. Appeals for information and articles for publication will be considered by Dr. G. Gramignani, v. Orsi 2, ANCONA. There was no mention of the WRG in this first issue, but in the second (July) it is noted that Dr. Chelini and Dr. Spano will collaborate to harmonise the activities in Italy of the WRG and the scientific commission of the CB. The paper outlining the need for the WRG (Vizoso, IWRB Bull. 38 : 56-63, December 1974) is discussed: the point is made that it does not reflect the current Italian situation. There are articles on: the origin of Woodcock that winter in Belgium, records of nesting Woodcock (during March in Italy), Woodcock with short beaks, organisation of the breeding survey in the Italian Alps and Appenines to determine S. limits of Woodcock nesting, 4pp. of regional reports on migration and hunting 1975-76, and an account of the first General Assembly (120 participants) and resolutions passed. 32 pp., illustrated.

### Club National des Bécassiers (France):

This club needs no introduction: members of the WRG will be familiar with its history and its quarterly journal La Mordorée. Space prevents more than a short notice of some contents, nos. 116-119, Oct. 1975 - July 1976, but many interesting articles appeared.

116. Oct. 1975: President Guizard's report to Migratory Birds Commission of C.I.C., the need to limit hunting where winter concentrations occur as result of severe weather (drought 1974/75) and to provide refuges; Prof. Fadat's research plans approved but hunter information of first importance; appeal for data from NE France to assist study of routes of adult male, adult female Woodcock; autumn migration reports.
117. Jan. 1976: President's motion to C.I.C. 'while awaiting results from WRG' urges that hunting methods and seasons be modified to reduce kill and shooting à la passée and during breeding season be prohibited effectively; reports from regions include interesting data from Charente - 74/75 season 1,320 birds seen, 446 shot

during general season, 278 more to 23 March; comparative hunting and breeding report, preferred nesting and wintering biotopes; resumé of nesting enquiry 1952 by CNB; from all hunting associations, only 29 hunters had ever found nests (40) and March closure of hunting not thought justified; over 20 localities noted where nests found; preliminary summary, autumn migration.

118. Apr. 1976: Count Lippens reviews and discusses records of short-billed Woodcock in Europe up to 1976; cases in France 1958-75; autumn migration in France; regional hunting reports; Dr. Fraguglione's work on Woodcock reproduction (continued from 114) refers to various works 1828-1972 on egg structure, clutch size, nest parasites, laying intervals, incubation, turning of eggs and hatching.
119. July 1976: Notes on return migration across France; recoveries of birds ringed in Finland, Holland, Sweden, USSR (total 5) and shot in France 1975/76; notes on hunting seasons in SW France, Central France, l'Herault; Woodcock and hunting in Morocco, Spain, Portugal, Corsica, Romania, Iran and Ireland; Prof. Fadat's demonstration of standard techniques for age and sex diagnosis; extracts from a Swedish article on Woodcock raised in captivity; Dr. Fraguglione's final article on reproduction - description of chicks and their growth; photograph of Woodcock with six toes on one foot.

RECOMMENDATIONS ADOPTED BY THE C.I.C.

International Council for Bird Preservation (I.R.V., C.I.P.O.) The President's Letter, no. 37, March 1976.

At the 22nd Triennial General Assembly of the International Council for Game and Wildlife Conservation held in Paris-Chambord, September 2-4 1975, the following recommendations and resolutions put forward by the Migratory Bird Commission were unanimously adopted:

Woodcock (Scolopax rusticola)

The C.I.C.

- drawing anew attention to the considerable yearly fluctuations noted in Woodcock populations
- once again urgently recommends that Governments pay the greatest attention to the problem of this species
- asks them, while awaiting the results of research on the Woodcock undertaken by IWRB and other authorities interested in the subject, to take all necessary steps to modify the Woodcock hunting methods and seasons in order to reduce the yearly harvest, and to prohibit the Woodcock hunting during breeding.

As a result, the International Council for Game and Wildlife Conservation invites all nations, and particularly those located in the south where Woodcock are accustomed to winter, to:

- take every necessary step in order to locate throughout the country the areas where, owing to abnormal weather conditions, great concentrations of these birds are to be found:
- in case such concentrations should be detected, take every necessary step in order to restrict the overall harvest within reasonable bounds.
- advise that hunting be authorised only certain days in the week or to limit the daily bag; that hunting with dogs only be allowed and that vast areas be established as reserves throughout the hunting season.
- once again draws the attention of the authorities concerned to the danger of pass-hunting for Woodcock (not to be confused with shooting at roding-time - known as flighting in Britain and Ireland) and invites all Governments to prohibit this practice.
- again recommends that any marketing of Woodcock be prohibited.

Dr.J.van Maasdijk (Netherlands) is Chairman of the Migratory Birds Commission. Monsieur Bertrand des Clers (France) is General Reporter.

OBITUARY - JOHN WARD

John Ward was enthusiastic and tireless in his encouragement of research on *Scolopax rusticola* and his death on the 30th March brings sadness to members who had the good fortune to know this charming man. He was responsible with Bill Marshall and Norman Slade for starting the North American Woodcock Workshop conferences in 1966 and last year he received the U.S. Fish and Wildlife Service's Citizens Award for his outstanding contributions to the wise management of the American Woodcock (*Philohela minor*) and the Bandtail Pigeon (*Columba fasciata*). It was his idea to invite Europeans to participate in the Woodcock workshop meeting held at Athens, Georgia in December 1974 and he worked hard to overcome all difficulties for us although he was already suffering ill health. The European Woodcock Research Group has lost a dedicated friend and members may like to know that a library of publications on *Philohela* and *Scolopax* is proposed as a memorial to him. Any enquiries, books or papers should be sent at this stage to Professor W.H. Marshall, Department of Entomology, Fisheries and Wildlife, University of Minnesota, St. Paul, Minnesota 55101, U.S.A. We offer our most sincere condolences to Mrs. Jane Ward.

MEMBERSHIP OF WOODCOCK RESEARCH GROUP

Aland	Mr. J. Harberg (Oc)
Albania	
Algeria	
Austria	
Belgium	Count L. Lippens (Oc)
Bulgaria	Dr. S. Dontchev (Oc)
Baltic SSRs	
Czechoslovakia	Dr. K. Stastny (Oc)
Denmark	Dr. I. Clausager (*)
Egypt	
Finland	Dr. M. Soikkeli (Oc)
France	Prof. C. Fadat (*)
Germany BRD	Mr. G. Nemetschek (*), Dr. H. Kalchreuter (O*)
Germany DDR	Dr. H. Prill (Oc)
Greece	
Hungary	Mr. J. Szabolcs (Oc)
Iceland	
Ireland	Mr. B. Stronach (c), Mr. J. Wilson (*), Mr. J. Rochford (*), Mr. J. Cummins (c), Mr. M. Jackson (c)
India	Mr. H. Abdulali (c)
Iran	Mr. J. Mansoori (O*)
Italy	Dr. A. Chelini (*), Dr. S. Spano (*)
Luxembourg	Mr. R. Schmitt (Oc)
Malta	
Morocco	
Netherlands	Dr. F. J. Kuiper (O*)
Norway	Mr. A. Krafft (O*)
Poland	Dr. J. Krupka (Oc), Dr. R. Dzieciolowski (Oc)
Portugal	Mr. F. Lopes (Oc)
Romania	Dr. M. Maties (*), Dr. D. Munteanu (*), Dr. J. B. Kiss (O*)
Spain	Mr. Alvaro Vizoso (O*/c)
Sweden	Prof. V. Marcströme (*), Swedish Ornithological Association (Oc)
Switzerland	Dr. D. Fraguglione (*)
Tunisia	Mr. M. Robbana (Oc)
Turkey	
UK	Mr. F. P. Errington (O*), Mr. G. des Forges (*), Mr. G. Hirons (*), Mr. J. Swift (*), Mrs. Vizoso Shorten (c) Mr. R. Knowles (c)
USSR	Prof. V. Ye Flint (c) 'Hopes to employ someone to work on Woodcock in a few weeks (23.08.76)'
Yugoslavia	Mr. J. Mikuska (O*/c)

\* - actively engaged in field research, wing analyses or surveys; c - collects and reports national statistics and news; O - no report in 1976; Oc - doubtful if doing anything at all.  
No limit to number of members per country, but one should act as national co-ordinator for reports.

INTERNATIONAL WATERFOWL RESEARCH BUREAU

WOODCOCK RESEARCH GROUP

1. The Group was formed in January 1975 after the International Council for Game and Wildlife Conservation (formerly known as the International Hunting Council or C.I.C.) had urged IWRB to set up such a group as soon as possible in order to establish basic scientific facts which would make rational exploitation of this quarry species possible.
2. The aims of the Woodcock Research Group are thus to encourage research into the behavioural, ecological and population aspects of the Woodcock's biology, and to keep the few people who work on this species in touch with one another. A yearly Newsletter summarises their research reports, lists recent publications, and provides a forum for discussion of problems, new ideas and other matters of general interest. The Research Group recognises the importance of friendly collaboration with hunters and hunting organisations, and welcomes the help it receives from the IWRB representatives in countries where Woodcock are found. Some members are engaged in full-time or part-time field research, others in collecting and analysing data over a national or international range (ringing records, breeding distribution, wing collections for age-analysis, reliability of hunting statistics, migration reports). The Group is seeking to compile a full bibliography on Woodcock, including all publications of scientific interest from each country, but this is proving to be a slow process.
3. The ultimate aim is to identify different population segments, determine their annual status, and evaluate the effects of natural mortality factors and of hunting upon abundance. Only when this can be done will it be possible to test the effects of management schemes. It is unrealistic to imagine that the aim can be achieved without years of preliminary work 1) by well trained research-workers 2) by massive effort of hunting, game management and bird-ringing organisations and 3) by administrative co-operation in the countries concerned.
4. Once preliminary research has justified the assumptions on which they are based, five kinds of survey should be set up to measure:
  - i) Population size (breeding birds) in each country.
  - ii) Productivity (number of immatures: adult females)
  - iii) Total annual bag in each and every country (using standard sampling methods)
  - iv) Proportion of population harvested (using iii) and improved ringing data)
  - v) Current survival rates, each age class and sex, for main breeding populations.

5. Research priorities:
  1. Efficient techniques for live-capture, marking, observation; for finding nests and broods; studies with marked birds during the breeding season to reveal characteristic breeding behaviour of male and female (i, ii, iv, v)
  2. Reliable distinction of either sex from plumage (preferably on wing) or from some other external feature (ii, v)
  3. A great increase in the number and a more even distribution of Woodcock ringed, especially as chicks and on wintering grounds (iv, v)
  4. Investigation of characteristic rate and cause of mortality for each age-class, especially between hatching and first migration (ii, v)
  5. Discovery of methods for judging the number of Woodcock using an area, or for obtaining a comparative index (i)
  6. Discovery of practical and uniform method for sampling and assessing the annual hunting harvest (ii, iii, iv, v)
  7. Preservation of wings from Woodcock of known sex and age-class for reference, organisation of regular and standardised wing-collection for unbiased sampling of annual kill (age-classes and eventually male/female) (ii, v)
  8. Surveys and comparisons of Woodcock habitats to reveal essential features of nesting, brood-raising, late summer and winter biotopes.
  9. Collection and analysis of data on migration routes, times and volume - in collaboration with hunting organisations and ornithological societies.
  10. Regular review of breeding distribution.
  
6. The WRG welcomes as members all those who have research programmes connected with the species. Membership is free, one pound should accompany orders for the Newsletter (to Brian Stronach, Forest & Wildlife Service, Sidmonton Place, BRAY, Co. Wicklow, Ireland).