

# GROUSE NEWS



## Newsletter of the WPA/BirdLife/Species Survival Commission Grouse Specialist Group

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## Editorial

We want to thank those of you who have contributed to GN 26. In this issue you will find information on conservation of Cantabrian capercaillie, black grouse in Austria and Caucasian black grouse. Further, there are research reports on capercaillie in Switzerland and Scotland, and on Caucasian black grouse in Georgia. Under the heading Snippets there is short book notices on the newly published autobiography of David Jenkins, capercaillie, survival of the hazel grouse, a Polish capercaillie monograph and new distribution maps of 3 palearctic grouse species, and also some other short notes. Many thanks to Anne Westerberg for help editing the language in some of the contributions.

Articles, reports from projects, conservation news; abstracts from papers (if permitted by the journal) and also other things you think may be of interest to grouse people are welcome. If anyone has suggestions for layout or other things that may improve Grouse News, please let me know.

A reminder to all of you that from 2004 the dates of publishing is **May 1** with deadline for contributions **April 1** and the fall issue **November 1** with deadline **October 1** to have 6 months between issues.

In the next issue of Grouse News to be published May 1 we would very much appreciate having some contributions from the Far East. I believe many grouse people would be interested in having some news from that part of the grouse range. Also from west in USA and Canada it would be nice having some more contributions. So far contributions from Europe are dominating.

At last we will wish all grouse people all over the world a Merry Christmas and all the best for 2004.

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## From the Chair

Just over a year has passed since the 9<sup>th</sup> International Grouse Symposium was held in Beijing, China, in September 2002. Thanks to Symposium President and Organizer Sun Yue-Hua, grouse experts from North America and Europe experienced a great opportunity to open their minds towards the nature and the grouse of China and Asia, to the growing number of excellent wildlife studies conducted in this region, but also to the many conservation problems Asian conservationists are facing.

These days, a selection of papers from the 9<sup>th</sup> International Grouse Symposium will be published in a special Proceedings issue of the International scientific journal *Wildlife Biology*. *Wildlife Biology* already published papers from the two previous International Grouse Symposia. We found this an excellent way to encourage participants to present high-quality papers at the Symposium, and to provide the Symposium and its Proceedings with wider attention. Each time, papers were selected in a peer-review process according to *Wildlife Biology*'s high scientific standards. At the 9<sup>th</sup> IGS, the number of papers submitted for publication far exceeded the previous two symposia. I take this as good indication that *Wildlife Biology* is an attractive platform for grouse scientists to communicate their results and ideas.

On behalf of all Symposium participants, I thank Editor-in-Chief Jon Swenson for providing us for the opportunity to publish in *Wildlife Biology*, and particularly also for generously granting the Grouse Proceedings 80 journal pages free of charge. This made it possible to publish all the papers that were acceptable according to peer review. The selection of papers in the proceedings nicely reflects recent trends in the study of grouse: increasing cooperation among researchers from different countries and growing integration of disciplines and approaches. So, watch out for the next issue (4/2003) of *Wildlife Biology* or check out the journal's web site at <http://www.wildlifebiology.com/>. Enjoy reading, and memorize the good time we experienced in China last year.

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## CONSERVATION NEWS

### **Cantabrian capercaillie *Tetrao urogallus cantabricus* population size and range trend. Will the capercaillie survive in the Cantabrian Mountains?**

**César J. Pollo, Luis Robles, Juan Seijas, Ángel García-Miranda and Rafael Otero**

The Cantabrian capercaillie *Tetrao urogallus cantabricus* metapopulation is the most endangered of the 12 sub-species recognised in capercaillie, listed in Appendix II of the Berne Convention; according to the IUCN Red List, the Cantabrian capercaillie qualifies for listing under criteria EN (Storch 2000). In 1998 it was reclassified in the Spanish Catalogue of Threatened Species as “Vulnerable”.

The sub-species inhabits the Cantabrian mountains of north-west Spain and is geographically isolated and separated by a distance of 300km from the nearest neighbouring population of *T. u. aquitanicus* in the Pyrenees. Already in the 1980s, the southern Cantabrian population was separated into two cores and was absent from the central area, where capercaillie was still present in the 1960s and 1970s (Castroviejo 1975).

The Cantabrian Capercaillie occupies mature beech *Fagus sylvatica* and mixed beech/oak *Quercus* sp. forests and as such is quite different from other European capercaillie sub-species, which inhabit pine *Pinus sylvestris* forests and feed mainly on pine needles. However, as in the other European sub-species, its presence is associated with bilberry *Vaccinium myrtillus*, which forms an important component of its diet.

In 1997 the Cantabrian Capercaillie Working Group requested the Autonomic Communities of Asturias, Cantabria, Castilla and León and Galicia to carry out a coordinated count in spring 1998. In comparison with the census of 1981-1982 (del Campo & García-Gaona 1983) the 1998 data show a clear decline in numbers (population decrease of 40-50%) and a strong reduction and fragmentation of the range, mainly in the peripheral areas of Galicia, Palencia Province, eastern Cantabria and in northern Asturias (Pollo 2001).

The present paper compares the results of the previous surveys (1981-1982 and 1998) with the most recent data (2000-2003) with respect to occupied leks, area of occupancy and changes in abundance.

#### **Occupied leks**

The spring reproduction census of 1981-1982 indicated an 85% occupation of documented leks, with only 45% occupied in 1998. On the southern slopes of the Cantabrian Mountains, the status of eastern populations (with a 24.7 % of occupation of leks) is worse than that of the western populations (58.4 % of occupation of leks) in 1998.

Overall, the data of 2000-2003 (reproduction and route-census methods, Martínez, 1993) show a 36.2% occupation of leks, with important differences between eastern and western populations on the two slopes. The most recent estimates for northern areas (González-Quiros et al. 2000, 2001) documented a 36.6% occupation of leks in the central and eastern sectors of Asturias (n= 213 leks) and 48% in western sectors (n= 164 leks). In the Cantabria Community only two leks are still occupied.

The proportion of leks occupied in the eastern population of the southern slope is of 23.3% (n= 120 leks), while in the western population it is 50 % (n= 114 leks).

#### **Area of occupancy**

The information given by the percentage of occupied leks has been used to determine the range of capercaillie, this parameter providing a good indication of the changes suffered by the Cantabrian metapopulation over the last two decades. The range has been equated to the “area of occupancy” according to the criteria and definitions of the IUCN (2001a, 2001b), which defines this area as the smallest area essential for the survival of the population, delineated by a circle of 2 km radius around the occupied leks. The resultant area equates quite well to the home range of the species. The “extent of occurrence” was also calculated using the same criteria and definitions (IUCN, 2001a, 2001b).

In 1981-1982 the area of occupancy covered a maximum of approximately 4672 km<sup>2</sup>, 2602 on the northern slope and 2070 on the southern (Table 1). In 1998 the total area was 2696 km<sup>2</sup>, indicating an overall reduction of 42.3% in 16 years, 35.5% on the northern slope and 50.9% in the southern.

In 2000-2003 the area of occupancy was 1986 km<sup>2</sup> representing an overall reduction of 57.5% in 22 years and 26.3% in the last five years, the greatest declines being on the southern slope over the whole time period considered (Table 1).



Table 1. Area of occupancy (in km<sup>2</sup>) of the overall range and on the northern and southern slopes in 1981-1982, 1998 and 2000-2003, and the percentage decrease within the different time periods.

	Approximate area of occupancy in 1981-1982 (km <sup>2</sup> )	Area of occupancy in 1998 (km <sup>2</sup> )	Area of occupancy in 2000-2003 (km <sup>2</sup> )	Percentage decrease in area occupied 1981-1998	Percentage decrease in area occupied 1998-2003	Percentage decrease in area occupied 1981-2003
Northern slope	2602	1679	1258	35.5	25.1	51.7
Southern slope	2070	1017	728	50.9	28.4	64.8
<b>Total</b>	<b>4672</b>	<b>2696</b>	<b>1986</b>	<b>42.3</b>	<b>26.3</b>	<b>57.5</b>

At present the population on the southern slope is fragmented into 13 populations, nine in the eastern core and four in the western. On the southern slope the decrease is different in each of the two cores, the eastern always having the greatest percentage decrease in all time periods considered (Table 2). For the eastern population there has been a decrease in the area occupied of almost three-quarters in the last two decades. The "extent of occurrence" (IUCN, 2001a) of the Cantabrian capercaillie metapopulation in 2000-2003 covers an area of 9088 km<sup>2</sup>.

Table 2. Area of occupancy (in km<sup>2</sup>) of the two cores on the southern slope in 1981-1982, 1998 and 2000-2003, and the percentage decrease in the different time periods.

	Approximate area of occupancy in 1981-1982 (km <sup>2</sup> )	Area of occupancy in 1998 (km <sup>2</sup> )	Area of occupancy in 2000-2003 (km <sup>2</sup> )	Percentage decrease in area occupied 1981-1998	Percentage decrease in area occupied 1998-2003	Percentage decrease in area occupied 1981-2003
Northern slope	1102	474	293	57.0	38.2	73.4
Southern slope	968	543	435	43.9	19.9	55.0
<b>Total</b>	<b>2070</b>	<b>1017</b>	<b>728</b>	<b>50.9</b>	<b>28.4</b>	<b>64.8</b>

### Abundance

In spite of the methodological difficulties of surveying capercaillie populations using traditional methods (Ena et al. 1984), we have considered it interesting to estimate the approximate number of birds in this population. We have also calculated abundance from the percentage of occupied leks.

The 1981-1982 census estimated 582 Capercaillie males (del Campo & García-Gaona 1983), while in 1998 approximately 280-300 males were estimated, a total reduction of 40-50% of the population, with very variable percentages depending on the zones (Pollo 2001). In the peripheral parts of the range there have been reductions of up to 75%.

The surveys carried out from 2000 on the northern slope (González-Quiros et al. 2000, 2001; Fernández-González 2001) estimated a reduction of 18.5% with respect to the 1998 census data and 50% compared to 1981-1982, mainly in the central and eastern sectors. On the southern slope the reduction in the last five years reached 23.9%, 56.6% in the eastern core and 5.17% in the western. As a whole, over the last two decades the Cantabrian metapopulation has been reduced by 56.9% compared with the 1981-1982 figures (del Campo & García-Gaona 1983).

Assuming a sex ratio of 1:1, with adults making up 70-80 % of the population, the Cantabrian capercaillie metapopulation is estimated at 627 ± 41 individuals (38.3% on the southern slope and 61.7% on the northern) in 2000-2003; of those birds 501 ± 34 would be adults.

These results show that over the last two decades the Cantabrian Capercaillie has undergone a dramatic decline, both in numbers of birds and in range (to about 57%), mainly in the eastern and central (northern slope) populations. There is a serious risk of definitive isolation of the whole Cantabrian capercaillie metapopulation into two different isolated areas (eastern and western populations).

The high degree of modification and fragmentation of the habitat, human disturbance from outdoor activities, high ungulate densities (mainly deer), poor weather conditions at crucial times of the year, and probably also other factors, reduce the productivity rate to values below 0.5 young per female per year (1997-2002). This means that the main cause of the decline during this period has been low productivity.

The populations of western Asturias and León are more stable and can be regarded at present as the more important core of the Cantabrian capercaillie metapopulation. We must preserve these populations



and encourage their expansion to peripheral areas, increasing reproduction rates and adult survival, as well as maintaining and enlarging capercaillie habitats using appropriate forestry and hunting management regimes.

If the present adverse conditions are allowed to continue, without adopting urgent measures within a long-term conservation programme, in a short time we will witness the extinction of the eastern core population and in the next few decades the total extinction of the Cantabrian capercaillie metapopulation. Using recent data (Obeso & Bañuelos 2001) different models of population dynamics predict a high probability of extinction in the next 20 years.

### References

- Castroviejo, J. 1975. El Urogallo en España. - Monografías de Ciencia Moderna, núm. 84. CSIC. Madrid. 545 pp.
- Del Campo, J.C. & García-Gaona, J.F. 1983. Censo de urogallos en la Cordillera Cantábrica. - *Naturalia Hispanica* 25: 1-32.
- Ena, V., García-Gaona, J.F. & Martínez, A. 1984. Seguimiento en la época de celo de tres cantaderos de urogallo (*Tetrao urogallus*) en la Cordillera Cantábrica. - *Bol. Estación Central de Ecología*, XIII 26: 63-71.
- Fernández-González, A. 2001. Resultados del censo estival y situación del Urogallo en el Parque Nacional de los Picos de Europa. TRAGSA, S.A.
- González -Quiros, P., Solano, S., Silva, P., Benito, J.L., Ballesteros, F. & Argüelles, J. 2000. Estimación de la población de Urogallo en los sectores central y oriental de Asturias. Octubre de 2000. Consejería de Medio Ambiente. Gobierno del Principado de Asturias.
- González -Quiros, P., Solano, S., Silva, P., Benito, J.L., Ballesteros, F. & Argüelles, J. 2001. Estimación de la población de Urogallo en el sector occidental de Asturias. Octubre de 2001. Consejería de Medio Ambiente. Gobierno del Principado de Asturias.
- IUCN 2001a. IUCN Red List Categories:Version 3.1. Prepared by the IUCN/SSC. IUCN, Gland, Switzerland and Cambridge, UK. 23 pp.
- IUCN 2001b. Guidelines for Assessing Taxa with Widely Distributed or Multiple Populations Against Criterion A. Prepared by the IUCN/SSC/SPS. IUCN, Gland, Switzerland and Cambridge, UK. 10 pp.
- Martínez, A. 1993. Contribución al conocimiento de la ecoetología del Urogallo cantábrico (*Tetrao urogallus cantabricus*). - Ph.D. Thesis, Universidad de León. 398 pp.
- Obeso, J.R. & Bañuelos, J.M. 2001. Diagnóstico de conservación del Urogallo cantábrico. - Ministerio de Medio Ambiente. Madrid. 150 pp.
- Pollo, C.J. 2001. El Urogallo cantábrico: situación actual y actuaciones de futuro. - *Medio Ambiente en Castilla y León* 16: 14-26.
- Storch, I. 2000 (Compiler). Grouse status survey and conservation action plan 2000-2004. ed. Gland. Switzerland and Cambridge WPA/BirdLife/SSC Grouse Specialist Group. IUCN, UK and the World Pheasant Association, Reading, UK. 112.

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Language edited by Anne Westerberg

## Construction projects in black grouse habitats – guidelines

Mark Wöss & Hubert Zeiler

Within the Austrian Alps, the highest densities and most stable populations of black grouse *Tetrao tetrix* are found in large interconnected habitats. But skiing facilities and other anthropogenic infrastructure have fragmented these alpine habitats (Meile 1981, 1982). Especially in the more eastern ranges, where existing habitats are of a more patchy or insular character, splitting up of black grouse populations is evident. However, the development of mountainous regions is still proceeding. Recently, wind energy plants utilize the same areas as those preferred by black grouse as habitats and displaying grounds (Zeiler & Berger 2003). In protected areas (e.g. Natura 2000 sites) the influences of constructions on Black Grouse need to be assessed. But statements differ in quality and volume depending on the expert's individual experiences, know-how and sometimes on his subjective opinion or even the employer's expectations. Our institutions were confronted with several cases of planned constructions within black grouse habitats (Zeiler 2000, Wöss 2001). From our experiences, we tried to develop recommendations for guidelines.



Usually statements concentrate only on the local scale, but effects on local habitats can bring about impacts on a local black grouse population, which can furthermore influence the metapopulation (Hanski et al. 1997). Therefore it is important to consider three different spatial scales in the assessment (Storch 1997):

- Local Scale (habitat, directly affected by the project).  
On this scale it is very important to consider both direct effects, such as mortality due to collision (Bevanger 1990, 1995; Miquet 1990; Novoa et al 1990) and habitat loss and indirect effects such as enhanced predation (Watson & Moss 2003), and disturbance (Georgii et al 1991, Rohrmoser 1997, Zeitler 1995).
- (Sub-) Population Scale (local population, coherent sites)
- Metapopulation Scale (mountain range; several local populations connected by dispersal)

Concerning compensatory measurements (e.g. substitutional habitats), additional measurements (e.g. optical marking of wires) and monitoring (e.g. counting of displaying cocks) in case of authorization of a certain project it is also important to have some guidelines and suggestions, which may guarantee a minimum quality. Additional aspects (e.g. responsibility or financial problems) may also have to be considered in this context.

We developed a rough concept of guidelines and tried to summarize the most important aspects in a checklist. At the European conference “Black Grouse – Endangered Species of Europe” in Prague we presented our ideas to grouse experts from all over Europe with the intention of giving a first input to the development of more detailed instructions for the assessment of infrastructure constructions in black grouse habitats. An article will be published in the proceedings of this conference that will be published as a special issue of SYLVIA in January or February 2004. As a result of our presentation in Prague, a working group will be founded which will further develop our first conceptual draft and try to produce a handbook, also containing examples of relevant monitoring programs and research studies. The working group will mainly be comprised of grouse experts from the Alpine countries, where conflicts between development of infrastructure and black grouse conservation are urgent.

Everybody interested in joining the working group or providing relevant information should contact Mark Wöss ([mark.woess@boku.ac.at](mailto:mark.woess@boku.ac.at)). Once more we want to stress how important it is to be able to consider and integrate experiences from relevant projects and assessment examples from different countries. We invite you all to hand in any information that could be of interest, any ideas you have and also contact addresses of persons who could provide some interesting information.

The final products and guidelines developed by the working group will be available on the website of the Grouse Specialist Group GSG (<http://www.gct.org.uk/gsg/>).

## References

- Bevanger, K. 1990. Topographic aspects of transmission wire collision hazards to game birds in the Central Norwegian coniferous forest. - Fauna norv. Ser. C, Cinclus 13: 11-18.
- Bevanger, K. 1995. Estimates and population consequences of tetraonid mortality caused by collisions with high tension power lines in Norway. - Journal of Applied Ecology 32: 745-753.
- Georgii, B., Zeitler, A. & Kluth, S. 1991. Skilauf und gefährdete Tierarten im Gebirge. - Wildbiologische Gesellschaft München e.V. 116 p.
- Hanski, I.A. & Gilpin, M.E. 1997. Metapopulation Biology. Ecology, Genetics and Evolution. - Academic Press. San Diego.
- Klaus, S., Bergmann, H.-H., Marti, C., Müller, F., Vitovic, O.A. & Wiesner, J. 1990. Die Birkhühner. - A. Ziemsen Verlag. Die neue Brehm-Bücherei. Wittenberg Lutherstadt. 288 p.
- Meile, P. 1982. Skiing facilities in alpine habitat of Black Grouse and Capercaillie. - In: Lovel, T. (ed.). Proceedings 2<sup>nd</sup> International Grouse Symposium: 87-92.
- Meile, P. 1982. Wintersportanlagen in alpinen Lebensräumen des Birkhuhns (*Tetrao tetrix*). - Veröffentlichungen der Universität Innsbruck 135. Hrsg. Univ. Innsbruck. 101 p.
- Miquet, A. 1986. Contribution à l'étude des relations entre tetras lyre (*Tetrao tetrix* L., Tetraonidae) et tourisme hivernal en Haute-Tarentaise. - Acta Ecologica / Ecologia Applicata. 7 n<sup>o</sup> : 325-335.
- Miquet, A. 1990. Mortality in Black Grouse *Tetrao tetrix* due to Elevated Cables. - Biological Conservation 54: 349-355.
- Novoa, C., Hansen, E. & Menoni E. 1990. La mortalité de trois espèces de galliformes par collision dans les câbles: résultats d'une enquête pyrénéenne. - Bulletin Mensuel, Office National de la Chasse, 1990: 17-22.
- Rohrmoser, S. 1997. Birkhühner (*Tetrao tetrix* L.) in einem Skigebiet. Raum- Zeit- Verhalten der Birkhühner am Fellhorn bei Oberstdorf im Winterhalbjahr 1995/96. - Diploma Thesis. University of Berlin.
- Storch, I. 1997. The importance of Scale in Habitat Conservation for an Endangered Species: The Capercaillie in Central Europe. - In: Bissonette, J.A. (ed.). Wildlife and Landscape Ecology. Effects of Pattern and Scale. Springer Verlag, New York Inc.



- Watson, A. & Moss, R. 2003. Impacts of ski-development on ptarmigan (*Lagopus mutus*) at Cairn Gorm, Scotland. - Biological Conservation, in press.
- Wöss, M. 2001. Wildbiologische Stellungnahme zu dem Bauvorhaben „Seilbahnen Mitterbach / Gemeindealpe“. Auswirkungen des geplanten Liftbetriebes auf Birkwild und Auerwild. P.21 + 7. - Department of Wildlife Biology and Game Management. University of Natural Resources and Applied Life Sciences. Vienna.
- Zeiler, H. 2000. Neuerrichtung Sessellift Annaberg. Wildbiologische Stellungnahme zu Auswirkungen der Lifterrichtung am Hennesteck / Annaberg auf Birkwild. - Department of Wildlife Biology and Game Management. University of Natural Resources and Applied Life Sciences, Vienna.
- Zeiler, H. & Berger V. 2003. Windräder, ein Risiko für Wildtiere? Erfahrungen aus dem ersten Beobachtungsjahr im Windpark Oberzeiring. - Weidwerkstatt-Wildforschung Heft 1: 1-8.
- Zeiler A. 1995. Skilauf und Rauhfußhühner. - Ornithologischer Beobachter 92: 227-230.

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## International conference – Caucasian black grouse conservation Ramaz Gokhelashvili

The international conference on conservation of the Caucasian black grouse *Tetrao mlokosiewiczzi* took place in Kazbegi, Georgia September 20-23, 2003. Georgian Centre for the Conservation of Wildlife (GCCW) in cooperation with Azerbaijan Ornithological Society (AzOS) and the World Pheasant Association (WPA) organized the conference. More than 30 experts attended the conference representing countries where the Caucasian black grouse is distributed (Azerbaijan, Armenia, Georgia, Russia and Turkey) and various international organizations (BirdLife International, WPA, IUCN Grouse Specialist Group, German Nature Conservation Association NABU, Swiss Association for the Protection of Birds SVS, Royal Society for the Protection of Birds RSPB and World Wildlife Fund WWF).

Reports on the current status of the Caucasian black grouse from countries where the species is found and information on international organizations were presented the first day. Second day was devoted fully to the discussion sessions.

The question of re-assessment was discussed. It was agreed that data is still lacking to assign the IUCN Red List status to the Caucasian black grouse. Further the following research methods to obtain more accurate data on species were discussed: defining distribution, determining status, understanding trends and assessing connectivity.

Finally, because the main issue now is filling the research gaps, each country was asked to identify: (1) Urgent needs for research; (2) Current opportunities for research; and (3) Required assistance. Countries have presented practically similar thoughts on these subjects that can be summarized as following:

- Research needs: distribution and population size, habitat requirements, connectivity, and threats.
- Current opportunities for research: some data already exist; some human resources are available; some projects are already in progress or expected to start; IBA programs in each country can provide more data.
- Required external assistance: general communication; training in research and data analyses; coordination of methods.

The opportunity to create the Caucasian Black Grouse Working Group (CBG Working Group) to promote communication and cooperation among experts and organizations both within countries where the species is found and at the international level was also discussed. This can be part of WPA/BirdLife/SSC Grouse Specialist Group and can function locally in the Caucasus region. It was agreed that communication among participants should be continued to finish this question.

The excursion to Caucasian Black Grouse habitats was organized at the end of the conference.

Financial support to organize this conference was provided by the Regional Environmental Centre for the Caucasus (REC-Caucasus) through the Swiss Transboundary Grants Programme (the Swiss Agency for Development and Cooperation, SDC), WWF-Caucasus Program, BirdLife International, Swiss Association for the Protection of Birds SVS and World Pheasant Association.

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## RESEARCH REPORTS

### How susceptible are capercaillies *Tetrao urogallus* to human disturbances? – A new PhD project

Dominik Thiel

#### Introduction

Human disturbance of capercaillie *Tetrao urogallus* is widely considered as a serious conservation problem. Many threatened local populations in Central Europe are supposed to be negatively affected by tourism and leisure activities. The popularity of outdoor activities is still growing. In some regions habitat management includes actions to reduce the effects of human disturbances. However, little attempt has been made so far to measure the susceptibility of capercaillie to disturbance. This PhD study investigates the effects of human disturbances on capercaillie in the Swiss Alps and in the Black Forest/Germany, based on measurements of physiological stress response and habitat use.

#### State of the art

Most disturbance related bird studies focused on the behavioral response to stressors. The physiological stress response was used to measure the effects of natural stress such as environmental conditions. Today, the physiological response to stressors can be evaluated non-invasively by measuring metabolites of stress hormones in faeces. Elevated levels of glucocorticoids indicate that animals are physiologically stressed. Chronic high levels of glucocorticoids result in immunosuppression, suppression of reproductive behavior and changes in foraging behavior a.s.o.

#### Study objectives

The first part of the present study will test the relationship between winter tourism activity and glucocorticoid level in faeces. Study areas include sampling sites with high level of human winter activities and unexploited and undisturbed control sites. Faeces will be collected from nocturnal roosting trees to measure the basal level without short-term stress responses. Stress hormone analysis will test:

- The effect of modulating factors such as sex, season and testosterone on the corticosterone level under constant environmental conditions (plasma samples from captive Capercaillie).
- Changes of corticosterone basal levels according to temporal and spatial variation of winter tourism activities (repeated fine-scale feces sampling from radio-tagged capercaillie during one winter season).
- Differences of corticosterone basal levels between capercaillie living in habitats with different levels of human disturbances (large-scale feces sampling in capercaillie populations with one sample per individual and winter).

For the endocrinological analysis we cooperate with the laboratory for Biochemistry at the Veterinarian University in Vienna (Prof. R. Palme) and the Washington State University (School of Biological Sciences, Prof. H. Schwabl).

The second part of the study focuses on the behavioral response of capercaillie to winter tourism. Therefore capercaillie will be radio-tagged within skiing areas in the Black Forest: Fine-scale space use will be determined according to temporal and spatial activities of winter tourists. Research questions include disturbance related habitat use, habitat preferences as well as seasonal and daily habitat shifting. The radio-telemetry study will be conducted in cooperation with the FVA Baden-Württemberg (Department of Landscape Management, Division of Wildlife Ecology, Dr. R. Suchant) and the Max-Planck-Research-Centre for Ornithology (Vogelwarte Radolfzell, Prof. P. Berthold).

In the study areas and sampling sites data on disturbance level (quantitatively measured and qualitatively validated) and winter habitat quality will be recorded. I intend to correlate data on stress hormone concentrations and spacing behavior with different factors such as disturbance levels and habitat quality. The conclusions of this study should allow the set up of disturbance related guidelines for conservation action plans. Please contact me for any questions or similar research interest.

#### References

- Palme, R. & Möstl, E. 1997. Measurements of cortisol metabolites in faeces of sheep as a parameter of cortisol concentration in blood. - International Journal of Mammalian Biology 62 (Suppl. II): 192–197.
- Wingfield, J.C., Hunt, K., Breuner, C., Dunlap, K., Fowler, G.S., Freed, L. & Lepson, J. 1997. Environmental stress, field endocrinology, and conservation biology. – p. 95–131 in Clemmons, J. R.





- & Buchholz, R. (eds.). Behavioral approaches to conservation in the wild. - Cambridge University Press, Cambridge.
- Wingfield, J. C. & Romero, L. M. 1999. Adrenocortical responses to stress and their modulation in free-living vertebrates. - p. 211–234 in McEwen, B. (ed.). Handbook of Physiology - Coping with the Environment. - Oxford University Press, New York.

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Language edited by Anne Westerberg.

## **Experimental burning, cutting and cattle grazing in a Scottish native pinewood important for western capercaillie *Tetrao urogallus***

### **Mark Hancock**

Scotland has lost 99% of its original native pinewoods, but still retains a small capercaillie *Tetrao urogallus* population. This rapidly-declining population is the focus of major conservation effort. Substantial support for capercaillie conservation has recently been secured through a five-year EU-LIFE project (see Kenny Kortland's article in Grouse News 25). Most of the population occurs in plantations but highest densities occur in the tiny fragments of ancient native pinewood.

Abernethy Forest (57°15'N, 3°40'W) holds *c* 15% of Scotland's remaining native pinewood and is an important site for capercaillie. It is owned by a non-governmental organisation, the Royal Society for the Protection of Birds (RSPB), and protected under both European and national legislation, which is put into effect by the government agency Scottish Natural Heritage (SNH).

Selective timber extraction over the past few hundred years at Abernethy has increased light levels at the forest floor. Recent deer culling, aimed at reducing browsing to allow young trees to grow, has reduced grazing levels. These factors have helped produce a tall, heather *Calluna vulgaris* dominated field layer over much of the site. Pollen records show heather to be more dominant now than it was in the past.

Studies at Abernethy and elsewhere have demonstrated the importance of invertebrate-rich bilberry *Vaccinium myrtillus* stands to capercaillie broods. Methods of manipulating shrub layer vegetation, to increase bilberry, and assist other management aims like greater tree regeneration are now being investigated by small-scale, experimental management trials. Trials involve introducing an element of disturbance of the shrub layer, using cattle, fire and hand cutting. Long-term usage by man makes it hard to estimate what typical levels of natural disturbance from large grazers and fire would have been in Scottish pinewoods. But occasional natural fires, and trampling by large herbivores, now extinct in Britain, like Elk *Alces alces*, may have been important in the past and management, which mimics such processes, is preferred.

Two trials have been set up: a cattle grazing trial and a more detailed fire / cutting experiment. These small-scale trials have been approved by SNH, but if results suggest that there is potential for developing these techniques as management over larger areas, then further approval would have to be sought.

#### **The cattle grazing trial**

A 15 ha area of old forest, with a heather-dominated shrub layer, was selected for this trial. The area was fenced with temporary electric fencing. Twelve heifers (young female cattle) of a traditional local breed (Highland Cattle) were released into the area for three months in late summer 2001. The animals concentrated on the few grassy areas, and ate little of the heather. They were given extra food every day so that their condition was maintained. As they moved around the area between feeding, loafing and drinking places, they trampled the tall heather extensively. Before and after grazing, vegetation surveys were carried out in the grazed area, and a control area. These recorded the composition and structure of the field layer, and the distribution of vulnerable features like pine saplings and standing dead trees.

#### **The fire / cutting experiment**

Twenty-five sites, each of 0.2ha were selected at random within the old forest at Abernethy. Each site held three plots, assigned at random to be burnt, cut, or left as controls. Burning and cutting took place in



early spring 2003. Burning methods were developed by Desmond Dugan, Site Manager, from traditional Scottish moorland heather-burning techniques. A team of 6-10 trained staff were present, with four water pumps. First a firebreak was established on the downwind end of the plot, by wetting the vegetation. The vegetation within the plot was then ignited in a series of 2-5m strips, starting from the downwind end of the plot. The edges of the plot were protected during the fire as necessary using further water from the pumps. Fire monitoring work included measurements of ignition patterns, fire spread behaviour, fuel moisture and consumption, flame lengths and weather conditions. Cutting at the assigned plots was carried out later using a hand-held petrol-driven strimmer, fitted with a metal blade approximately 30 cm in diameter.

Data were collected from the experimental plots in the summer before the treatments were applied, and in subsequent summers. These comprised composition and structure of the shrub layer, invertebrate numbers and species, deer and grouse usage (from dung counts) and forest stand composition.

### **The future**

Responses will be monitored from both experiments for a number of years, with the first full review early in 2005. This will involve quantifying changes in the shrub layer, impacts on non-target features such as ants nests, and, for the fire-cutting experiment, changes in invertebrate communities (including species important as capercaillie chick prey items) and usage by grouse and deer. After this and later reviews, the suitability of these techniques, for conservation management at Abernethy and other Scottish native pinewoods, will be assessed. This will help us develop better techniques to aid the recovery of capercaillie in Scotland, and properly manage its native pinewood habitat.

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## **New project - Caucasian black grouse research, monitoring and conservation management in Georgia**

### **Ramaz Gokhelashvili**

Georgian Centre for the Conservation of Wildlife (GCCW) in association with World Pheasant Association, Department of Fish and Wildlife Resources, University of Idaho (USA) and BirdLife International (European Division Office) have developed a project proposal as a response to the RFP - Rare Faunal Species Conservation Management in Georgia for Environmental Investment Program (EIP). This program is established by Baku-Tbilisi-Ceyhan and South Caucasus Pipelines operated by BP.

The project proposal is accepted, and its implementation will be initiated in January 2004. The overall approach of the proposed project is to systematically build up our knowledge and capacity on black grouse from its current low level so within two years it will be possible to make appropriate management recommendations that are both scientifically and practical. To ensure the implementation of these plans, the national and local qualifications will be built up in Georgia, the regional collaboration will be promoted, and the public awareness will be raised to guarantee the support from public and decision makers.

The specific objectives of the project are to:

- Compare available data on the species and identify areas for intensive studies.
- Conduct ecological and population studies (population biology, spatial distribution, habitat requirements and population genetics) essential for the development of an effective monitoring plan and for the feasible management procedures.
- Develop a sustainable and effective species-monitoring plan, and create the capacity at local and national levels to initiate it.
- Establish goals for conservation of the species and make a management plan based on the research.
- Promote co-operation with other Caucasian black grouse conservation programs in the region and internationally.
- Increase public awareness about the project activities and goals.

Project results will be regularly distributed among all interested experts and organizations.

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## Autumn display in the Caucasian black grouse *Tetrao mlokosiewiczii* – observations in the Kasbegi Reserve, Georgia

Siegfried Klaus & Ilse Storch

The Caucasian black grouse is endemic to the Greater and Lesser Caucasus and some adjacent mountain ranges in Armenia, Azerbaijan, Georgia, Iran, Russia and Turkey. It is a species of special conservation concern (Storch 2000). BirdLife International listed the Caucasian black grouse as a Species of European Concern, category 2, its status being “insufficiently known” (Tucker & Heath 1994). In the 1996 IUCN Red List of Threatened Species, it was listed as “near threatened”. In its 2000 Red List of Threatened Species, however, IUCN included the Caucasian black grouse as “data deficient” (Hilton-Taylor 2000). Clearly, its conservation status is insufficiently clarified (Storch 2000). Reviews of the present knowledge were given by Potapov (1985), Vitovich (1986), Klaus et al. (1990, 2003), Storch (2000), Sultanov et al. (2003) and Gokhelashvili et al. (2003).

In order to clarify the status and to stimulate research in the Caucasian countries an international conference “Caucasian Black Grouse Conservation” was held in Kasbegi/Georgia (September 22-23, 2003). Caucasian black grouse were known to occur in the nearby Kasbegi reserve (8,700 ha).

### Observations

During the conference we spent a few mornings and evenings unsuccessfully searching for Caucasian black grouse at grassy slopes above 2,200 m a.s.l., where displaying males had been observed in spring 2002 (Ueli Rehsteiner, pers. obs.). On September 23, we went to the high mountains. We placed our tents at 2,750 m a.s.l., just in front of the impressive snow-covered peak of Mt. Kasbek (5,047 m a.s.l.).

In the evening of September 24, Ilse was the first to detect an aggregation of adult (recognized by their black plumage) males of the Caucasian black grouse feeding in a northern slope between 2,450 and 2,700 m a.s.l. covered by the dense shrubs of *Rhododendron caucasicum*. We observed this flock in the following mornings and evenings up to September 26. In the evening of September 25, up to 18 Caucasian black grouse (black adult males, grey yearlings and a few brownish females) were counted. The birds were intensively feeding in a northern slope between 2500–2700 m a.s.l. covered with extended shrub areas of *Rhododendron caucasicum* intermixed with fruiting shrubs of *Vaccinium myrtillus*, *Vaccinium vitis-idea* and *Empetrum nigrum*. The flock spent the whole day in this dense and food-rich shrub vegetation. The moulted feathers we found in the shrubs indicated long-term presence of the birds in this vegetation type.

Around 4.30 p.m. the first males became active, left the cover, and started to expose themselves on rocks or open areas. Rarely they performed flutter jumps and territorial flights. On a few occasions we observed males chasing each other or courting around a nearby female. The dominating activities were intensive feeding and “standing on the post”, a typical behaviour in this species, used to demonstrate their presence without spending much energy. Individual distances between post-standing or feeding cocks was very small – sometimes less than 1 m only, showing great intraspecific tolerance in autumn in this species. Before 8 p.m. the birds disappeared into the dense shrub cover, and spent the night there on the ground. In the mornings the birds were intensively feeding, and display behaviour was almost absent. Also, the numbers of birds visible during the mornings was lower than during the evenings.

### Discussion

According to earlier descriptions, the Caucasian black grouse shows a preference for dense cover of *Rhododendron* shrubs or high grass after finishing spring display in the middle of June, through the moult in July and August (Vitovich 1986). Then the Caucasian black grouse is very silent and hard to find, until it becomes more active in autumn.

Autumn display in this species was described by Tkachenko (1966) and Vitovich (1986). According to their observations, old males form flocks and are active on or near to their traditional spring display grounds; a territory system, however, is not established in autumn. Our observations agreed with these descriptions: the birds were feeding together in an extended area of about 50 ha, mostly walking, sometimes flying and moving around.

At least where spring and autumn habitats are tightly interspersed or in close vicinity, autumn activity of Caucasian black grouse could be used to locate potential lek sites and to count birds more easily as compared with early spring when high snow makes access to the high mountain areas difficult and sometimes impossible.



### Conclusions

- In autumn (September – October) Caucasian black grouse form male-dominated flocks near their traditional spring display sites (leks). The birds feed intensively during the mornings and evenings, and mainly on northern slopes rich in ericaceous shrubs (*Rhododendron caucasicum*, *Vaccinium* spec.). Adult males commonly expose themselves on elevated rocks or hill-tops (“standing on the post”). Flutter jumps, flights and courtship behaviour were rarely observed. Individual distances were small.
- For the detection of potential lek sites and for counting birds the autumn also seems an appropriate time when access to the high mountains is easier.

### Acknowledgements

Our thanks are due to Phil McGowan (WPA) and Ramaz Gokhelashvili (GCCW) and his team for organizing a very fruitful meeting at Kasbegi/Georgia. Thomas Gottschalk and Ueli Rehsteiner took part in our observations.

### References

- Averin, J.V. 1938. The Caucasian Grouse. - Trudy Kavkazsk. gos. zapovedn. 1: 57-86 (in Russian with English summary).
- Gokhelashvili, R., Reese, K.P. & Gavashelishvili, L. 2003. How much do we know about the Caucasian Black Grouse? - Sandgrouse 25(1): 32-40.
- Hilton-Taylor, C. 2000. 2000 IUCN Red List of Threatened Species. - IUCN, Gland, Switzerland and Cambridge, UK.
- Klaus, S., Bergmann, H.-H., Marti, C. Müller, F. & Wiesner, J. 1990. Die Birkhühner. - 2. Aufl. N. Brehm-B. 397. Ziemsen, Wittenberg.
- Klaus, S., Bergmann, H.-H., Wiesner, J., Vitovich, O.A., Etzold, J. & Sultanov, E. 2003. Verhalten und Ökologie des Kaukasusbirkhuhns *Tetrao mlokosiewiczii* – stumme Balz am steilen Hang. - Limicola 17: 225-268.
- Potapov, R.L. 1985. Hühnerartige (Galliformes). Familie Raufußhühner (Tetraonidae). - Fauna der UdSSR, Vögel Bd. 3, Ausgabe 1, Teil 2. Nauka, Leningrad (in Russian).
- Storch, I. 2000. Grouse Status Survey and Conservation Action Plan 2000-2004. - WPA/BirdLife/SSC Grouse Specialist Group/IUCN. Gland, Cambridge.
- Sultanov, E., Karimov, T., Klaus, S. & Etzold, J. 2003. - Qafqaz Tetrasi (Das Kaukasusbirkhuhn). Azerbaijan Ornithol. Soc., Baku (in Aserbaidshen).
- Tkachenko, V.I. 1966. Ökologie der Hühnervögel des Hochgebirges im Nordwestkaukasus. - Trudy Teberdinskavo zapovednika 6: 5-144 (in Russian).
- Vitovich, O.A. 1986. Ökologie des Kaukasischen Birkhuhns. - Trudy Teberdinskavo zapovednika 10: 165-309 (in Russian).

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## NEW BOOKS

### **Of Partridges & Peacocks - and of things about which I knew nothing**

Autobiography by GSG member David Jenkins

From the eared-pheasants of central China and the green peafowl of eastern Java, the lions and high mountain pheasants of India, Pakistan and Nepal, and the capercaillies of far northern Russia and the Pyrenees, to the red grouse, shelducks and otters of eastern Scotland, *Of Partridges & Peacocks* chronicles the studies, experiences and observations of one of Scotland's top ecologists. The book is written for country lovers and amateur naturalists as well as for game biologists, conservationists and students interested in an adventurous life.

Throughout his career, Professor David Jenkins has been driven by a desire not only to answer questions in his own research but especially to encourage and inspire others more talented than himself.

A keen birdwatcher who first became a vet and subsequently a professional ecologist with the Scottish Landowner's Federation, Aberdeen University and the Nature Conservancy, David Jenkins was the first to recognize the importance of ground cover and the bird's social behaviour in regulating partridge populations, and his research team was the first to demonstrate that declines in red grouse numbers were largely due to the failure to manage heather moors effectively.

David Jenkins had a big influence on the initial research and development of the Nature Conservancy and the Institute of Terrestrial Ecology (now the Centre for Ecology and Hydrology) in Scotland, and introduced scientific thinking into the work of the World Pheasant Association. His book describes the growth of these organizations and the ways in which ideas for conservation research developed in Scotland and has influenced game bird conservationists overseas. He believes in multidisciplinary research in ecology, with scientists working most effectively in small groups, and he emphasises the roles of ecologists in integrating policies for land use, with work on a big estate in southeast England as a practical example.

His book is intended not as a close on a life's work but as a stimulus to sustainable land use and as a baton to stimulate debate and future research among a new generation of wildlife conservationists, ecologists and land managers.

For a more detailed summary and a review of the book, see the GSG website.

<http://www.gct.org.uk/gsg/>.

Copies of this book can be obtained from:

TLA Publications; P.O. Box 62,

Aboyne, Aberdeenshire,

AB34 5YF, U.K.

Price £21.00 (+ £4 packing and postage within Europe, £9 elsewhere).

### **Polish capercaillie monograph**

Zawadzka D. and Zawadzki J. 2003. *Głuszczyk [Capercaillie]*. Naturalists' Club, Swiebodzin, Polen.

ISBN 83-87846-26-0; 152 pages, with 20 tables, 18 figures, and 20 colour photos.

A book on capercaillie in Poland was published by the Naturalists' Club in Swiebodzin in spring 2003 (in Polish with English and German summaries). This is the fourth Polish monograph about capercaillie (the first was published in 1908). It presents information about numbers, distribution and densities of capercaillie in Europe and Asia and population trends in all European countries. Changes in number and distribution of isolated populations in Poland during the last century are described. Data on habitat preferences, social organization of population and size of territories is also given. Based on literature, information about breeding biology, lekking, nesting, production of young, major causes of loss of chick, population fluctuations, age structure, sex ratio and annual mortality is given. The monograph includes data on food and feeding habits, and winter ecology. Information about hybrids and abnormally behaving capercaillie is also described. The main threats of capercaillie populations nowadays and in the past, and the history of protection in Poland and Europe as well as the actions needed for saving this forest grouse is given. The last chapter discusses the capercaillie in the Polish culture, mainly literature and paintings.

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## New book on capercaillie

**Bergmann, H.-H., Klaus, S. & Suchant, R. 2003: Schön, schein, schützenswert - Auerhühner [Beautiful, secretive and deserving protection – The Capercaillie]. G. Braun Buchverlag, Karlsruhe, Germany. 108 pp, 90 figures including 78 colour photographs. In German. Hardback, ISBN 3-7650-8283-X, €24.80.**

Three members of the Grouse Specialist Group have combined their shared passion for capercaillie into the production of a new book. Grouse biologists Hans-Heiner Bergmann and Siegfried Klaus, both authors of the great German capercaillie monograph (Klaus *et al.* 1989), have joined forces with Rudi Suchant, a forester active in capercaillie management in the Black Forest. It is easy to see that the new book has its origins in Klaus *et al.* (1989), but it addresses a different and much broader readership. While Klaus *et al.* (1989) functions as the specialized scientist's "All you ever wanted to know about capercaillie", and is therefore a demanding read, Bergmann *et al.* 2003 is a beautifully illustrated, but still informative, coffee-table book. The grouse scientist will miss "hard" facts and references to the original literature, but will find the book very useful in raising sympathy for capercaillie amongst less convinced family and friends as well as with land managers and decision makers.

The book offers much easy-to-digest information and explanations that lead the reader to a basic understanding of capercaillie. After an introduction into the history of capercaillie hunting and research, the authors describe capercaillie habitats in the boreal forest, in the Alps, and in the lower mountain ranges of central Europe. The majority of chapters are dedicated to various aspects of capercaillie behaviour, biology, and ecology, including plumage and field characteristics, diet, predators, display, reproduction, and adaptations for survival. Two chapters discuss threats to capercaillie populations and present central European examples of approaches to conservation. The final chapter briefly introduces the other European grouse species. The authors' clear, narrative style makes the book a pleasant read. The reader will also welcome the extensive index, and will find a few suggestions for further, mostly popular reading on capercaillie.

There is very little in the book that I would not agree with. The only major flaw I found is the distribution map on page 89. Information of very different resolution and quality has been blended into a single map – as a result, the range in the Alps incorrectly appears unfragmented in Germany, Italy and Slovenia, but extremely patchy in Switzerland and Austria. Some areas have been missed altogether, e.g., much of western Austria, the Fichtelgebirge in Germany and Puszcza Solska in Poland.

The book is a welcome addition to the German-language capercaillie literature. I recommend the book primarily to non-professionals interested in capercaillie, wildlife ecology, and conservation. Capercaillie specialists, however, will admire the many beautiful photographs, which show more than the "standard" displaying cock.

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## New distribution maps of 3 palearctic grouse species: Hazel grouse, Chinese grouse and Siberian spruce grouse

**Martens, J., Eck S. and Y.-H. Sun (eds). Atlas der Verbreitung paläarktischer Vögel, volume 20, ISBN 3-9807089-1-8, size approximately 24 x 34 cm, 94 pages, maps partly to be folded out, size approx. 71 x 34 cm, several in colour, 1 colour plate, Euro 36,-. Available from J. Martens, Institute of Zoology, Saarstrasse 21, D-55099 Mainz, Germany ([martens@uni-mainz.de](mailto:martens@uni-mainz.de)).**

The following grouse species are described in this volume: Siberian grouse *Falcapennis falcapennis* (S. Klaus & A. V. Andreev), hazel grouse *Bonasa bonasia* (S. Klaus, J. Martens, A. V. Andreev & Y.-H. Sun) and Chinese grouse *Bonasa sewerzowi* (S. Klaus & Y.-H. Sun). Further Solitary snipe *Capella solitaria*, Zappey's parrotbill *Paradoxornis zappeyi*, Willow tit *Parus montanus*, Sichuan jay *Perisoreus infaustus*, Pinkish-backed rosefinch *Carpodacus rhodochlamys*, Large Tibetan snowfinch *Montifringilla henrici* are treated.

The project "Atlas of the distribution of palearctic birds" was founded by the famous German ornithologist Erwin Stresemann in the 1950s, and from 1960 20 volumes were published describing 226 species. The aim of this atlas project initially was and still is to delimit distributional boundaries of palearctic bird species as meticulous as possible. The unparalleled excellence of this long-lasting project is its accuracy in documentation of every single record mentioned. In such a vast area as the Palearctic, it is impossible to search and document every record published. This is only the case in species occupying



extremely small areas or in such species, which occupy areas that are highly fragmented and scattered over larger territories. In most cases, the borderline records are documented as to finally find out the actual (and/or past) area limits. All the peripheral records are numbered and the related bibliography is presented in detailed lists including also the coordinates so every finding can be traced to its origin. Over the decades, the Curator of the Ornithological Section of the St. Petersburg Museum of the Russian Academy of Science was a co-editor and often also co-author. Also in this last volume Russian ornithologists largely contributed to the results. This is a matter of necessity as the huge and highly split Russian (formerly Soviet) ornithological literature is almost impossible to be correctly surveyed by westerners. A further step to better investigate the rich east palearctic avifauna is to incorporate also Chinese scientists, and this luckily happened in the present volume. Such atlas projects are indispensable tools not only for ornithologists but also for ecologists, conservationists, evolutionists, biographers and systematists. Today, nearly every field guide offers distributional maps, but according to the circumstances, they are not precise enough, mostly even poor, and are not a basis at all for further scientific purposes.

The text is in German. An extended English summary with the topics: Relationships, Distribution, Ecology, Acoustics and Migrations is included.

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## **Survival of the hazel grouse *Bonasa bonasia rupestris* in the Jura Mountains. Between board and lodging**

**A special title « Gélinotte des bois – Hazel grouse – *Bonasa bonasia* » in the next « Bulletin neuchâtelois des sciences naturelles (Bull. Neuchâtel. Sci. Nat.) » (ed. Blaise Mulhauser). 168 pages (9 papers about *Bonasa bonasia rupestris*, 7 in french and 2 in english). Format 17x24 - 168 pages - 68 illustrations and more than 68 photos and sketchings. € 30.- (without the post taxes).**

Summary: The total population of hazel grouses *Bonasa bonasia rupestris* of the Jura is estimated between 2300 and 3800 pairs. Although it is not yet threatened, it appears to be more and more isolated from other populations, due to the disappearance of the bird's habitat at low altitude. Locked up in the beech groves (Abieti-Fagetum) and fir forests (Abieti-Piceion) of the High-Jura, it seems it can face the coming change of its habitat. But we don't know for how long. Investigating the habitat and food requirement of the species, we come to the conclusion that a forestry practice consisting of the planting of bushes and fruit trees on a patchwork manner would compensate the negative effects of global warming.

This book can be obtain at my private adress

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## SNIPPETS

### Translation & interpreting

Some grouseers may remember Brigitte Geddes from the north of Scotland who assisted us with English-German interpreting at several symposia in the past - Dalhousie, York, Lam and Elverum. Although we haven't seen Brigitte for a while, she has been following GN events with interest. Brigitte has asked me to let you know that she has been studying for a BSc in Environment & Heritage studies since 2001 and would welcome translation work into German in the fields of EIA/EIS, NVC or any other scientific publications (source text English) you may wish to publish in German scientific journals or at international conferences/symposia. Brigitte is a fully qualified interpreter and member of both the Institute of Translation & Interpreting and the Institute of Ecology and Environmental Management. Her email address is [BrigitteGeddes@aol.com](mailto:BrigitteGeddes@aol.com).

### The GSG keeps growing

By the end of 2003, the IUCN Grouse Specialist Group had 115 registered members in 30 countries. In particular, our representation has become better in eastern and central Europe and Caucasus Region, but also in North America. If you are looking for contacts in any particular part of the grouse range, or for experts on certain species or topics, please contact the Chair at [ilse.storch@gmx.de](mailto:ilse.storch@gmx.de) or any of the Committee members (see <http://www.gct.org.uk/gsg/> for contact details).

### Proceedings from the 9<sup>th</sup> International Grouse Symposium

A selection of 19 high-quality contributions from the 9<sup>th</sup> International Grouse Symposium (China, September 2002) will be published in issue 4/2003 of the international scientific journal *Wildlife Biology*. See the journal's web site at <http://www.wildlifebiology.com/>. All abstracts from the symposium will be made available at the GSG website at <http://www.gct.org.uk/gsg/>.

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