

The Corncrake (*Crex crex*) in Moldova

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1. Introduction

In this country the corncrake is one of a small numbered species of nesting birds whose population status is of concern due to its decline.

Arrival in the nesting areas occurs at the beginning of April with nest building in mid May and eggs laid at the end of May. Corncrakes in passage were observed with migrating quails (*Coturnix coturnix*).

2. Development of knowledge about the corncrake in Moldova

At the beginning of the 20th century, up to the 1970s, corncrakes were a rather numerous and

common species in Moldova populating wet meadows and hay meadows with tall grass. They were not uncommon in meadows and clearings in patch woods, in the forests on flood plains and in the central area of the country - Codrii. Some authors (AVERIN & GANEA 1970; AVERIN et al. 1981) mentioned that in almost all the suitable habitats, during evening and early morning hours, calls of 3-7 (up to 9) males could be heard from an observation site. From the 1950s until the beginning of the 1980s ornithologists surveyed about 80% of the country for numbers of birds. The results of the survey contributed to the estimate of the populations of the majority of species and of trends and changes in their densities. Later, these data served as a basis for an attempt to compile an Atlas of nesting birds of Moldova for The Programme of European Nesting Birds (TUCKER & HEATH 1994).

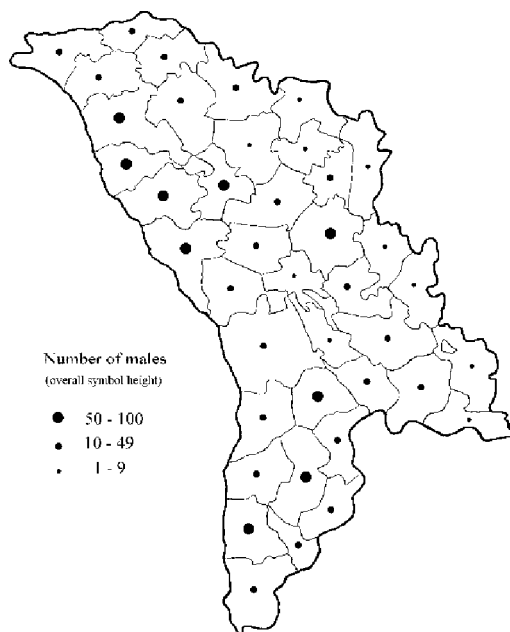


Figure 1: Distribution of the corncrake by the administrative districts of the country (1985).

3. Distribution and important areas of corncrake population

According to the data collected for the Atlas, the corncrake population in Moldova was estimated at 700-1100 nesting pairs. The data collected for the Atlas of nesting birds demonstrate that the corncrake in Moldova populated all the suitable habitats (Fig. 1). However, the sites of maximum concentration were situated on the flood plains of the Prut, the Reut and the Jalpug.

From the actual distribution of corncrake in this country a general tendency to a decrease in its number can be seen. In spite of the fact that there insufficient data on all squares UTM for our country, there is some authentic information about the nesting of this species (Fig. 2).

4. Size and development of the national corncrake population

4.1 Size of national corncrake population

According to this source, the corncrake population in Moldova was estimated at 700-1100 nesting pairs (TUCKER & HEATH 1994).

Analysis of the current status of the corncrake population in Moldova was performed on the following premises. According to the author's observations, recently the area of populated habitats decreased by 30%. Also, the number of the individuals in the remaining habitats has reduced by 35-40%. Therefore an estimate of about 100-250 pairs of corncrake occur in this country at present (scale: 0-guess) (Table 1).

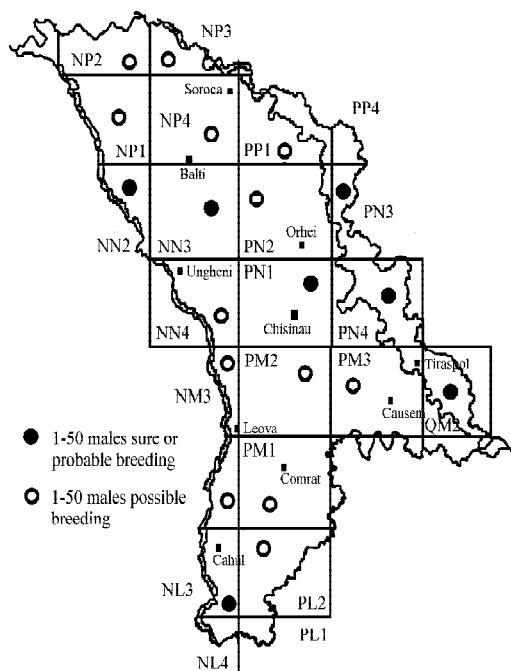


Figure 2: Actual distribution of the corncrake by the square UTM 50x50 km in Moldova (1998).

Table 1: Population size of corncrake in Moldova.

Species	MGS	Habitats	HBV	POPMIN	POPMAX	YRC	PSV	PST	PTV	RST	RTV
Crex crex	M	37	Y	700	1100	85	2	-1	2	-1	2

4.2. Development of population

a. National population trend

On the basis of past density of corncrakes in separate regions of the country it is probably true to say that there has been a constant tendency toward a decrease in corncrakes. Surveys of the whole country were not conducted in recent years. Probable changes in the density of corncrakes are submitted in Fig. 3.

b. Is data more accurate or have things really changed?

Decreases in corncrake numbers have occurred in recent years based on data of this species compiled from separate regions mentioned before.

c. Examples of population trend in restricted areas

Recent surveys on the changes in population density of the corncrake in the central and southern areas of Moldova demonstrated that the number of individuals registered a five to tenfold decrease. Thus, in the district of Criuleni the species density was 10-20 males singing in the 1980s and in the 1990s it decreased to 5 (Fig. 4); in Codrii Reserve from 5 to 8 pairs were nesting in the 1980s, only 3 pairs were found in 1996 and none were found in 1998.

A similar decline is observed for the other three reserves: Plaiul Fagului, Pădurea Domnească and Prutul de Jos. In the 1980s in Pădurea Domnească about 30 pairs were nesting, in 1996 - 7 pairs and in 1998 - only 2 pairs. At the same time, in certain areas, where the corncrake population declined, some increase in quail (*Coturnix coturnix*) density was observed.

Species density is higher in areas with lower human population density. Thus, in Criuleni district, with the human population density from 200-500 ind./km², the corncrake density is 1-3 pairs, and in Cimislia district (under 75 ind./km²), the corncrake density is 5-8 pairs.

d. Estimate of future national population

The future of the corncrake population in Moldova depends on many factors. By estimating all these factors it is possible to assume that the negative tendency will continue at least for the next five years. However, sharp differences in corncrake numbers will not be seen in the future. The general number of the corncrake in this country to some extent will depend on the prosperity of species nesting in the eastern European areas.

e. Reasons for population trend

The heterogeneous distribution of the corncrake within the country is determined not only by the

presence or absence of suitable nesting sites, but also by other factors, the most important being the intensive economic exploitation of the areas, pesticide application in agriculture and high human population density resulting in a high level of disturbance. All these factors lead to a constant decline in the corncrake population in this country. The sharpest decline in corncrake population was recorded between the 1980s and 1990s. In some sites inhabited by the species, the population density has strongly reduced and some sites were abandoned.

Currently, besides the above causes of the corncrake population decline in Moldova, a big

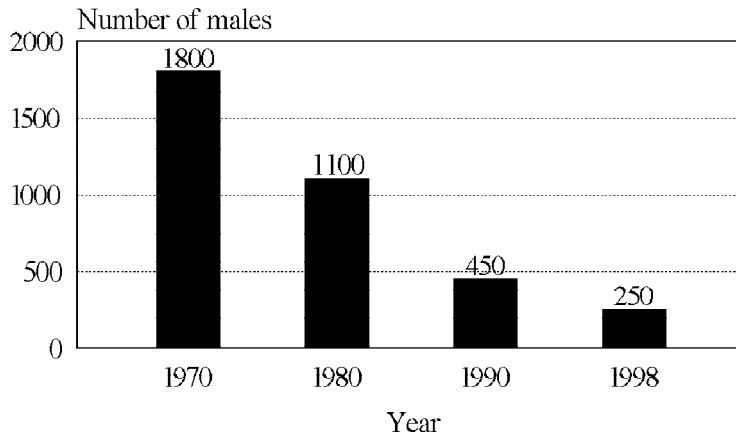


Figure 3: The tendency in population of corncrakes in Moldova for the last decades.

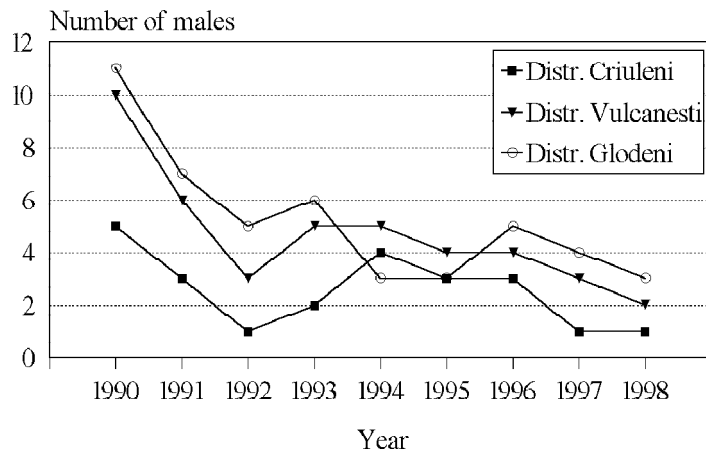


Figure 4: Changes in number of corncrakes in three regions of the country for this decade.

factor is considered to be the lack of adequate measures for the species protection, which could compensate for the negative influences and the decline of scientific studies in ecology and species conservation.

5. Threats to the corncrake population

Threats to the corncrake population are related to several factors: (1) Increase in intensity of land cultivation in agriculture (lack of an unified system of cultivated land management), (2) Transfer of part of public lands to private use for urban citizens, increasing built-up areas, (3) Increase in the number of private cattle, and consequently in the intensity of grazing, (4) Negligence concerning elementary measures of nature conservation, (5) Land reclamation and water management schemes on rivers resulting in the lowering of the water table in flood plains, (6) Increase in disturbance and the decrease in soil humidity after several dry years. The last factor deserves careful attention and further studies. There are also two further possible factors - redistribution of density in nesting pairs within the nesting area and the increased mortality (number of casualties) in passage.

6. Conservation status

The corncrake enjoys State protection as do all other bird species in Moldova. The species is proposed for inclusion in the Red Data Book of Moldova and New Independent States of the former Soviet Union (NIS).

7. Ongoing or planned conservation or study projects

To develop an action plan on corncrake conservation in this country. Current economical policy should be agreed with nature conservation activities. A full survey of the territory should be

performed to find out the real status of the species population and all the factors resulting in the species decline, accompanied by the development of scientific recommendations on population maintenance under critical conditions. Work should be continued on compiling the Atlas of nesting birds of Moldova on the basis of a species distribution map with a scale 10 x 10 km. Also, the importance of education and information to the local population of the necessity for adherence to nature conservation acts intended for species conservation and biodiversity maintenance while performing economic activities should not be underestimated. The main problem in the implementation of all these programmes is the poor payment to ornithology experts.

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