

## The Corncrake (*Crex crex*) in Belgium

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### 1. Introduction

In Wallonia 60 individual corncrake calling sites were found in 1998. This is the highest number ever recorded over the past 30 years. Earlier this century, however, much higher numbers were known to breed in Belgium, especially in Flanders, where up to 200 singing males were recorded (LIPPENS & WILLE 1972). Presently, there are only very occasional observations in Flanders, but no systematic search has been organised in that part of Belgium.

### 2. Development of knowledge about the corncrake in Belgium

In Wallonia a regular search programme for corncrakes started in 1983 and has been carried out annually since. It has been shown since then that numbers of corncrakes fluctuate strongly on an annual, seasonal and spatial scale (RYELANDT 1990, RYELANDT 1995).

### 3. Important areas of corncrake population

#### 3.1. Number of calling sites in Wallonia in 1998

Table 1 shows the importance of annual fluctuations of corncrake numbers in Wallonia since 1990. Table 2 indicates the strong local variations in corncrake numbers during the two years with maximum total numbers.

An interesting fact has been noticed recently: if an influx of corncrakes occurs in an area with nature reserves comprising hay meadows, it seems at present that most birds are concentrated around those reserves (Table 2 and 2a).

#### 3.2. Short analysis of seasonal population movements of corncrakes in 1998

After having discovered some isolated males in May, most singing birds discovered from the end of May to mid June were observed in the Famenne area. Afterwards, from the end of June to July,

**Table 1:** Corncrakes data since 1990 in Wallonia (principally in Fagne-Famenne).

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Corncrakes singing males	2	3	53	15	4	11	5	20	60

**Table 2:** 1992 and 1998 Corncrakes data in Fagne, Famenne and other parts of Belgium.

	West Fagne	East Fagne	Famenne	Other Regions	Total
1992	9	41	3	-	53
1998	17	4	18	22	61

**Table 2a:** Nature reserves occupation by male corncrakes with 1992 and 1998 influx.

	West Fagne	East Fagne	Famenne
Nature reserves occupation in 1992	Without nature reserves	100%	Without nature reserves
Nature reserves occupation in 1998	100%	0% Since 1994	100%

most new birds were recorded in the Western Fagne area (Table 3). The high numbers of corncrakes recorded in the Thudinie area are primarily an effect of systematic search in that area at that time of year. To study the strong regional seasonal fluctuations of singing corncrakes, one needs, however, regular prospecting from May to July, which is a very time-consuming activity.

#### 4. Size of national corncrake population

##### 4.1. Number of singing males

Table 3 shows the number of singing male corncrakes contacted by decades from May to July 1998 in different regions of Belgium.

##### 4.2. Habitat

###### a. Large cultivated areas (> 25 % of calling sites)

Remarkably, in 1998, more than 25 % of all singing males were recorded in large cultivated areas (Table 4). Birds were recorded in peas (2 birds), barley (5), wheat (6) and oats (1) (Table 5). It is worthwhile to note that this habitat has rarely been prospected in recent years. Therefore, we do not know how to extrapolate these results to the rest of the country.

###### b. Set-aside lands (6,5 %)

It is also worthwhile to note that four singing males were recorded in or close to uncultivated

**Table 4:** Habitats occupied in 1998 in Belgium.

	Total	%
Hay meadows	38	62.3%
Crops	16	26.2%
Agricultural fallow	1 (+ 3)	1.6% (6.5%)
Other	3	4.9%
?	3	4.9%
Total	61	99.9%

area set-asides several years ago. In one case in Flanders, the LRPBO (a private bird conservation association) negotiated to delay the mowing of a set-aside area occupied by a singing male (Table 7). Successful breeding is thus highly likely there. In Wallonia, juvenile corncrakes were observed on 22 July close to a set-aside area, which had previously been mown early in June. These types of habitat have rarely been prospected during previous years.

###### c. Nature reserves (40 %)

About 20 % of the calling sites of corncrakes in 1998 were recorded inside the nature reserves created by RNOB through a LIFE-program in Belgium. Moreover, some supplementary 20 % of singing males were in close proximity to these protected areas (Table 6). If one takes into account only those calling sites located in hay meadows, more than 60 % of all corncrakes have been noted in or around the existing nature reserves.

**Table 3:** Singing male corncrakes contacted by decades from May to July 1998 in different regions of Belgium.

Regions	Month	May		June			July			Total
	Decades	II	III	I	II	III	I	II	III	
Brabant			1	1	1					1
Fagne			1		2	7	13	7	3	17
Famenne		2	3	7	14	6				18
Thudinie			1		1	9	3	5	3	11
Condroz					1	1				1
Thiérache			1							1
Ardenne								2		2
Total		2	7	8	19	23	16	14	6	53

**Table 5:** Crops occupied by singing male corncrakes in Belgium in 1998.

Type of culture	Number	%
Pea – Fallow	2	12.5%
Winter barley (Escourgeon)		
Winter barley – Colza		
Winter barley – Fallow (Jachère)		
Winter barley – Winter Wheat (Blé)	5	31.25%
Winter wheat		
Winter wheat – Bean (Féverolle)	6	37.5%
Oats (Avoine)	1	6.25%
?	2	12.5%
Total	16	100.0%

**Table 6:** Singing male corncrakes bound to nature reserves in 1998.

	Number of singing male corncrakes	Proportion in % of 61 stands of singing male corncrakes
In nature reserves	12	19.6%
Immediately neighbouring nature reserves	12	19.6%
In nature reserves and immediately neighbouring nature reserves	24	39.3%

**Table 7:** Corncrake removals due to harvest before 15 July in different habitats.

	Number of corncrakes removals/ Number of sites	%
Hay meadow	5/34	<b>14.7%</b>
Crops	0/16	0%
Agricultural fallow	0/1	0%
	(3/3)	1%
Others	0/2	0%

Code	Bird or breeding situation	Explanations
Code 0	No bird	No bird on the site during breeding season.
Code 1	Migratory bird	Bird heard once or twice giving impression of migratory bird.
Code 2	Installed bird to breed	Day calls + abundant night calls, abundant discontinuous calls in the evening and continuous at night.
Code 3	Mated bird or laying of eggs	Day calls and night calls with pauses, none or few calls in the evening.
Code 5	Hatching	Code 4 + 3 weeks without harvesting or mowing.
Code 6	Chicks	Code 4 + 4-6 weeks without harvesting or mowing.
Code 7	Fledged chicks	Code 4 + 7 weeks without harvesting or mowing.
Code 8	Possible moult	Code 7 + presence of refuges for September adult moult.

4.3. Analysis of corncrake movements caused by mowing before July 15.

Because the humid weather, before July 15, few bird casualties were caused by mowing (15 % of all documented cases) and none by harvesting (Table 7). However, it seems that early in June three birds had to leave agricultural fallow after obligatory mowing to control weeds.

4.4. Corncrake breeding estimation in Belgium 98

a. Use of codes to estimate corncrake breeding in Belgium 98 (What about these codes??? See code-table last page.)

b. Global estimation of breeding success through a unique coding system.

When information was unavailable, it was impossible to attribute a code to every site (18 % of sites). For the other sites, it was not always easy to attribute a code. Our approach should therefore be considered as a primary study.

Table 8 shows that more than 80 % of singing males displayed a behavior typical of breeding birds, but successful breeding is probable in only 26 % of those cases. In 62% of the cases, it seems quite probable that nests or juvenile birds were killed through mowing.

c. Breeding estimation by habitats

What about possible first clutches for birds contacted at the end of June and July? Table 9 shows breeding estimation by habitats.

**Table 8:** Breeding estimation in Belgium 98 with codes (Documented sites).

Code	Not mating		Nests			Chicks	Successful breeding	
	1	2	3	4	5	6	7	8
Total (50 documented sites)	1	5	0	11	1	19	3	10
%	0,02	0,1	0	0,22	0,02	0,38	0,06	0,2
	0,12		0,62	0,26				

**Table 9:** Breeding estimation by habitats (50 documented sites).

Code	Not mated		Nests			Chicks	Successful breeding		100%
	1	2	3	4	5	6	7	8	
Hay meadow	3.2%	3.2%		35.5%		35.5%		22.5%	31
		(25%)							
Crops		25%			6.2%	50%	18.7%		16
Others								100%	2
Agricultural fallow								100%	1

**Table 10:** Estimation of breeding in nature reserves with codes (Documented sites).

Code	Not mated		Nests			Chicks	Successful breeding		100%
	1	2	3	4	5	6	7	8	
In nature reserves				18.8%		45.5%		36.3%	11
Immediately neighbouring nature reserves		28.5%				71.4%			7

*d. Breeding estimation in nature reserves*

Table 10 shows breeding estimation in nature reserves.

*e. Conclusion*

Although the estimated breeding success is lower than 20 %, 1998 seems to be a favourable year for corncrakes in Belgium as most harvest activity was delayed: 60 singing males in Wallonia and 12 (?) in Flanders (only one is considered in this presentation) – 27,8 % of birds were in crops in Wallonia. The global estimation of breeding success through a unique coding system for documented sites is globally + 26 % (22.5 % in hay meadow and 18.7 % in crops).

The impact of 180 ha of nature reserves is very important because 20 to 40 % of the Walloon corncrake population was contacted inside or immediately neighbouring nature reserves which are the best places to have successful breeding (36,3 %) but this situation could be improved.

**5. Threats to the corncrake population**

Early mowing

**6. Conservation status**

No data are available.

**7. Conservation projects**

No data are available.

**8. Ongoing or planned conservation or study projects**

*Questions:*

1. Why don't nature reserves in east Fagne look attractive to corncrake?

Bad management? First clutches not detected at all? Given the low attractiveness of nature reserves in the eastern Fagne area, should we readapt their management?

2. How is it possible to improve successful breeding in nature reserves?

Problem of last clutches. Is it possible to consider cutting a part of the sites in May and leave this part unmowed from June to September or later? Would mowing in Spring be helpful in reducing mortality of corncrakes between June and September?

Friendly mowing is not so easy to do for farmers!

3. What about codes presented to estimate corncrake states of breeding?

4. How can we estimate the whole corncrake population in Belgium with data we have collected in 1998?

5. What about agricultural fallow and corncrake? Important effects (10 % in 1999 in EEC)!

To mow twice a year is very dangerous for the corncrake. To destroy weeds with appropriate surgical doses of weed-killer seems to be less dangerous. This latter problem deserves very serious study or plants of agricultural fallow are not cut like in the country of East Europe (best solution for the corncrake).

How can legislation be changed?

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