

## Investigations into the Corncrake (*Crex crex*) Population in the Bremen Basin \*

Stefan Pfützke

In the green belt surrounding the town of Bremen, the corncrake is an annual breeding bird with a fluctuating population, but on account of its hidden lifestyle and its practice of calling during the night, until now its breeding habits have remained virtually uninvestigated, in contrast to those of most other water meadow birds in the area. During the course of the diploma work, therefore, in 1997 a comprehensive mapping exercise of the potential habitats was carried out, and in the Borgfeld and parts of the Fischerhude Wümme meadows (in all about 923 hectares), a study was made of the birds' breeding practices. In connection with this, the calling habits of the young males were examined, in order to obtain evidence of their pairing status; 15 young males were caught and fitted with transmitters for telemetry studies and a survey was made of the most important habitat parameters of areas occupied by the corncrake.

Presumably on account of the cold weather in May 1997 the corncrakes arrived late (earliest observation 19.05), and their density in the Bremen area was below average. Outside the Wümme meadows only eleven or twelve callers were noted. Within the Wümme meadows by the end of June, 13 young males and 17 living patches had been registered. From the beginning of July there was an influx of young males from other areas, so that at this point in time there were 19 young male corncrakes resident in the Wümme meadows.

Examination of the calls and the telemetry results led to the conclusion that in at least ten of the 17 living patches pairing of the young males took

place and in the Bremen area secondary breeding occurred. The active calling period at individual calling sites lasted on average for 23 days. On 24.07 calling behaviour indicative of breeding could still be noted. During the day, the young male corncrakes wandered varying distances (sometimes more than 500 m) away from the nighttime calling site and thus regularly passed through other patches.

All 23 sample sites studied for habitat structure in the Wümme meadows (either calling sites or daytime stopping places) were extensively farmed hay meadows, that were not normally mown before the end of June. Almost all these test sites had a high proportion of acidic grasses with an average of almost 40 % and a high percentage (80 %) of total cover. At the beginning of the season, reed beds in ditches and valleys were mainly chosen as calling places, because of the higher cover they offered, but as time went on calling places could also be found on the flat meadows, which had grown higher by then. It was also striking that all calling places in the Wümme meadows were in areas subject to regular and sustained winter flooding. This is due to the favourable vegetation growth on such surfaces (high cover, but few obstacles to running about on the ground), which predominates especially with the high proportion of sedges *Carex spp.* In this connection an evaluation of corncrake population from 1990 to 1997 has been undertaken to evaluate the influence of winter water conditions, and this shows a correlation between high, persistent winter flooding and above-average corncrake populations.

---

\* Diploma exercise at the University of Bremen, School of Biology/Chemistry (1998)

Analysis of the area of the Bremen green belt shows that close to the Wümme meadows other water meadows covering a large surface are suitable for long-term settlement by the corncrake, but owing to a basically much too early mowing date adequate reproduction is impossible. A time model drawn up using data derived from calling cycle areas, which throws light upon the breeding pattern of the corncrake in the Bremen basin, shows that until far into September young birds that are still unable to fly are still present in the meadows. These birds are particularly under threat from the mowing of the meadows. But older birds that can fly may also fall victim to the mowing operation, as a corresponding finding from the Wümme meadows confirms. As it is not really possible to introduce a general mowing date suitable for young male corncrakes at the end of September in the meadowland used by them, a protection plan taking account of this aspect of the situation has been drawn up. The plan envisages the introduction of appropriately trained staff, with whose help individual areas could be designated (parts of fields in which there are calling sites for paired birds), on which late mowing is required. Otherwise a desynchronisation of the mowing exercise is suggested, which would allow birds driven out by mowing to move away to other areas in the neighbourhood.

Stefan Pfützke  
Adam-Stegerwald-Straße 6  
D - 28329 Bremen  
Translation by Dorothy Williams