

Female Corncrake (*Crex crex*) singing in the wild

Richard Ottvall

Department of Animal Ecology, University of Lund, Ecology Building, S-223 62 Lund, Sweden.
E-mail: biv94rol@student1.lu.se

Summary

The male Corncrake (*Crex crex*) has a characteristic mating call. In aviary it has been shown that females can also produce a call similar to the male's typical "crex crex". I describe a strikingly different call produced by a female on Öland, southeast Sweden. The sex identification was based on the small size during close examination in the hand. The female call has a similar rhythm to the male call but lacks the rasping of the male and is almost a barking sound. The female was heard calling continuously at night throughout a three-week-period. Another bird producing the same call was heard about 100 m from the caught female suggesting two females in the same field. No male Corncrakes were heard in the field during the period when the female was calling. Possible explanations for this behaviour and the function of the call is discussed.

Key words: aggressive behaviour, mate-attraction-call, Sweden

Zusammenfassung

Rufe eines weiblichen Wachtelkönigs (*Crex crex*) im Freiland

Männliche Wachtelkönige (*Crex crex*) haben charakteristische Balzrufe. In Gefangenschaft gehaltene weibliche Wachtelkönige rufen ebenfalls männchenähnlich „crex crex“. Dieser Artikel beschreibt einen bisher unbekanntem Ruf eines weiblichen Wachtelkönigs von der Insel Öland/SE Schweden. Die Geschlechtsbestimmung erfolgte aufgrund der geringen Maße. Die Rufe des Weibchens zeigten einen ähnlichen Rhythmus wie die der Männchen, ihnen fehlt jedoch der knarrende Klang und sie klingen eher bellend. Das rufende Weibchen wurde über drei Wochen regelmäßig nachts gehört. Ein weiterer Vogel mit den gleichen Rufen wurde etwa 100 Meter neben dem gefangenen Weibchen gehört, was darauf deutet, daß es sich um zwei Weibchen in dem gleichen Feld gehandelt hat. Rufende Männchen wurden während dieser Zeit nicht gehört. Die Bedeutung dieser Weibchen-Rufe wird diskutiert.

Studies on Corncrakes in the wild have up to now reported only that males produce the characteristic mating season call, even though both sexes have been recorded singing in captivity (Schäffer et al. 1997). A report from Fisher (1963) described a male and a female singing together in an aviary in Edinburgh Zoo. They

were definitely a pair as they later produced fertile eggs.

Since 1992 Ottenby Bird Observatory has been carrying out a study of Corncrakes on the southern part of the island of Öland in the Baltic Sea close to the Swedish mainland. The study includes regular night-checks of calling

males in the study area. During one of these checks, the night 14/15 June 1997, I heard two birds giving similar calls that I found quite different from the normal call of male Corncrakes. A new visit to the site some nights later clearly revealed that it was two Corncrakes that were producing the strange call. In the early morning of 24 June, we caught one of these birds in a mistnet. At a distance of less than 2 m from the calling bird we chased it into the net and there is no doubt that the bird caught was producing the strange call.

Based on a close examination in the hand, we determined the sex of the bird as female. The plumage looked quite similar to the males I have processed in the hand ($n=60$), but differed slightly in being more brown with less grey on the head and breast. In a study of Corncrakes in Scotland, Tyler et al. (1996) showed that the sexes could be distinguished based on a combination of measurements of head + bill-length and maximum wing-length, males being 5–6% larger than females in these measurements. The discriminant function of Tyler et al. (1996) could not be used directly to sex the bird, as Swedish Corncrake males have shorter wings than Scottish. In 1995–97, measurements of head + bill-length ($\bar{x}=53.1$ mm; range 49.5–56.0) and maximum wing-length ($\bar{x}=145.1$ mm; range 138.0–153.0) were recorded for 55 male Corncrakes. The comparable measurements of the singing female were 49.0 mm and 134.0 mm, respectively. Hence, the small size in combination with the occurrence of a developed incubation-patch strongly suggested that the bird uttering the different call was a female.

The second Corncrake at the same site had a similar call to that of the captured bird, suggesting that there were two calling females in the same field. I produced sonograms of Corncrake calls using the software program Canary 1.2 (Cornell University, USA). In Figs. 1 and 2 a sonogram of the female call shows that the rhythm is quite similar to a male's but that the call is softer and more like a gull's or a begging young owl's. One similarity between the male

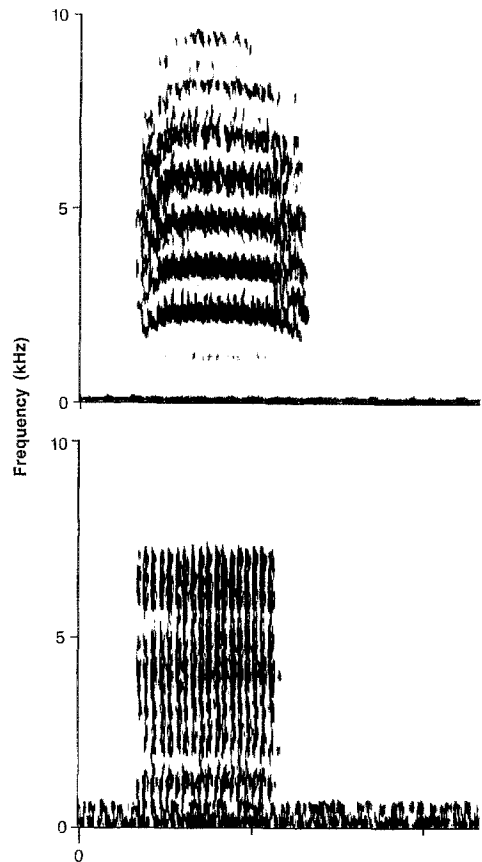


Fig. 1. Sonograms of the Corncrake call consisting of two syllables separated by an interval, a) a female recorded on Öland in 1997 and b) a male recorded on Öland in 1993.

Abb. 1. Sonogramme des vollständigen Wachtelkönigrufs, bestehend aus zwei, von einer Pause unterbrochenen, Silben: a) Das 1997 auf Öland aufgenommene Weibchen und b) ein 1993 auf Öland aufgenommenes Männchen.

and female Corncrake calls is that the second units of the sounds are about 40 ms longer than the first units produced (Fig. 2, see also Cramp & Simmons 1980). In describing the sounds of the calls I use the terminology of Catchpole & Slater (1995). The sound of the male call could be described as several short bursts of clicks occurring very close together, resulting in a harsh short call repeated at regular intervals. This harsh noise is associated with a wide fre-

quency spectrum. The female call is based on a tone-like sound that has harmonics, multiples of the first or fundamental frequency, resulting in what Catchpole & Slater (1995) describe as a barking sound. This sound given by the female is then basically different from the rasping typical of the male.

The call produced by the females was loud and could be heard clearly at a distance of one km during a windless night. The two females were calling about 100 m from each other and seemed to call from the same sites every night. One female was still heard calling in the field on 8 July when we made our last night-check for the season. No males were heard in this particular field, but in late May/early June one male was calling on several nights in a nearby silage field. However, during the time period when the females were singing, no males were heard from the silage field. The nearest calling males were present in a field about 3 km from the calling females.

The first time a tape-recording of the male call was played back to one of the females, it reacted by approaching, running towards the tape-recorder giving grunting calls. In later play-back trials the calling females reacted by uttering clucking calls but they did not approach the tape-recorder. The female call was played back to a male once but it did not react at all.

Schäffer et al. (1997) found that females in captivity could give a call almost identical to the typical male call in two different situations. First, if the male in a pair was separated from the female before she had initiated incubation, and second, when several females were close together with small chicks. The sonogram of this call, however, is very similar to that of the call of a singing male. The call given by the females described here is strikingly different. (Figs. 1 and 2).

Why has the female call presented in this paper not been reported before? One explanation is that it has been disregarded as a variety of the normal male call. As an example, a report from Färö, Gotland in the Baltic Sea describes

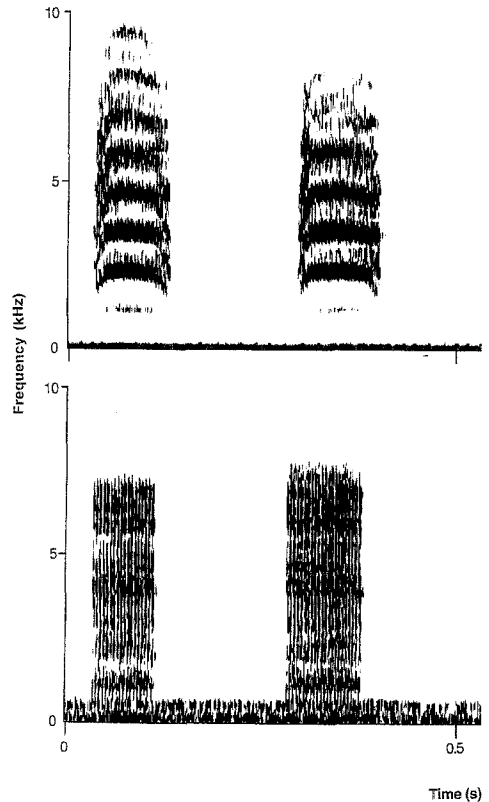


Fig. 2. Sonograms of two entire Corncrake calls, a) a female recorded on Öland in 1997 and b) a male recorded on Öland in 1993.

Abb. 2. Sonogramme zweier vollständiger Rufe des Wachtelkönigs: a) Das 1997 auf Öland aufgenommene Weibchen und b) ein 1993 auf Öland aufgenommenes Männchen.

a Corncrake giving a strange call similar in tone to an alarmed Common Gull (*Larus canus*; Sundberg 1989), that is without the rasping character of the typical male call. Why do females give this kind of call? In the case of the two calling females on Öland, incubation may have been interrupted by mowers. Mowing was intense in surrounding fields just prior to the period when the females were first heard calling. When examining my field notes, I found another observation for 26 June, 1994, where I describe a call reminding me of the call of the caught female Corncrake. That particu-

lar bird was calling from a hay field about a week after it had been exposed to mowing. An alternative explanation is that females occasionally sing in areas with a low density of Corncrakes.

I suggest that the function of the female call described here is to attract mates. But why remain in the same patch and not search for males elsewhere as other bird species do (e. g. Great Reed Warbler *Acrocephalus arundinaceus*; Bensch & Hasselquist 1992)? In the Red-winged Blackbird (*Agelaius phoeniceus*) of North America the females produce one type of song as an aggressive signal towards other females (Beletsky in Catchpole & Slater 1995). The lack of reaction from the Corncrake male exposed to a tape-recording of the female call indicates that the Corncrake female call is not a „mate-attraction call“. Also, females are likely to compete for potential mates, especially late in the breeding season. If a male arrives in an area with two or more females, only one of them will be mated at first. Therefore, females have reasons to be aggressive towards each other.

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