Corncrake
Crex crex

Status

Red listed: BD, HD, BL, SPEC 1 (V)
Schedule 1 of WCA 1981
Annex I of EC Wild Birds Directive

National monitoring

Annual censuses of the main UK areas since 1991 (RSPB).
National surveys: 1988, 1993, 1998, 2003.
Rare Breeding Birds Panel.

Population and distribution

The corncrake is one of three globally threatened birds in Britain. Its distribution within Britain and Ireland has contracted towards the north-west (Cadbury 1980, Hudson et al 1990). The decline in population and the contraction in range of this species are thought mainly to be linked to the intensification of farming practices (Stowe et al 1993). Corncrakes require vegetation cover and can be found in a variety of vegetation types although they typically breed in hay meadows and silage fields. In 1993, there were 480 calling male corncrakes in Britain (Green 1995). About 90% of potential breeding areas are monitored by the RSPB and Birdwatch Ireland annually.

Ecology

Male corncrakes sing to attract females. They can sing from late April until the end of August. Once males have mated they sing less until the female starts incubating, after which they sing more again.

Breeding season survey – population

In areas of Britain and Ireland where the RSPB and Birdwatch Ireland survey corncrakes annually, surveys are closely linked to corncrake initiative (grant) schemes. These survey instructions therefore incorporate some measures that are essential for corncrake protection.

Information required

- estimated number of males
- maps showing locations of all craking males

Number and timing of visits

A minimum of two, between 20 May and 30 June.

Time of day

0000–0300 BST.

Weather constraints

Avoid conditions that are windy (over 3 on the Beaufort scale) and wet.

Sites/areas to visit

Meadows and grassland but also gardens, nettlebeds, crops and any vegetation cover taller than 20 cm.

Equipment

- 1:10,000 OS map of the survey area
- Schedule 1 licence
- a compass with an internal light
- a clipboard and headtorch
- warm clothing.

Safety reminders

Visit the areas to be visited at night first during the day. Ensure someone knows where you are and when you are due back. Always carry a compass and know how to use it. Always obtain permission to enter private land, especially crop fields (avoid walking through the crop). Warn police that you propose to drive around in the middle of the night.

Disturbance

Do not disturb corncrakes while counting. It is not necessary to get closer than 100 m to pinpoint a male's singing position. If he stops singing you may be too close – stand still and make no noise until he starts singing again, then walk slowly away. Avoid flushing females by using field edges and paths to pinpoint bird positions. Never use playback of tapes, etc, to try to get a bird to crake.

Methods

Visit the survey area by day to plan a route that will take you within 500 m of all potential corncrake habitat. It may be necessary to reduce this to 200 m if windy conditions are unavoidable (eg Malin Head and the Uists). Mark suitable stopping places on the map. Note any features that will be identifiable at night (eg signs) close to stopping places and make sure you know where all the stopping places are on the map. Even if you know the area well, plan the route carefully in advance.

It is possible to survey many areas by car from public roads. At each stopping place, turn off the engine and get out of the car. Spend at least 1–2 minutes listening. If a corncrake happens to be near the road, it may stop singing when the car engine is turned off. If your car windows are down you will hear this and should wait to confirm the presence of the bird.

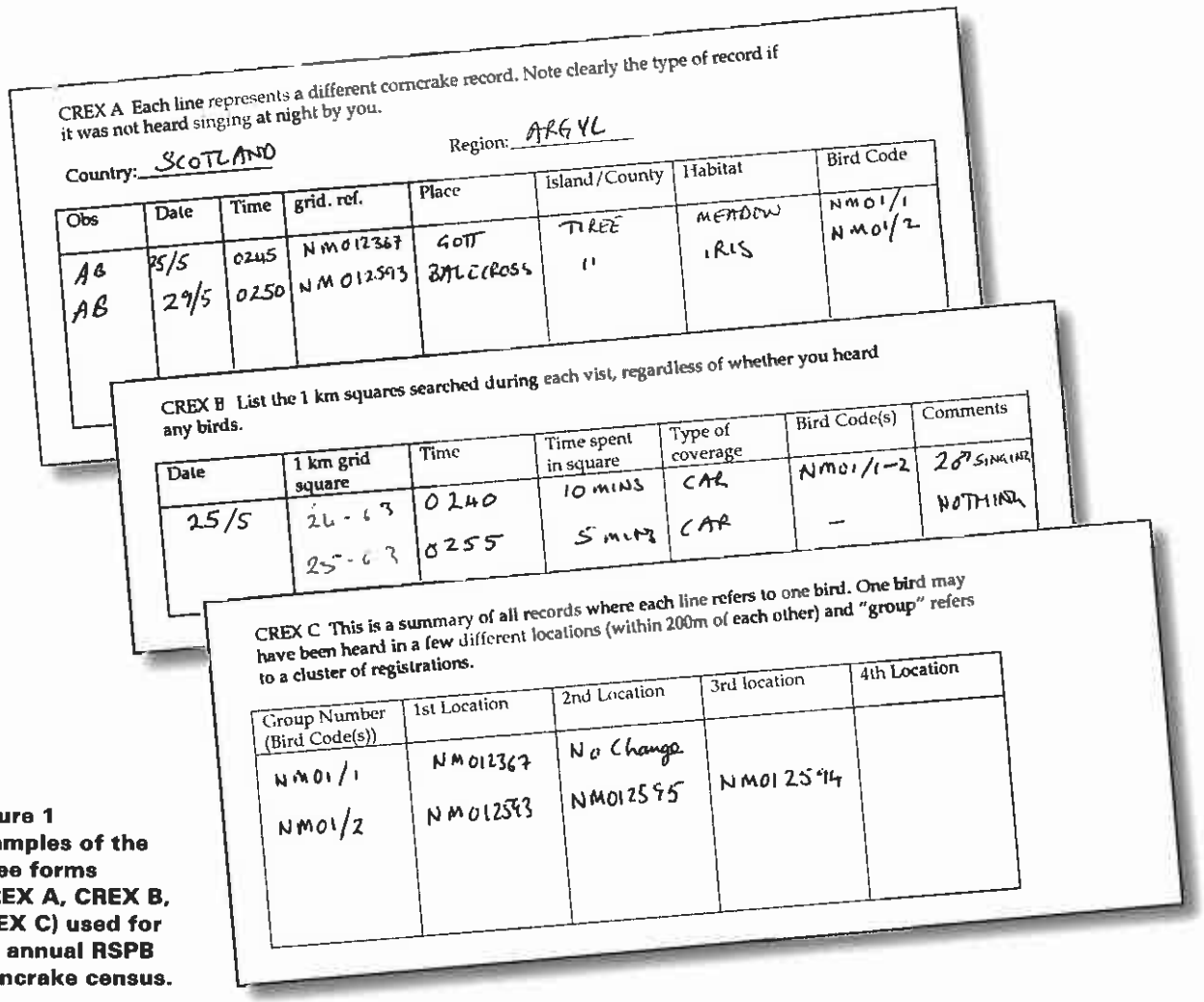
The position of more distant corncrakes can be assessed by cupping your hands behind your ears and scanning around. If you hear a corncrake, work out where it is by triangulation. Ensure this is accurate to within 100 m. If the landscape is such that the positions of singing birds need to be estimated over longer distances, use a compass with an internal light to improve accuracy. In the dark it is often difficult to relate actual positions to mapped positions. By marking your own position at night with a marker (eg tied to a fence or tree) and noting the relative position of the bird, you can return when it is light to map its position more accurately (all markers must later be removed).

Note that the strength of the sound varies depending on the direction the bird is facing. Beware of corncrakes calling near objects which reflect sound such as walls and buildings. This can cause you to misjudge distance and direction, or to record two or more birds singing where there is only one.

To avoid confusion, give each bird a unique code starting with the 10-km square reference, eg NB01/1, NB01/2, etc. It is important to list the 1-km squares searched during each visit in the specified night-time period, regardless of whether you heard anything. Note the time and the number of listening stops.

Update your records immediately after your last visit to a site, while the details are fresh in your mind. As well as mapped information, record the census date, time, grid reference (letters plus six numbers) and location name for every bird on each visit. Surveys organised by the RSPB record such information on standard forms (Figure 1). Note whether you saw or heard the bird and anything distinctive about the way it called (eg speed or pitch). Additional records of males singing during the day within the census season, young seen or nests found should also be noted. It does not matter if you survey different parts of the area on different dates.

When interpreting the results, it is sometimes not clear if a bird heard calling from different places on two visits is the same or a different bird. If the second location is within 200 m of the first, then it is almost certainly the same bird. If the second location is separated by 200 m or more, then they should be recorded as two separate birds unless (a) there is something distinctive about the call that tells you they are



CREX A Each line represents a different corncrake record. Note clearly the type of record if it was not heard singing at night by you.

Country: SCOTLAND Region: ARGYL

Obs	Date	Time	grid. ref.	Place	Island/County	Habitat	Bird Code
AB	25/5	0245	NM012367	GOTT	TIREE	MEADOW	NM01/1
AB	29/5	0250	NM012593	BALLCROSS	"	IRIS	NM01/2

CREX B List the 1 km squares searched during each vist, regardless of whether you heard any birds.

Date	1 km grid square	Time	Time spent in square	Type of coverage	Bird Code(s)	Comments
25/5	26-03	0240	10 MINS	CAR	NM01/1-2	20 SINGING
	25-03	0255	5 MINS	CAR	–	NOTHING

CREX C This is a summary of all records where each line refers to one bird. One bird may have been heard in a few different locations (within 200m of each other) and "group" refers to a cluster of registrations.

Group Number (Bird Code(s))	1st Location	2nd Location	3rd location	4th Location
NM01/1	NM012367	No Change	NM012594	
NM01/2	NM012593	NM012595		

Figure 1 Examples of the three forms (CREX A, CREX B, CREX C) used for the annual RSPB corncrake census.

probably the same bird, (b) something has happened to the habitat at the first recorded location (eg it has been mowed) and the new location is the nearest place to which the bird could go or (c) local people who seem reliable tell you that they often listen to corncrakes and have not heard calling from both places at the same time.

Include records of nests or flightless young in the totals if they are more than 200 m from the location of a singing male detected in the census period. Include records of singing males from outside the census period if this is the only information available from a remote area where corncrakes are thought to breed, eg an offshore island.

Breeding season survey – productivity

These methods are based on those used as part of the RSPB/Birdwatch Ireland corncrake initiative.

Information required

- number of corncrake nests found in searches after mowing
- details of all areas searched
- number of corncrake chicks seen during mowing
- the number of chicks killed during mowing
- details of all mowing watched.

Number and timing of visits, Time of day

Depends on date and timing of mowing by individual farmers.

Weather constraints

As for the population survey (above).

Sites/area to visit

All fields that are within a 250-m radius of a singing male corncrake that has been present at the same site for a week or more.

Equipment

As for the population survey.

Safety reminders

Do not stand close to tractors as they mow: there is a real risk of being hit by stones or detached mower blades. Do not watch for birds from the tractor.

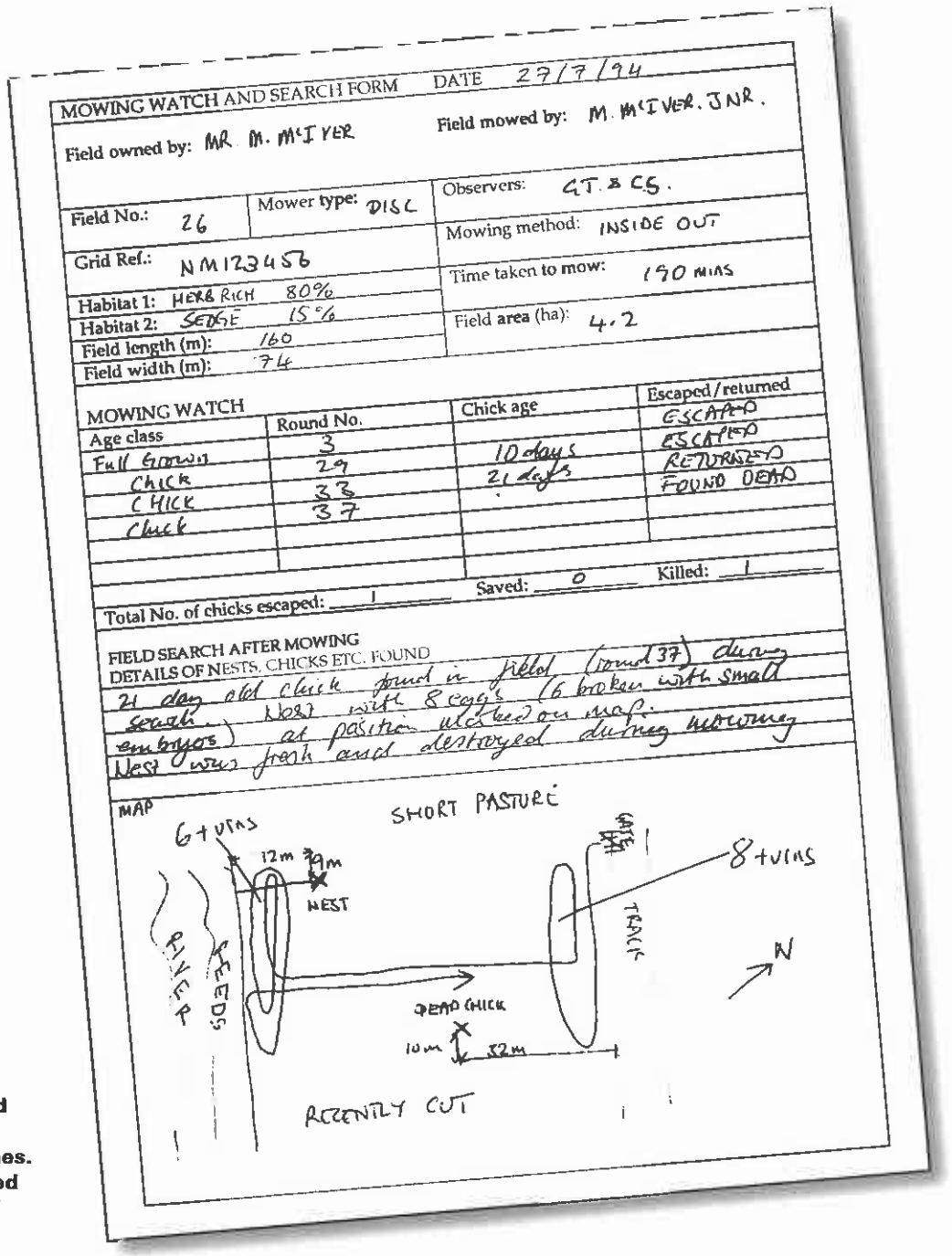
Disturbance

Corncrakes will be reluctant to come out of a field being mown and you may inadvertently scare them back in. Stand in a position that will avoid this (see Figure 3). However, if a bird appears not to be escaping to safety, try chasing it out of the field.

Methods

One of the conditions of the corncrake initiative scheme is that the landowner must inform an RSPB or Birdwatch Ireland fieldworker when they will be mowing their eligible fields so that someone from one of the conservation organisations can be present.

Record the grid reference of the centre of the field, the field dimensions in metres (pace it out), the type of mower used, and the mowing method (eg from the outside of the field inwards or from the centre of the field outwards). An example of a recording form is shown in Figure 2.



MOWING WATCH AND SEARCH FORM DATE 27/7/94

Field owned by: MR. M. McIVER Field mowed by: M. McIVER. JNR.

Field No.: 26 Mower type: DISC Observers: GT & CS.

Grid Ref.: NM123456 Mowing method: INSIDE OUT

Habitat 1: HERB RICH 80% Time taken to mow: 190 MINS

Habitat 2: SEDGE 15%

Field length (m): 160 Field area (ha): 4.2

Field width (m): 74

MOWING WATCH

Age class	Round No.	Chick age	Escaped/returned
Full Grown	3		ESCAPED
CHICK	29	10 days	ESCAPED
CHICK	33	21 days	RETURNED
Chick	37		FOUND DEAD

Total No. of chicks escaped: 1 Saved: 0 Killed: 1

FIELD SEARCH AFTER MOWING

DETAILS OF NESTS, CHICKS ETC. FOUND

21 day old chick found in field (round 37) during search. Nest with 8 eggs (6 broken with small embryos) at position ticked on map. Nest was fresh and destroyed during mowing

MAP

Figure 2
An example of the recording form used during mowing watches and searches. These forms are used during RSPB annual surveys.

Ideally, two people should be present at each mowing attempt, although a lone observer could be helped by the tractor driver. Figure 3 shows the positions in which observers should stand to watch fields being mown. In those being mown from the centre outwards, it is important to watch the edges of fields where they adjoin areas of short

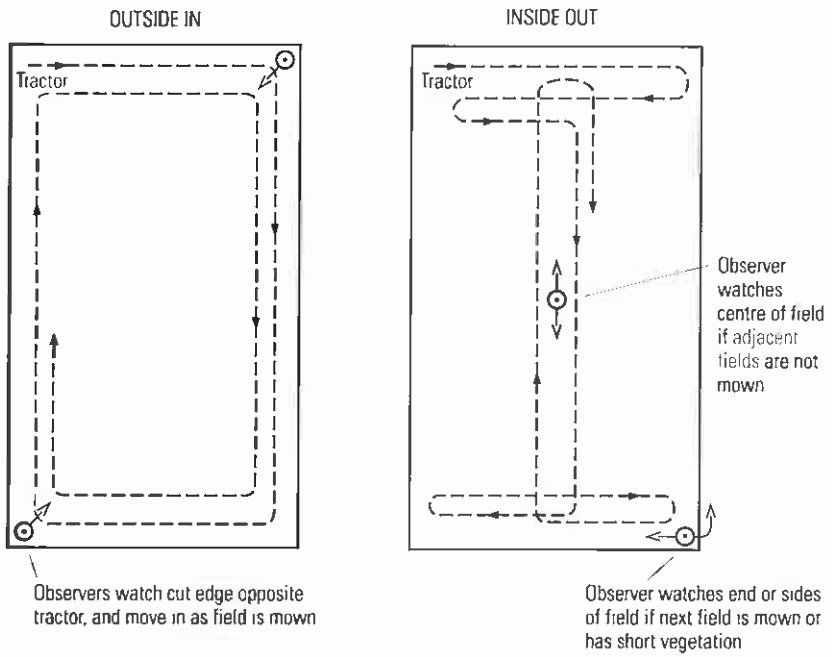


Figure 3
Recommended positions for observers (preferably two) and the directions in which they should look, during mowing procedures – with the tractor moving from the outside in and from the inside out.

vegetation as adults and chicks may appear there. If there is no adjoining short vegetation (or cut edge), one person should watch from the centre of the field and one should watch and listen for chicks or adults at the edge. If a field is being mown from the outside inwards, watch the cut edge of the grass opposite where the mower is cutting, as most birds will flee away from the mower (see Figure 3).

Every time birds are seen, even if it may mean that the same birds are recorded more than once, record the number of adults and chicks and the number of times the mower had travelled round the field when they were seen. If possible, indicate which records probably refer to the same individual(s). Estimate the age of birds running out of the crop by using the 'chick chart' (available from RSPB). Note whether the bird returns to the field or whether it escapes.

Immediately after a field has been mown, search for the remains of nests or adults and chicks that might have been killed during mowing. If the field is left for any length of time (hours) scavengers and predators will remove the evidence. Check the field by walking between the rows of cut grass looking between the rows and in the cut grass. It is not feasible to turn all the cut grass while searching for remains, but if you see a clue, such as possible nest material or eggshells, turn the grass to check for further signs. Dead chicks can be aged using the 'chick chart' to provide an estimate of hatching dates, and destroyed nests can provide information on clutch size.

Whenever destroyed nests are found, record whether they contain no egg remains, shell fragments from hatched eggs (usually have papery membranes attached to the shell), shells (indicating predation) or freshly broken eggs (destroyed by mowing), etc. Make detailed notes of the appearance of the remains. If embryos are present, record their stage of development by noting their size and the amount of down feathers. Record the approximate age of any dead chicks on a sketch map of the field. Record the position in metres (pace them) from the two nearest sides of the field, this can later be related to mowing procedure.

References

Cadbury, C J (1980) The status and habitats of the corncrake in Britain 1978–79. *Bird Study*, 27: 203–218.

Green, R E (1995) The decline of the corncrake *Crex crex* in Britain continues. *Bird Study* 42: 66–75.

Hudson, A V, Stowe, T J and Aspinall, S J (1990) Status and distribution of corncrakes in Britain in 1988. *British Birds* 83: 173–187.

Stowe, T J, Newton, A V, Green, R E and Mayes, E (1993) The decline of the corncrake *Crex crex* in Britain and Ireland in relation to habitat. *J. Appl. Ecol.* 30: 53–62.