

Lowland Grassland

Title

Lowland Grassland Survey (Birds of Managed Grassland) 2000-2002

Description and Summary of Results

Just as arable farmland, lowland grassland is subject to more or less intensive management regimes aimed to improve sward quality and quantity for livestock. Typical activities include reseedling, fertilizer applications, frequent cutting for hay or silage and high-density grazing, each of which can lead to simplified vegetation characteristics, reduced invertebrate populations and a reduction in suitability for foraging and/or nesting birds. Although some population changes of birds in grassland landscapes have been attributed to reduced habitat complexity between fields, within-field sward composition is also likely to be an essential factor in determining how birds use grassland. The visual characteristics of grassland, however, are far less distinctive than those that exist between different arable crops, and the management intensity is a continuum, so broad relationships between birds and sward condition are more difficult to identify and categorize.

Many species use grassland for nesting and especially feeding, and among them are several species which have been in long-term decline. These include Grey Partridge *Perdix perdix*, Lapwing *Vanellus vanellus*, Skylark *Alauda arvensis* and especially seed-eating finches and buntings and such relatively rare species as Corncrake *Crex crex*.

The lowland grassland survey collected data from winter 2000/01 and summer 2002 from 94 1-km squares in England, S Scotland and Wales. The aim was to record birds from at least 25ha of grassland within these.

Analyses found that there were no major associations between the whole bird community and types of grassland. However there were differences in habitat use between groups of birds and these were dependent mainly on diet and foraging methods. In general higher densities of bird species which eat worms, such as thrushes and crows, occurred on grassland with a short, dense, uniform sward, typically characteristic of improved grassland. In contrast, surface-feeding species, including Robin *Erithacus rubecula* and Dunnock *Prunella modularis*, occurred at highest densities on uneven, tussocky swards that are characteristic of less improved grassland. It is likely that the former species need good access to organisms in the soil and so like short dense swards, whereas the surface-feeding species are more likely to respond to the higher densities of invertebrates that live in structured swards above ground.

The findings from this study were used to extend a more intensive Defra-funded project carried out by BTO staff in E Devon and N Buckinghamshire (a four-year study 1999-2002, though disrupted by the Foot and Mouth disease outbreak in 2001, known as GRINBI).

Methods of Data Capture

Fieldwork involved two winter and two summer visits to 1-km squares. The survey, originally planned for summer 2001, took place in summer 2002 due to the Foot and Mouth outbreak, although winter work was completed in 2000/2001. Counts of birds seen feeding

or nesting on different field types were recorded, together with as much information as could be gleaned on sward structure and management.

Purpose of Data Capture

This BTO-funded survey was designed to identify the bird communities and assess the generality of bird preferences for different grassland types, in terms of sward composition and management. The project was linked to intensive government-funded grassland research elsewhere within the UK.

Geographic Coverage

Fields with different management regimes were sampled in England, Wales and southern Scotland, with the majority in the southwestern quarter of England.

Temporal Coverage

The winter of 2000/01 and summer of 2002. (It was originally planned for summer 2001 but the outbreak of Foot and Mouth disease in the spring and summer 2001 meant that it could not be done in that year.)

Other Interested parties

The survey was organised, run and funded by the BTO.

Organiser(s)

Ian Henderson

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Publications

The survey did not produce significant results and there was never a major report. However brief results were noted in *BTO News* number 247, and the results were used in planning other projects.

Available from NBN?

No.

Computer data -- location

BTO Windows network -- personal space.

Computer data -- outline contents

Computer data -- description of contents

Information held in BTO Archives

None.

Notes on Access and Use

Other information needed

Notes on Survey Design

Specific Issues for Analysis