

BBS NEWS AND RESEARCH

Coming soon! New BBS recording methods

Starting in 2014, BBS volunteers will have the option to record whether birds were first detected by sight, call or song. This will allow the BTO to calculate bird densities more accurately.

By **Kate Risely**, BBS National Organiser, BTO

BBS volunteers record birds in distance bands, meaning that counts can be used to calculate the detectability of different species, which in turn can be used to work out how many individuals were present, including those not directly observed. However, this method does not take into account the fact that males are much more detectable than females for some species, but not for others, which could bias the resulting density and population estimates (see page 5).

CHANGES TO FIELD RECORDING

From 2014, BBS volunteers will have the option of recording whether each bird, or group of birds, was first detected by sight, call or song, in addition to recording birds in distance bands as normal. Volunteers are encouraged to use the territory-mapping-style notation of circling a record of a bird detected by song, drawing a line under a bird detected by call, and leaving unmarked any record of a bird, or group of birds, detected by sight. There will be no change to the field recording forms.

CHANGES TO ONLINE DATA SUBMISSION

The overall structure of the online data entry system for bird records will not change significantly, but users should enter each bird, or group of birds, as a separate entry, in order to record detection type. It will not be necessary to summarise any counts; each record from the field recording sheet should be input in turn. We hope to take this opportunity to make other changes and improvements to the online system, such as incorporating habitat and mammal recording within the bird data entry pages.



BBS SURVEYOR BY DAVID TIPLING

HINTS AND TIPS

- It is important to record how a bird was first detected; if a bird is detected by sight, but later starts singing, it should not be recorded as detected by song. **The aim is not to record evidence of breeding.**
- The recording of detection type is optional, but should be applied to all records from a visit, or to none. Before submitting data online volunteers will be able to opt-in to the new system, and can change back to simple recording later if necessary, but it will not be possible to switch between the two methods within a visit.
- New detection codes can only be submitted online, as it is not possible to incorporate the new information on Count Summary Sheets. Volunteers who submit data on paper, but who would like to use the new methods, should contact the BBS Organiser at BTO.
- Guidance will be available on how sounds such as wing flapping of Woodpigeons and drumming of woodpeckers should be recorded, and on whether vocalisations of birds such as Pheasant should be recorded as songs or calls.
- It is important that the new methods do not affect the consistency of new data with data from previous years. In particular, volunteers should try not to spend longer than normal on their surveys.
- It is not necessary to record whether birds seen are male or female. In a field trial of these methods in 2011 volunteers were asked to record the sex of birds seen. However, this has not been included in the full survey, since feedback from the trial suggested that this could affect the time taken to complete surveys, as observers were stopping to get better views of birds not easily sexed on first view, such as Great Tits.
- Detectability information can only be analysed if habitat codes (at least Levels 1 and 2) are available for the relevant transect section.

Any data submitted using the new methods will make it possible to extract additional information from BBS counts, and we are grateful to all volunteers who wish to try the new methods. However, we would like to emphasise that the standard BBS counts will still be used as normal to produce BBS trends and for other research, and remain as valuable as ever.

BBS NEWS AND RESEARCH

The latest House Sparrow breeding population estimate was derived using BBS distance-band counts



ESTIMATING BIRD NUMBERS USING DISTANCE-BAND COUNTS

New estimates of the breeding and wintering populations of all of the UK's bird species were published early in 2013. Estimates ranged from single figures of rare breeders such as Savi's Warbler to over eight million pairs of Wrens! The work of assessing and updating the population trends was carried out by the Avian Population Estimates Panel, consisting of representatives from BTO, RSPB, JNCC, WWT and GWCT.

As would be expected, there are many different methods of estimating bird numbers; the appropriate method for each species will depend on whether it is rare or common, as well as behaviour and ecology. Birds with very small populations, such as Crane, Spoonbill and Golden Oriole, can often be directly counted, but obviously this approach is not possible for more numerous species.

For many common species the panel took estimates published in the 1988–91 *Breeding Atlas*, and updated these to the present day using BBS trends. However, for many species an alternative and independent set of estimates was available, generated using BBS distance-band data. This method is based on the fact that observations are assigned to distance bands,

allowing statistical analysis to infer the proportion of birds not detected by observers, and thus how many birds in total were present in the area surveyed. This estimate can then be scaled up to give a total figure for the UK.

While this approach is statistically sound, it is likely to work better for some species than for others.



In particular, the males of many species are more detectable than females, thereby biasing the estimate. For example, an estimate of Grasshopper Warbler numbers using this method is effectively an estimate of the number of pairs, since only singing males are detected, whereas an estimate of Collared Dove numbers is more likely to represent individual birds.

The panel considered the estimates produced by distance sampling alongside those produced by other

methods on a case-by-case basis, considering the ecology and habitat of the species, as it was felt that this approach was likely to produce less accurate results for species where there was a large and uncertain difference in detectability between sexes.

In some cases the estimates were very similar; for example, the number of Blackbirds estimated from scaling the 1988–91 *Breeding Atlas* figure was 5.4 million pairs, while the number calculated using the entirely independent BBS distance-band analysis was 5 million pairs. In other cases, the detectability estimates could clearly be improved by recording whether birds were recorded by song or sight on BBS visits (see page 4).

In the final report, estimates derived from BBS distance bands were presented for 23 species, from common birds such as Starling and House Sparrow, to scarcer species such as Whinchat and Common Crossbill.

FIND OUT MORE...

Musgrove, A.J., Aebscher, N.J., Eaton, M.A., Hearn, R.D., Newson, S.E., Noble, D.G., Parsons, M., Risely, K. & Stroud, D.A. 2013. Population estimates of birds in Great Britain and the United Kingdom. *British Birds* **106**: 64–100.