



The first year...



▲ Breeding Curlew have become increasingly rare in recent decades.

Launched in late 2015, our Curlew Appeal has been our most successful Appeal ever. How are we using the funds you so generously donated to conserve this beloved bird? **Sam Franks** explains.

In the lead up to our Curlew Appeal, the situation was bleak. The UK had lost nearly half its breeding Curlew in 20 years, and the species had just been included on the *Birds of Conservation Concern* Red List for the first time. However, the outpouring of support for the Appeal is a huge ray of hope, and local and national efforts have been galvanised to discover how we can reverse the fortunes of this most charismatic of birds.

Although information collected by volunteers taking part in the Breeding Bird Survey (BBS) tells us that our breeding population of Curlew is suffering the most, the UK also hosts one fifth of the global population during the winter, and this has declined by 20% since the late-1990s. Our winter population is supplemented by birds breeding on the continent, but many local breeders also winter here. UK Curlew conservation efforts must therefore understand the environmental pressures and mechanisms affecting this species throughout the year. Measures can then be targeted towards factors that may influence both breeding success (e.g. upland afforestation, conversion of semi-natural 'rough' grassland to improved pasture or arable land and predation pressure from generalist predators such as foxes and corvids) and adult survival (e.g. estuarine development and fisheries activities, such as Cockle dredging).

BOOSTING BREEDING BIRDS

Our ambitious and multi-faceted Curlew research programme is using various techniques, from analysis of long-term monitoring data to GPS-tracking (pages 14-15), and working in partnership to generate information that can be directly applied to protecting and restoring our Curlew populations. Recent analysis has used BBS and environmental data to examine the factors that affect Curlew breeding abundance and population trends. We found that arable farming has a detrimental effect, as does upland afforestation. Not only do these

activities result in both habitat loss for Curlew, but Curlew actively avoid forest edges, preferring open areas. Trees act as a reservoir for corvid predators that roost there and predation, primarily on eggs and chicks, is therefore an additional detrimental factor. Curlew abundance was also negatively related to rising summer temperatures (warmer summers are associated with fewer Curlew), but positively associated with protected area cover. This is the most comprehensive assessment to date of the factors influencing these trends on a national scale.

RESHAPING OUR KNOWLEDGE

While we have fairly good information about changes in the distribution and numbers of Curlew from surveys such as BBS, Wetland Bird Survey (WeBS) and *Bird Atlas 2007–11*, we know much less about the demographic mechanisms (i.e. changes in adult survival and/or breeding success) underlying these

patterns. Next year we'll be addressing this, working to learn more about variation in Curlew survival around the UK. For example, does a bird's likelihood of survival

depend on whether it winters on the east or west coasts, and have annual survival rates changed over time? As Curlew is a long-lived species, small changes in annual survival could have a significant impact on longevity and, consequently, on lifetime productivity affecting population trends.

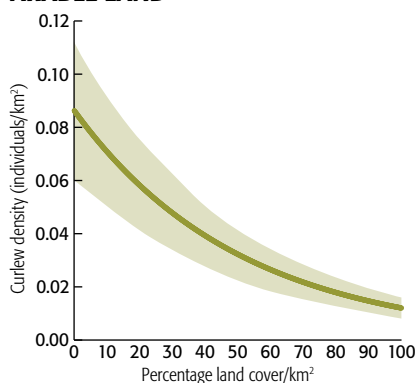
Similarly, we know very little about the factors contributing to changes in wintering Curlew populations around the country. We already know

We found that arable farming has a detrimental effect, as does upland afforestation

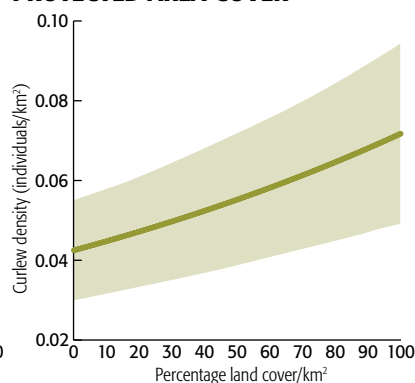
Environmental influences on Curlew

Showing trend line and upper & lower confidence intervals.

ARABLE LAND



PROTECTED AREA COVER



Curlew collaborations

We are building our knowledge base by working with other people and organisations who have a stake in Curlew conservation, including farmers, landowners, estate managers, and local authorities. This autumn and winter, we are involving local stakeholders in workshops in the Yorkshire Dales and Cairngorms National Parks to develop bespoke research programmes on their important numbers of breeding waders, including Curlew. These programmes will gather information on breeding wader numbers and breeding success to identify the environmental conditions needed to support sustainable local wader populations. This work will also highlight areas where conservation efforts might compete with or complement other land management objectives, helping managers to target and prioritise effective conservation action.

that wintering declines are more pronounced in Wales and Scotland than in England, for example, and we need to figure out why. Analysis of regional WeBS data will investigate the environmental factors influencing the regional population trends for birds wintering in different parts of the UK, bringing in information on habitat, climate, food availability and anthropogenic disturbance.

A BRIGHT FUTURE?

We are working hard to put our research plan into action with the hope that what we find will contribute to our understanding of why Curlews have declined so rapidly. With luck, and working alongside our colleagues throughout the wildlife conservation sector, we'll find a way to return the iconic cry of the Curlew to our countryside. ■

Get involved

Support our Curlew Appeal:
www.bto.org/curlew-appeal

Volunteer to take part in our surveys:
www.bto.org/surveys