

FUTURE CONNECTIONS

Managing landscapes, food chain and habitat is key to reversing the decline of UK birds

WORDS: BEN MACDONALD

THIRTY YEARS FROM now, the UK will be facing one of two scenarios when it comes to bird population. It is entirely our choice which of the two 'diary entries' below are written in the year 2046 – and be quite clear; both are entirely possible. Be even clearer, there will be no middle ground.

1 April, 2046

We drove just under 200 miles from London to Dartmoor today, but it was worth the trip. The Cuckoo was showing well. The crowd was well behaved, and the RSPB volunteer-manned stand kept people at a safe distance, so everyone could get a good view. It was good to see the bird on our fourth attempt and it called constantly during our stay. We never saw a female, and this shouldn't have surprised us, but it did feel a little sad to see him cuckoo-ing away all by himself. The last English Cuckoo – all alone on the moor.

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1 April, 2046

We drove to Dartmoor today. A little earlier than last year, climate change perhaps. The harriers were ghosting around the moor and Ring Duzels chattering around the rocky outcrops. It was a month too early for the shrikes and Wrynecks in the Birch woods, but Cuckoos and Redstarts were in full song, and Tree Pipits had started their towering flights from trees on the hillside. Willow Tits were twanging away in the wet woodlands and, strangely, the wood itself seemed to be growing back – the invisible Lynx no doubt taking its toll on the deer. A farmer told us he had seen one last week, but I doubt we ever will. It's just good to know that they're back. England's Yellowstone is blooming, though even my ears tired of the endless cuckoo-ing after a while...



We will either think big; realising landscapes, food chains and varied habitats on a large scale, or think small, and in trying to save the last few postage stamps of habitat, and their birds, watch them slip through our grasp as they isolate and fade. So it up to us, as conservationists, to catch up with every other first-world country – from America to Germany – and rebuild our wild places, for good. If there is one key to local survival in declining birds, it's food. But if there is one key to population survival, it's connection – retaining landscapes, with many birds, in one place. This is the largest, long-term challenge we face, if, in 30 years' time, that second diary entry is to be the more likely of the two.

Habitat is about giving birds a home. Food is about keeping those birds and their young alive. Connection is about keeping populations alive – decade after decade, century after century. You can have habitat, and you can have food; but without connection in a population, extinction will always follow. Isolation is extinction.

Many of us know that Wolves need connection and space in order to hunt, den, find new mates and retain social cohesion. Some packs need 1,500 square kilometres as a connected home range. Connection is a necessity for all our birds, not just our residents, but also the smallest of migrants.

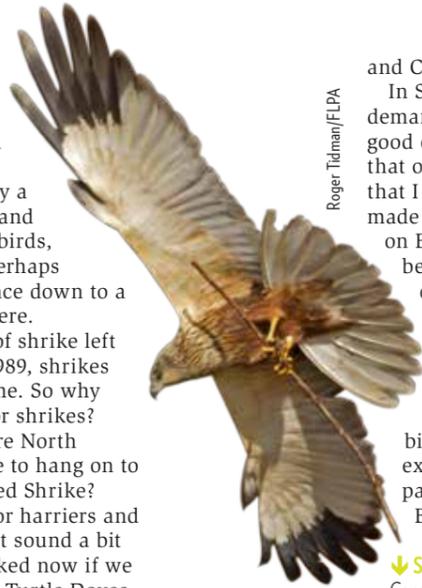
↑ SURVIVAL

Food is vital for keeping birds alive (even 'abundant' Meadow Pipits) – but 'connection' will protect populations

Why 'critical mass' is critical

In 1939, the RSPB bought North Warren in Suffolk for its breeding bird communities. They included Red-backed Shrikes, at that time on the cusp of a severe plummet in fortunes, after already a century of decline. It was a smart move and one that's proven the salvation of many birds, including Bitterns, Roseate Terns and, perhaps most of all, the Marsh Harrier (*right*), once down to a single pair at carefully-protected Minsmere.

Yet, by 1960, there were just 27 pairs of shrike left along this section of coastline and, by 1989, shrikes bred regularly in England for the last time. So why wasn't North Warren the saving grace for shrikes? Why, with optimal habitat and food, were North Warren and other heathland sites unable to hang on to their five, 10, 15 or 20 pairs of Red-backed Shrike? Why did the Minsmere approach work for harriers and Bitterns – but not for shrikes? This might sound a bit academic, but this question has to be asked now if we want to reverse or freeze declines in our Turtle Doves



Roger Tidman/FLPA

and Cuckoos, Wood Warblers and flycatchers. In Somerset, a few months ago, an irate lady demanded to know why her garden was no longer good enough for Spotted Flycatchers. On explaining that other gardens were also needed, I saw not only that I was explaining things badly, but also that I'd made an implacable enemy for life. There is no anger on Earth like that kindled by impugning someone's bee plants. So, here's my chance to try the connection argument again.

Polish ornithologist, Viktoria Tacaks, has done lots of work on Red-backed Shrikes, where they are still common. Her work brings to the forefront one of the most important questions facing conservationists – how many birds do we need in a population to prevent extinction in the long term? Shrikes are particularly important because their numbers in Britain, in any one place, were self-evidently too

↓ SUCCESS
Conservation efforts have helped the UK's Bittern population bounce back



↑ SUPPORT
Corncrake Ale, was inspired by a Corn Crake at Quooyloo in Orkney. For every bottle of Corncrake Ale sold, 50p goes towards conservation work of this species

low to prevent their demise. We need to learn why this was the case, in order to stop that happening to other species, especially other summer migrants.

Viktoria's paper "Predictions of changes in population size of the Red-backed Shrike (*Lanius collurio*) in Poland: Population Viability Analysis" is important to understand why we've lost birds we care about. In her study, Viktoria looks at a stable population of Red-backed Shrikes in east Polish farmland. She asks a simple question: how many pairs are needed to keep things as they are? What if the food and habitat remain prime? What if we factor in a bad summer, which, in Poland, happens every four and a half years? What if we start with 30 pairs? What if we start with 200 pairs? How likely is it that, in 50 years' time, this population of shrikes will still exist?

Viktoria puts these questions to VORTEX. When I heard this term, I pictured a cosmic black hole, but it's actually a piece of software for Population Viability Analysis (PVA). It's used to estimate extinction probability in any single population. In Poland, the team knew things like the percentage of shrikes laying between one and five eggs, the breeding age of females (they're ready at the tender age of one, but past it by the age of nine), and the mortality of young and adult birds. Bear in mind that 60% of hatchling shrikes do not last their first year. Like many migrants, just one third will make it back from Africa the following spring.

From the VORTEX results, Viktoria calculated approximately how many shrikes you need in a single population to stand the test of time.

How many birds make a future?

The study revealed that for a shrike population to have a 95% chance of surviving 50 years – in favourable conditions – you'd need around 80 to 90 pairs in that population, or 160 to 170 individual shrikes. That puts a massive demand on the size of your landscape, and the food resources within it. This conveys, perhaps, quite how robust a population of summer migrants needs to be in order to stand the test of time. Those single pairs of Spotted Flycatcher, Swallow or Wood Warbler near you are already extinct. It doesn't matter if the habitat is prime, or nothing has changed. It's not the habitat that's vanished. It's the connection.



Paul Hobson/FLPA

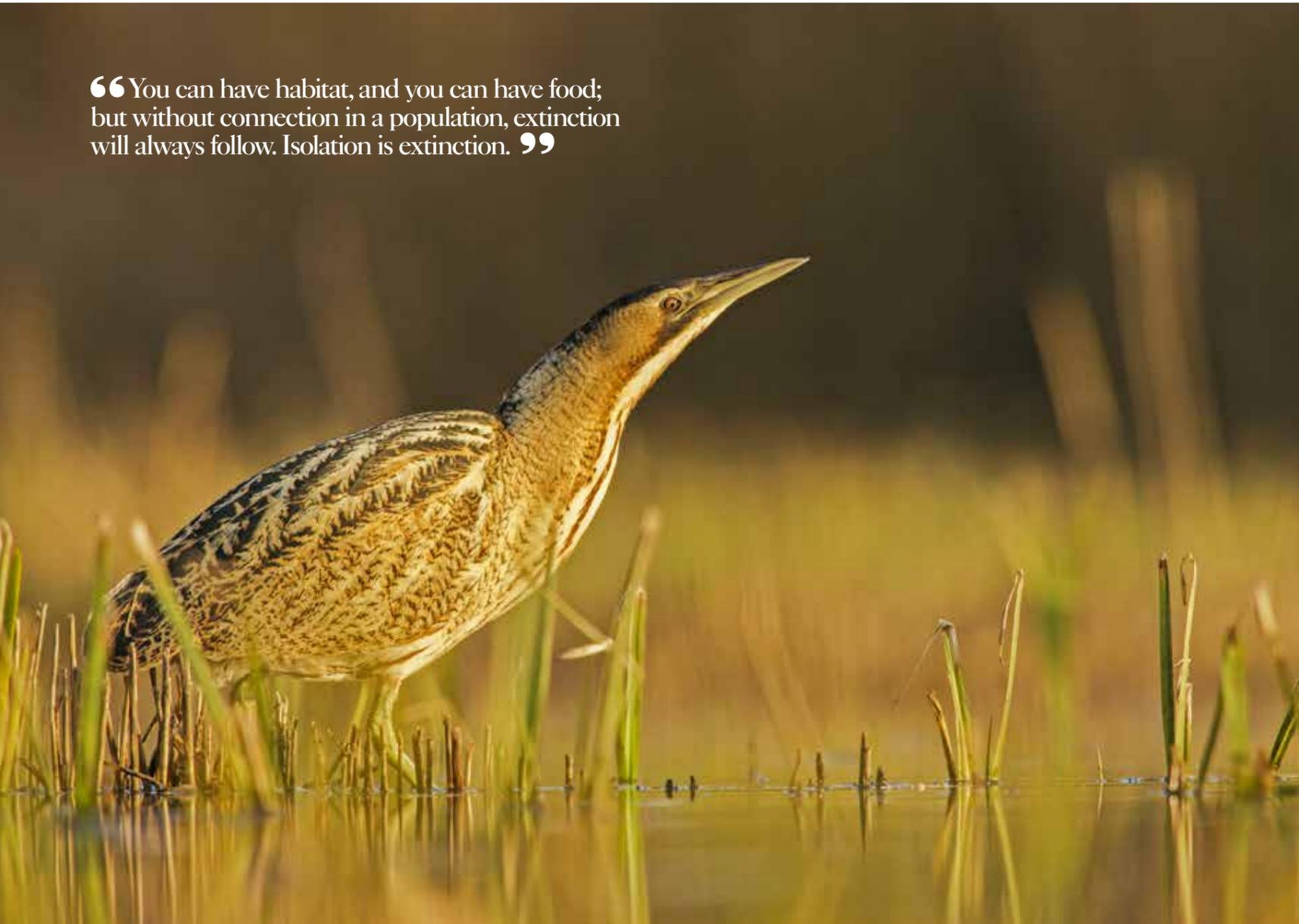
↑ RED LISTED
The Ring Ouzel's population decline is cause for concern

↓ NORTH WARREN
The RSPB's Suffolk reserve offers birds coastal, wetland and heathland habitats



Ian Barbour

“You can have habitat, and you can have food; but without connection in a population, extinction will always follow. Isolation is extinction.”



Jamie Hall/FLPA

CORN CRAKES IN THE HEBRIDES

Until the late 1800s, the Corn Crake bred commonly in almost every county across Britain. A century later, the 1993 survey recorded just 480 birds – and 92% of these birds were on the Hebrides. This first fact threatened the Corn Crake with extinction. The latter saved it. What was once a bird of hay meadows across the wider countryside had become a bird of hay meadows on the Hebrides. This was, put simply, the last place where late-cut and insect-rich grasslands existed on a scale large enough to support a Corn Crake population, rather than a few doomed individuals.

We know today that the Corn Crake bounced back due to superb conservation work by the RSPB; but how was that work possible? On the Hebrides in 1993 – the low point of Corn Crake decline – there were 106 calling male Corn Crakes on Lewis, 66 on North Uist, 50 on South Uist and 111 on the tiny island of Tiree.

So, even at that low point, here were four islands with connected Corn Crake populations, in a landscape where people were doing the right thing for birds on a big scale.

That meant the RSPB had a population, rather than a few pairs, when they took on the case of the Corn Crake – and spectacularly won. As a result, from a population as low as 50 males on South Uist, there were, in the last survey, 90 males.

What's interesting is that numbers from the key strongholds in 1993 were, in most cases, close to Viktoria's 50-year threshold for shrikes. And Corn Crakes are a comparable species, because, like shrikes, they are long-range summer migrants of which only one third make it back the following summer. In a nutshell, Corn Crakes had the decency to persist in one large haven. This bought the RSPB time to expand their habitat. As always, connection is king.



Mike Lane/Alamy



Research carried out in Poland suggests what is needed to ensure the Red-backed Shrike still exists in 50 years' time

Richard Brooks/FLPA

WHY CONNECTION IS KING

Connection is why you will travel to the Highlands in 50 years' time and feel that spring thrill, even in the lull of summer, at hearing a Cuckoo – one of thousands connected in a vast unbroken food-scape. Lack of connection is why those two pairs of Willow Tit at your local gravel pit, or the Spotted Flycatcher hawking your lovely buddleia in a sterile village, are already history. That is why the little Alder wood near you, the wood where “nothing has changed”, has lost its Lesser Spotted Woodpeckers – but the New Forest has retained 100 pairs, each one connected to the other.

One of the many wonderful things about the New Bird Atlas is the relative abundance maps. I'd particularly recommend the Cuckoo map (see right) as an example of how tightly you can correlate a savable population to food and habitat at a landscape level: just look at the New Forest and Dartmoor – bursts of red hope on a desolate English map. I'd also recommend the Turtle Dove map for understanding how few landscapes are left for them. We might save the odd

farm, but you'd need to buy most of Essex to stand any real chance of saving Turtle Doves, today. More optimistically, look at the Whinchat map to see a blast of red over Salisbury Plain – 300 pairs of birds defying the chemicals of the 20th Century, feasting on insects preserved by the military since 1898.

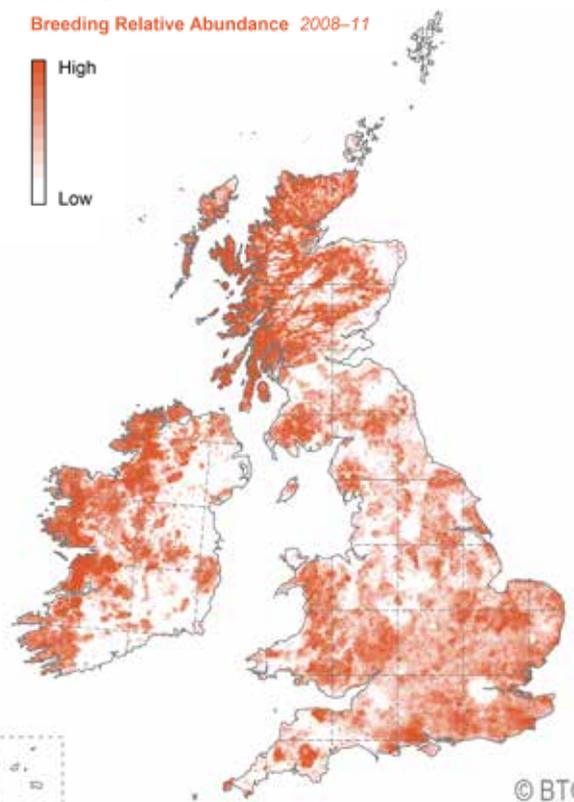
Connection is king. If we can connect and rebuild our birds in landscapes, we will win. If not, we have already lost – landscapes are as optional as food.

Over time, the reintroduction of summer migrants, like shrikes and Wrynecks, will boost a Britain whose wetlands are expanding and whose forests and grasslands are slowly joining up. For most of Britain's birds, it's not up to farmers or gamekeepers, it's up to conservationists and it's up to us. Deep down, we already know which is moral, and right, for the future.

Novelist Jules Verne described isolation as a “wretched thing, beyond human endurance”. Why then, should we inflict it on our birds? 

CUCKOO

Breeding Relative Abundance 2008–11



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