

INCREASES IN FARMLAND BIRDS IN DORSET SHOW THE POSSIBILITIES FOR CHANGE

An example of rapid recovery

Mike Coleman

The catastrophic decline in farmland bird populations in the UK and across Europe has been well documented and greatly lamented. However, recent changes in Dorset show that this situation can be rapidly improved while source populations of farmland birds are still present. The following account results from my surveys in an area of several thousand acres of predominantly arable land near Milborne St Andrew over the last eight years, concentrating on Corn Bunting and Yellowhammer. I walk these farms daily during autumn and winter and also spend weeks surveying nesting birds on the two core farms, totalling over 600 acres, which are without public access. Other species are noted along with observations that I have made in this area since the 1970's when I started observing birds around my home village of Milton Abbas.

The reason for concentrating on these two species is that their fortunes have been followed closely in the UK and declines have been documented particularly since the 1970's/80's. Before detailing the recent increases in the survey area, I feel it is useful to consider some background to the previous decline. The general consensus as to the decline of the Corn Bunting is that it occurred in line with the major change that became widespread by the 1980's from spring sown cereals, particularly barley, to winter wheat, sown in the autumn. The retention of stubbles during winter is crucial to farmland birds and was often the practice during the rotation that included the spring sowing of barley. The crop's structure and invertebrate populations were related benefits, but not entirely essential to nesting Corn Buntings.

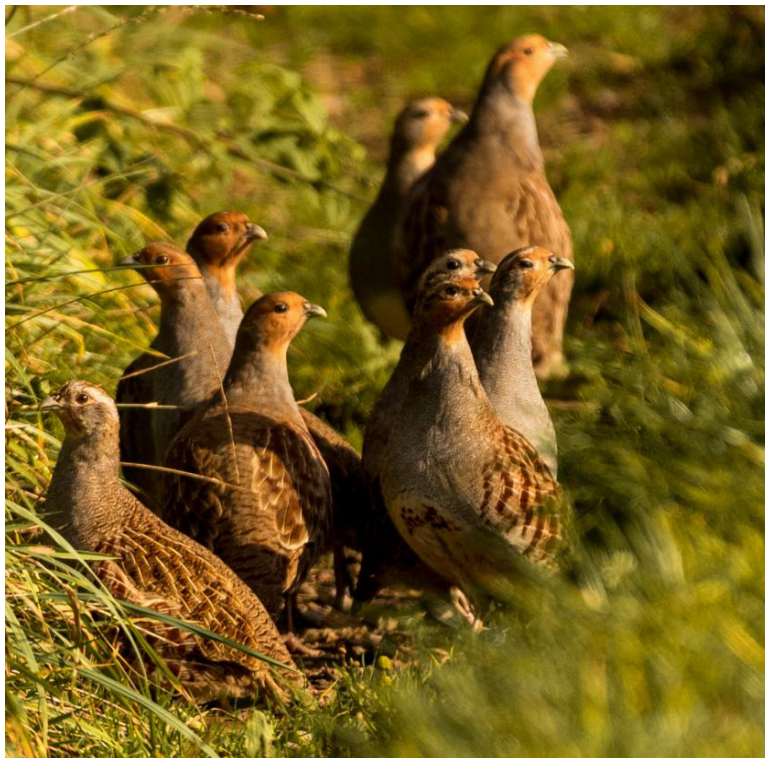
A key feature of these two bird species is that they are strongly resident, particularly Corn Bunting, happily remaining all year within the same locality unless forced to move through hard weather and/or low winter food supply. Indeed, Corn Bunting song dialect is local within a few miles of their natal areas, proving that they form sedentary populations. The species is semi-colonial, forming groups of nests, males often being polygamous with sometimes as many as three breeding females per male. The features of spring planting that are important to Corn Buntings are therefore the provision of winter food, traditionally in stubble, together with suitable nesting habitat in the form of extensive tall vegetation.



Corn Bunting in Vetch ley nesting habitat

The idea that the earlier harvesting of winter cereals is disastrous for Corn Buntings, as ground nesters, is erroneous, since the first broods hatch in early June and although vulnerable as fledglings, they are mobile and safe in late July/early August. It is true that some second broods are lost but this is a minor issue and has always occurred in cereal crops. Similarly, Yellowhammers thrive where stubbles are retained and where the hedges are in good condition, managed rotationally with thick cover at the base where nests are hidden. More than eight miles of such hedges are maintained in the main survey area of 600+ acres.

Other species that have suffered huge declines in the UK include Turtle Dove and Grey Partridge. Turtle Doves nested in the survey area until the early 1980's, though I noted a greatly reduced nesting density, and Grey Partridges lingered with occasional nesting, although I personally saw no coveys after 1973 until slight recovery in recent years. Interestingly, Turtle Dove remains as a breeder just beyond the eastern edge of Dorset, where an important population nests around Martin Down, persisting through the period of agricultural change and wider population decline almost to extinction in the UK. I suspect that the expansion of this cluster of pairs would be crucial to any future for the species in Dorset and adjacent counties.



Wild Grey Partridge covey

The results of my Corn Bunting surveys on the two core farms at Milborne St Andrew show a dramatic change: in 2012 a single male was present and one brood fledged; the most recent survey found 28 singing males with 38 first broods hatching. At least ten second nesting attempts were made. The wintering flocks now total over 200 birds, up from a few individuals originally in the early years. Although I employ standard BTO breeding bird survey methods, the individual broods of Corn Bunting must be located by observing the behaviour of the breeding males. They start to feed each of their several broods a few days after hatching. The use of a vehicle to access all parts of the study area on existing tracks is crucial for avoiding disturbance and thereby locating all nests.

The wintering Yellowhammer flocks have risen from around 100 birds to over 550. Yellowhammer pairs have risen some 20% to 35 with around 30 second nesting attempts.

So what has changed in addition to the retention of winter stubbles?

- the sowing of winter cover crops on several hundred acres, which has included mustard, roots, linseed and cereals as bird food.
- provision of a dozen standard drum gamebird feeders dispensing wheat from November to April, in addition to scattered grain.
- return to a rotation including spring barley and the planting of 300 acres of summer cover crops, in the form of leys, which gives the benefits of providing ideal nesting habitat and massively increased invertebrates. Leys are retained year round without cutting or grazing.

- winter cover crop seed is broadcast into standing summer crops before harvest, ensuring that bare soil is largely avoided.
- minimal tillage is employed with no ploughing.
- some scarification occurs when crop residues are incorporated into the seedbed using a heavy duty tractor-mounted flail prior to direct drilling of main crops.
- years of applying compost and farmyard manure has taken place.
- permanent cover crops including Reed Canary Grass have been planted on difficult ground and as a control of invasive Blackgrass. Leys contain grasses and a very high percentage of clover and vetch which not only boost invertebrates but also fix nitrogen.

The increase in invertebrates, including ground beetles, spiders and bumblebees has been phenomenal. Earthworm numbers have increased and nitrate leaching is greatly reduced. Yellowhammers in particular, nesting on adjacent farms, have benefited and are observed returning to the survey farms to collect food for their broods.

The farms are not organic, herbicide being used to kill crop residues between rotations and standard inorganic pest controls and artificial fertilisers are applied as required. No predator control is carried out and occasionally over recent years, Grey Partridges have been reintroduced at a maximum of 300 birds per annum by the shooting tenant or by myself for falconry. Without predator control, Grey Partridge nesting success is undoubtedly very low, but the introduced birds and their offspring are now breeding on the farms, producing several coveys each year.

Quail nest on the farms, as they do elsewhere in Dorset and neighbouring counties, and have increased in recent decades. In a year when there has been a good migration of breeding birds into the county, several may be heard singing in the study area, an occasional brood being seen later in the summer. Common Whitethroats have taken advantage of the large acreage of tall, dense cover crops. They have doubled their breeding numbers to at least 22 pairs, now nesting in the sward as well as in the hedgerows. Skylark numbers are high, some 35 pairs nesting on 600 acres with autumn flocks of 200 or 300. The House Sparrow flock nesting around the farm buildings is doing well and will be surveyed more thoroughly in future. The winter flock numbers around 50 birds now. Interestingly, the adults fly many hundreds of yards out to the cover crops to collect food for their broods. Linnets feeding in Linseed in autumn have numbered as many as 1,000 in a single flock.

Autumn passage migrants such as Whinchat linger in cover crops with as many as 20 birds present daily in sheltered valleys. Several Redstarts are often present during migration and Black Redstart has also been noted. Stonechat numbers reach double figures and several overwinter in mild conditions. In winter a significant roost of up to 50 Reed Buntings uses the Reed Canary grass.

Woodcock roost in the cover crops in a good year and Jack Snipe also use these areas for roosting every year. Recent years have seen up to 200 Golden Plover roosting in one particular area. Up to 50 Snipe use the wetter areas of cover crop through the winter. Several Short-eared Owls winter, roosting in the cover crops, attracted by the massively increased vole numbers and roosting birds. A Great Grey Shrike has wintered occasionally, similarly attracted by such prey.

Raptor numbers are much increased with as many as five Hen Harriers wintering, spending many hours hunting the same cover rather than just passing through. Local adult Peregrines and migrant juveniles winter, along with Merlins and many adult and juvenile Sparrowhawks. The Sparrowhawks, particularly the males, become very adept at hunting on foot, scurrying through the six-inch high cover in pursuit of pipits and other small avian prey. They comically pop up to perch on a clod and survey their surroundings, before diving back in to run another few yards.



Male Hen Harrier in winter

One such juvenile male also flew past my feet, using my vehicle as cover as it dived into the hedge beside me, targeting the Yellowhammers, and ignoring me totally. Goshawks are now ever-present, juveniles dispersing from nests many miles away arrive in autumn, attracted to winter territories by high gamebird and pigeon populations. I have observed them hunting areas that I have recently disturbed while flying my trained Goshawks in winter. Similarly, I observe wild Peregrines stooping at Partridges that I flush. They quickly learn that I am useful in assisting their hunting, often in late afternoon. Merlins frequently mob my hawks whenever they locate them, even when I am close by.

A minimum of two pairs of Barn Owl and Kestrel nest with several of both species present all winter. Many pairs of Buzzard nest with large numbers of non-breeders also present year round. Two pairs of Hobby nest and recently a male Hen Harrier has been present in summer. Bizarrely, at least five Quail have spent recent winters in a limited area of cover crops. It is known that birds escaped from a [Japanese] quail farm locally over 20 years ago. Japanese/Common Quail hybrids do not migrate and it is likely that the wintering birds are hybrids, which suggests that this invasive hybrid has been breeding for a long time in Dorset - as it has in other European countries. This could be a worrying development as they could replace the native migrant Common Quail. DNA samples would be required to confirm the presence of such hybrids.

Crucially the changes in husbandry, including use of minimal tillage, spring sowing, cover crops, leys and supplementary wild bird feeding, has been grant-aided in partnership with Natural England and Wessex Water as a trial to both reduce nitrate leaching and to boost biodiversity. Targeted conservation action can work, provided that adequate incentives are provided! Reduction in agricultural input - of seed, fertiliser, machinery, chemicals, fuel, water and labour - is marked, and soil compaction is rare or non-existent. Seed can be home-grown to a greater extent and future possibilities for sustainable tourism and other exploitation of the recovering biodiversity may well be viable.

Importantly these changes in breeding bird numbers and other benefits have taken place very rapidly and there is no reason why such results could not be replicated on adjacent and distant farms.

Surely this points the way for future support models in agricultural policy? Not forgetting of course the vital willing participation of the farmers, without whom change is not possible.