

Your questions answered

The BTO/CJ Garden BirdWatch Team quite often receives a number of letters asking the same, or a very similar, questions. This suggests that other participants may also be wondering about particular topics and it makes sense to provide an answer to the questions where they can be read more widely. This new regular feature has been put together to provide readers with answers to commonly asked questions.



Young Starlings by Hugh Insley

In the last issue of Bird Table we asked if any readers had witnessed birds like Blue Tit, Great Tit and even Great Spotted Woodpecker feeding on their red hot poker plants. We had a large number of responses from Garden BirdWatch participants who reported similar goings on in their gardens. Sadie and Ramsay Napier from Lerwick reported that the House Sparrows which tear their red hot poker plants to shreds then perch on the washing line and stain the clean washing with indelible droppings.



Other reports came from across the UK and involved all four of the species mentioned above. Interestingly, while some Garden BirdWatchers reported that the flowers were destroyed by the birds, other birds were far more delicate and left them intact.

This sort of behaviour has been reported in the ornithological literature before and it seems that some birds will attempt to feed on nectar and/or pollen from a range of plant species. A more detailed article will appear in a future issue of **Bird Table**.

Next month: How to deter Sparrowhawks

Q. I have seen Starlings carrying green material into their nest this summer. Are they feeding it to their chicks?

A number of Garden BirdWatchers have noted Starlings carrying fresh plant material into their nest sites, prompting questions as to the functions of such material. Recent research, carried out by scientists in Germany, sheds some light on this behaviour and reveals that the use of certain herbs in this way can have a positive benefit on nesting success. Male Starlings will intermingle fresh plant material, typically from species that are rich in volatile compounds, into the dry grasses that form the bulk of the nest.

The researchers examined whether the presence of herbs in a nest, together with the type of herbs and quantity of material used, had any effects on the mite and bacteria loads of the nest or on the condition of the nestlings. Although the presence of herbs had no effect on the number of mites living within the nest, those nests without herbs suffered higher levels of nestling mortality with increasing mite load than those nests with herbs. The findings also revealed that there were fewer bacteria in nests with herbs than in those without. Finally, nestlings in nests with herbs fledged at a higher weight than those from nests without herbs. The researchers suggest that these three findings demonstrate that the presence of certain herbs can have a beneficial influence on nestling development, either by acting as immunostimulants or by reducing the numbers of germs.

Gwinner, H. & Berga, S. (2005). European Starlings: nestling condition, parasites and green nest material during the breeding season. *Journal of Ornithology* 146 (4): 365–371.

Q. Why are the eggs of birds speckled?

A number of different explanations have been put forward to explain why the eggs of many bird species are speckled. These include (i) to camouflage the egg against the unwelcome attentions of egg predators, (ii) to signal female condition and (iii) (in species like Cuckoo) to mimic the patterns of eggs to which a 'parasite' egg is being added. Evidence in support of each of these explanations has been put forward over the years but it does appear that some of these explanations may be less satisfactory than others. A recently published paper, reporting on work carried out by researchers based at the Universities of Oxford and Birmingham, has come up with an alternative hypothesis.

Detailed work, examining the location of spots on the surface of the egg in relation to shell thickness, revealed that pigment spots specifically demarcated thinner areas of shell. Not only this, but darker coloured spots marked thinner areas of shell than those marked by paler spots. The authors suggested that the pigmented areas (made up of compounds known as protoporphyrins) formed in areas where the shell was thin because of variations in the amount of calcium available to the female during eggshell formation. When they examined Great Tit eggs from nest sites across a study area with varying calcium availability, the researchers found that calcium availability predicted both eggshell thickness and pigmentation differences between clutches. More work is needed to ascertain whether these findings can be applied to other species and other sites.

Gosler, A.G., Higham, J.P. & Reynolds, S.J. (2005). Why are birds' eggs speckled? *Ecology Letters* 8: 1105–1113.

Q. You include species like Goldfinch, Woodpigeon and Magpie on the less frequent species list for GBW but in my garden they are frequent. Can you adjust the count form to reflect this?

The format of the GBW count form was determined when we began the project in 1994. Separation of species into 'frequent' and 'less frequent' tables was the only way to get all 42 species onto one form. The decision as to which list a species should go on was based on the national pattern of occurrence at the time. Even though this may have changed, we need to be consistent in our approach to ensure we do not bias the results. The GBW Online system allows users to record actual counts for all species, so we can use this information alongside that gathered on the paper forms to build a more complete picture.