

The hidden depths

What a wonderful time of year it is for bumblebee-spotters. There are fewer of the big queens on the wing but many more workers, frantically collecting pollen or nectar. Additionally, there are some cuckoo bees that take over bumblebee nests in the way that cuckoo birds exploit avian species.



These “parasitic” bees are bigger and heavier than the social bees that they take advantage of. They are thugs with thicker coats and heavier jaws. They do not collect pollen or nectar and so are lazier, flying from flower to flower at leisure. One such is the **Southern cuckoo**, distinguished by the yellow band behind her head and the yellow spots on each side of her body in front of her white tail. She takes advantage of the White-tailed social bumblebee.

By now, the Summer is usually at its hottest and driest. Our garden plants have probably been chosen to provide a few more months of colour but, in the fields, the wildflowers have reached the peak of their short blooming season. The pollinators that we rely on, are at their busiest because they time their foraging to coincide with the presence of the wildflowers.

What happens if these disappear? Pollinators then rely on gardens, allotments, and parks for their survival. In the last few decades, the use of herbicides has allowed farmers to eliminate nearly all “weeds” and there are even genetically modified crops that withstand glyphosate and so can be treated repeatedly to remove all plant competitors. Such chemicals drift onto hedges and run into watercourses. Not only are pollinators affected but also other insects, birds and mammals that feed on a range of wild plants. It is not just insecticides that are a problem for bees. We are only just beginning to understand the extent of the damage that these persisting chemicals are doing, now that they have got into the soil and watercourses.

There is a brilliant new book available called “The mind of a Bee” by Lars Chittka. One of the studies shows how a bee can learn to solve a problem, involving the retrieval of nectar from a hidden place, by watching a trained bee performing the action a couple of times. Another describes how a bee can be trained to wait for 5, 10, 15, or 20 minutes before approaching a pot containing a nectar reward. “So what?” you might ask, but this is relevant in a landscape where some flower species replace their nectar supply in a matter of minutes, but others take hours. When a worker bee leaves her nest for the first time, she has to learn everything about her job “on the wing”. The studies described in this book give some insight into how she manages.

