

It seems to me . . .

Honey bees have never had it so good! Yes, people are worried about declining numbers, but my colonies have stayed pretty healthy. Increased research into problems facing honey bees and other pollinators is producing results, which in turn will help beekeepers in their battle against a myriad of pests and diseases from which honey bees can suffer.

Beekeeping combines science and craft; it would be a great teaching tool across the whole curriculum: maths, English, biology, botany, woodwork, art, cookery.

It also teaches patience, perseverance and self control: it's not very helpful when stung, to abandon a hive and run, though I did just that once in the early days, jumping fully dressed into the swimming pool!

How did I become a beekeeper? Some 28 years ago I watched a bee sticking its long tongue (proboscis) into flowers to collect nectar. Intrigued by the bags of pollen on its back legs, I wanted to learn more. No beginners course was available, but I saw a 'bees for sale' advert so, undeterred, we brought them home. Decision made: I was keeping bees! I joined Surrey Beekeeping Association, enjoyed a theory and practical course and, with much to learn, returned a second year just to make sure!

I had several false starts. I lost two hives to disease and my third hive was ill-tempered and aggressive. The bees came to meet me as I left the house. Then a dear man in Dorking heard of my plight and offered me a surplus colony. I went with the children to see him and his bees. He lifted off the roof to show us, wearing no protective clothing. I was apprehensive, but ecstatic that they weren't aggressive. Beekeeping could start in earnest.

The bee year begins in February. The queen produces eggs (brood) in a small patch of comb kept at 35°C even in chilly weather! The bees eat honey,



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giving them energy to vibrate flight muscles, which in turn creates heat to warm the colony. They also cluster within the hive to conserve heat.

As outside temperatures increase, the queen lays more, until by May she is producing 1500–2000 eggs daily, until the colony has around 60,000 bees. Young bees (female) clean, feed the queen, store incoming nectar and pollen, then graduate to guard duty at the entrance, finally becoming nectar gatherers; after another three weeks they die, exhausted.

In summer there are several hundred drones (males) in the colony, their only purpose to mate with new virgin queens, dying in the process. Those left do no work, have no sting, but make a lot of noise. By late summer they are expelled from the hive by the female workers and die.

Workers born in late summer and autumn are spared the hard work of their older sisters and live 6 months until new bees emerge next spring. In winter they consume their honey and pollen and fly out on fine days to relieve themselves, as healthy bees never foul the hive.

It is said that 1lb of honey takes around 25,000 bee trips; i.e. 550 bees visit two million flowers, flying up to 50,000 miles, equivalent to twice round the world, just for one jar! A bee produces about one twelfth of a teaspoon of honey in its lifetime. A strong colony needs to collect around 120kg of nectar and 20kg of pollen a year just to support itself. Compare these quantities with the tiny amount that one bee can transport (40mg of nectar and 15mg of pollen per load) and you will understand why good sources of both are so vital to the survival of a colony.

In early spring, hazel and crocus are good sources of pollen, needed to feed brood. Trees are great sources of nectar and in May horse chestnut and other *Aesculus* species can produce well. In July, lime trees and blackberry are really useful. I should add that some limes are poisonous to bees, namely *Tilia tomentosa* and its varieties. However, *T. x europaea*, *T. cordata* and *T. platyphyllos* are fine.

By late summer the bees usually provision themselves. I leave at least 40lbs of honey per colony for winter. I notice today, late August at 10.30 am, that they are having a sleep in; not much activity around the entrances, but at the height of nectar production they will be at work by 6 am. Interestingly, bumble bees work longer hours and in cooler weather than honey bees.

If you want to grow more bee-friendly plants, Graham Stuart Thomas's *Perennial Garden Plants* lists more than 50 species. Herbs such as *Satureia montana* (winter savory) and *Oregano laevigatum* are excellent – in flower for weeks, and good garden plants too. Gardening in a bee-friendly fashion is good for the bees and for pollination! 

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