

THE BUZZWORD IS 'BEE'

By Sue Jackson

First published in *The Big Issue*, Issue 15 (28 March 2011)

All over the world, bee populations are in decline. Why this is happening remains a mystery, but it is bad news for all of us. Sue Jackson explores some possible solutions, so that the honey-making may continue.

As a child, the highlight of my year was the annual Royal Show in the September school holidays. As soon as we arrived, I'd rush to the Honey Exhibition – even bypassing the show-bags. There I would stand for ages, staring into the observation beehive through the glass panel. The orderliness, productivity and teamwork of the bees and the intricacy of their tiny world fascinated me.

It was at the Exhibition that I learned the extent to which the history of bees is interwoven with our own. Cave paintings in Valencia, Spain, depict our ancestors hunting wild honey around 15,000 years ago. By 3000 BC, bees were domesticated in Egypt, where honey and its products were a common form of tribute. The ancient Greeks and Romans even valued bees as weapons of war, to be catapulted in their hives over the walls of besieged cities.

But even though bees have a rich shared history with humans, there is much about them that remains a mystery. And it was a mystery that attracted public attention in 2004 when, inexplicably and in their billions, bees across the US and parts of Europe began abandoning their hives. This phenomenon, which has bypassed Australia (so far), became known as Colony Collapse Disorder (CCD).

Elizabeth Kolbert, writing in the *New Yorker* magazine at the time, described the curious experience of David Hackenberg, a Pennsylvania beekeeper and the person who

first raised the alarm: “The more he saw, the weirder the situation looked. The frames all had honey in them, indicating that there had been plenty of food. They were filled with young larvae, meaning the bees, usually fiercely maternal, had abandoned their young. There were no signs of moths or pests that normally invade sick colonies. And Hackenberg couldn’t find any dead bees.”

So what was going on? Millions of dollars and research hours later, there is still no definitive answer to that question. Varroa mites, Israeli Acute Paralysis Virus, habitat loss, the impact of GM crops, mobile-tower radiation, climate change and pesticides... These have all been implicated. Dissection of affected bees has revealed black scar tissue and evidence of numerous diseases, but no single cause of the malaise has been established.

If the demise of innumerable bees does not alarm you, it should. Consider this: roughly one in every three mouthfuls of food we eat depends on the humble honeybee. IN FACT, HONEY PRODUCTION IS A RELATIVELY MINOR ASPECT OF THE CONTRIBUTION BEES MAKE. It’s their pollination of plants, in their unending quest for nectar, that most deserves our gratitude. About 90 fruit and vegetable varieties (including melons, apples, berries and pumpkins) are much more productive with the assistance of bees. Meanwhile, some crops, such as almonds, depend on them entirely, and the beef and dairy industries rely heavily on hay, which is pollinated by...yes, bees. This is why numerous people – in government, in groups and going it alone – have decided not to wait for experts to come up with solutions; they are taking action right now.

Even before the onset of CCD, the prescient Slovenian Government made a wise move. In a country where apiculture (beekeeping) is an extremely popular leisure activity, legislation was passed in 2002 protecting and guaranteeing preservation of the country’s native Carniolan bees. In November 2008, as the awareness of CCD increased, the

European Parliament passed a measure creating special recovery zones, where bees are provided with a variety of pesticide-free habitats.

The bee population in the US had been in serious decline for years prior to CCD. Many people believe that antibiotic-resistant genes from GM crops are to blame. The bee crisis has thus added weight to already vociferous demands for bans on GM crops worldwide.

In recent weeks, the international citizens' watchdog group, Avaaz, has circulated a petition that has already garnered more than one million signatories. The petition calls upon the US and EU to join the ban on neonicotinoid pesticides, which some independent researchers now cite as *the* cause of CCD. Yet Bayer (their main manufacturer) continues to export these pesticides despite bans in Italy, Slovenia and even in the company's home country of Germany.

As well as big-picture action, there are lots of small-scale initiatives. Kangaroo Island, off the South Australian coast, has been home to Ligurian bees since they were introduced from Italy in 1884. There are 19 apiaries on the island, and the resident bees buzz freely in a non-GM, minimal pesticide zone. It is difficult to overestimate the significance of this uncontaminated island sanctuary. As Lachlan Colquhoun, writing in *The Adelaide Review*, put it: "If the CCD crisis was to grow, the island would assume huge importance as a global control, and a source of pure bees that could help save the apiary industry and the human food chain."

Over in Melbourne, Lyndon Fenlon is a bees' champion extraordinaire. He is ingenious at locating suitable sites to build new hives, whether in scrapyards, disused factories, backyards and even Buddhist temples. Around the world, his fellow pioneers in the rapidly expanding urban honey movement are equally inventive. There are now hives on the roof of a railway station in Belgium and even atop the Paris Opera House.

Fenlon, as reported in the *Maribyrnong Leader*, sings the praises of urban honey. “City bees are healthier because there’s no crop spraying and they don’t have to fly as far for food.” He also manages to combine productivity with environmental credentials: “I have a specially-made rickshaw to cart the honey around with my bike so it’s carbon-neutral organic honey sold within five kilometres of where it’s produced.” Obviously Fenlon’s sustainable principles, as well as his honey, are hitting the mark: his micro company can’t keep up with demand.

All those years ago, the bees at the Royal Show struck me as such a strong, productive community that I could never have imagined them deserting their home. And while a single, all-encompassing reason for CCD remains a mystery, it is increasingly obvious that environmental degradation caused by man is a huge factor. It seems that the bees reached their species’ tipping point, and just abandoned their millennia-long way of life.

Yet perhaps the bees’ disappearance is their most important contribution to humanity: they are our very own canaries in the mines. But will enough of us heed their warning in time?