

## A sad day at the office.

The sun sets on a warm June evening as I make my way across the fields. I crest the brow of the hill and my destination comes into view, tucked into the corner of the field stand five bee hives on concrete blocks. I pause to plan my next move; the hives are old and have holes around the bottom where the wood has rotted away, so how best to seal them up? I've come prepared with duct tape, foam and petrol. Its nearly dark now and the earlier rain has stopped the honeybees from flying, but I know I'll have to be quick because as soon as I start disturbing the hive the bees will come out to see what's happening, and they won't be happy! I gingerly stuff the larger holes and the entrance with the foam and quickly duct tape up the smaller holes as a few bees start to emerge from them, then I double check the hive for holes, taping as I go, it's of the utmost importance that the hive is totally sealed. It's properly dark now, and I've had a long day so I steal myself for the worst part of the job. I pour out a pint of petrol in a plastic jug, remove the roof of the hive and quickly pour in the petrol and replace the roof. The honeybees roar as the fumes from the petrol kill them, then after a few seconds everything is quiet again.

So why am I killing colonies of honeybees under the cover of darkness? I'm not some escaped psychopath with a honeybee vendetta, instead I work for the National Bee Unit as a Seasonal Bee Inspector. It's my job to inspect colonies of honeybees for statutory notifiable diseases and pests and treat any diseased or infested colonies to prevent the further spread of infection. Unfortunately, this colony has American foulbrood. I started the day by inspecting all of the beekeeper's colonies, carefully taking the roof and supers off and stacking them so as not to squash any bees, then taking each frame of brood from the brood chamber, I checked for the queen and then shook all of the bees from the frames back into the brood box so I could check the larvae and sealed brood for signs of disease. All of the larvae were healthy and pearly white, neatly curled in the bottom of their cells, however, in one of the beekeeper's hives I notice that some of the wax capping's of the pupating larvae are dark, greasy and sunken with small perforations. This isn't a good sign, the capping's should be dry, domed and a nice digestive biscuit colour; when I insert a cocktail stick into the cell and pull it out a toffee coloured mucus rope emanates, my suspicion of American foulbrood is confirmed with a lateral flow device, the diagnostic test kit bee inspectors use to confirm disease.

There's no treatment for American foulbrood and as infected colonies are doomed to die from the spore forming *Paenibacillus larvae* bacteria, they are destroyed and infected equipment is sterilised to prevent the spread of the disease to other colonies. If left untreated the bacteria would spread to the rest of the brood, the colony would dwindle and die, and honeybees from other colonies would rob the hive of honey stores, spreading spores of the bacteria to their own colonies, insuring their own deaths. Tomorrow morning, I will return to the infected apiary and dig a meter square pit to burn the dead bees and frames, then I will scrape all the wax and propolis from the hive equipment before sterilising it with a blowtorch so it can be reused. The beekeeper is understandably upset by today events, and worries that it's his fault that his bees are sick, but I reassure him that anyone's bees can become infected, the pests and diseases that we look for take no notice of beekeeping experience or the quality of equipment

used when they infect a colony. Hopefully when I return in six weeks to recheck the colonies for signs of disease I'll be able to give the beekeeper the all clear and remove the standstill that prevents him from moving any bees or equipment until he is disease free. I'll spend the next few weeks checking all the honeybee colonies within five kilometres for disease, in an attempt to track down the source of the infection and stop it from spreading further. Fortunately, today isn't a typical day for me, the vast majority of colonies that I look at are disease free, and I get to spend my time helping and offering advice to beekeepers, it's not very often that I have a bad day at the office.

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