Biodynamic Beekeeping: a weekend with Michael Weiler

A review of 'The Nature of Bees and Biodynamic Beekeeping',
at The Hatch, Thornbury, 26th-28th August 2005

It took me a while to find The Hatch community in Thornbury, just north of Bristol, and even as I arrived I wondered if I really had the right place. Most of the people gathered on the grass in front of the entrance appeared to be in their twenties – surely this was not a beekeeping event?

But it was. I am past my half century, yet I am usually one of the younger members at meetings of beekeepers, so it was greatly encouraging to find that more than half the forty-odd people here – apparently willing to sit through a whole weekend of bee-talk – were under thirty. Better yet, a much higher proportion than is usual were women. Even Michael Weiler, our speaker for the weekend, is younger than me – albeit only by a couple of years. Michael runs a health food shop within a special needs community, similar to our Camphill communities, on a 100 hectare farm near Stuttgart in Germany and is an experienced beekeeper who looks after fifty colonies.

During the past five years I have become something of a bee nerd. I have kept my own bees in standard hives, hives of my own design and the traditional skep. I have read just about all the major books on the subject and many of the minor ones. I have watched and assisted other beekeepers and for a year worked at Buckfast Abbey, probably the best-known commercial beekeeping enterprise in Britain and even the world, thanks to the work of Brother Adam, who lived and worked there for most of his 98 year life. None of this, of course, makes me any sort of expert. Most of the beekeepers I know have many more years of experience and I would not presume to elevate myself to their rank, but I can say that I have studied the subject in some depth and gained quite a bit of practical and theoretical knowledge in that time. Only a few weeks previously I attended a week-long intensive course at the Central Science Laboratory near York, so this weekend was an opportunity to extend my learning and I was looking forward to discovering how biodynamic beekeeping differs from what we have come to accept as 'normal' beekeeping, which, from my perspective, is in urgent need of some radical re-thinking.

Michael was introduced by Bernard Jarman, executive director of the Biodynamic Agricultural Association (BDAA) for ten years.

Had Michael been a native English speaker, he may have been tempted to deliver the information content at a faster pace, which may have overwhelmed those in the group with little background knowledge. As it was, his thoughful and gently-paced delivery enabled even complete beginners to follow his talks, while giving the more experienced listeners time to consider the implications of this or that procedure and to ask questions, which Michael was always willing to answer. When he occasionally ran out of English vocabulary, several German-speaking members of the audience were able to provide helpful suggestions.

In contrast to the more general approach to teaching beekeeping, Michael stressed the importance of learning about the nature of bees before learning how to handle and cultivate them. He reminded us that Rudolf Steiner had given eight lectures about bees, which he considered to be more important to agriculture than any of the domesticated species because of their vital work in pollinating crops. Albert Einstein considered them so vital that he predicted an early end to human life on earth should the honeybee become extinct.

Although Michael and his fellow biodynamic beekeepers use 'modern' rectangular wooden hives with moveable frames, they do not fit the frames with wax foundation, according to general practice. He considers that building wax comb is an important, natural function of the honeybee and that suppressing this function, by providing ready-made foundation sheets embossed with the honeycomb pattern, causes the bees unecessary stress. There is also the danger inherent in the common practice of recycling wax into new foundation whereby lipophilic substances from anti-

parasite treatments will tend to concentrate in the wax, leading to a build-up of toxins that could damage bees, as well as encourage the development of mites resistant to such treatments. In the biodynamic system, bees are allowed to build their own comb according to their needs, thus acknowledging that the bees know better than we do what is best for them.

Michael noted the common objection from beekeepers that, left to their own devices, bees will build comb containing many more large drone-sized cells that they would if provided with smaller-cell worker-sized foundation, thus potentially reducing the space for raising worker brood. On the face of it, a reduction in the working population ought to result in lower honey yields, but in practice this appears not to be the case. One of Michael's friends is a commercial beekeeper with 500 hives, who makes a good living using the biodynamic system and has excellent honey crops.

Michael considers that allowing the bees to decide on the male/female balance in the hive gives them more control and thus results in a less stressed colony. Although it is generally considered that the drone bee's only function is to mate with a queen – something that only a tiny proportion of drones actually achieve in practice – there may be other secondary functions of which we are unaware, possibly including helping to keep the brood warm. Another advantage of having large numbers of drones around an apiary is that our queens are more likely to mate with our own drones, thus helping to maintain our blood lines.

Another unusual feature of this system is the non-use of the queen excluder – a wire screen that allows the passage of worker bees into the honey storage boxes placed on top of the hive, but prevents the passage of the queen, thus keeping her below in the brood chamber. Michael says that only rarely does the queen actually lay in the honey boxes and when she does it is a simple matter to separate out the few affected frames.

Debates about the necessity or otherwise of queen excluders have been endemic since the advent of the modern hive and Michael's argument against them is that by denying the queen access to the honey its 'energetic' qualities are changed. As an example, he said that honey from oilsed rape, which commonly crystallizes in the comb very quickly (making it difficult to extract) does not do so as readily when the queen has access to it. Few conventional beekeepers are likely to understand or even believe this, but given the evidence of a successful commercial operation, they may be persuaded to try it for themselves.

Against the general trend, biodynamic beekeepers raise queens exclusively from those generated by the swarming impulse, when queen cells are made – sometimes in quantity – by the bees in preparation for sending out a swarm, as their primary mechanism for reproducing the collective organism of the bee colony. This behaviour is unique to the honeybee and provides us with the means for increasing our stock. Michael does not consider that this practice encourages swarming, despite the attempts of some bee breeders to select for a low tendency to swarm. He and his colleagues do practice a form of artificial swarming in order to prevent the loss of prime swarms, which would otherwise result in a greatly reduced worker population and subsequent lower honey yields.

Most commercial beekeepers either raise their own queens using a process known as 'grafting' - which entails the transfer of young larvae from worker cells into artificial queen cups - or they buy in queens from breeders who use either the same system or artificial insemination. Both are anathema to the biodynamic beekeeper, who considers queens raised by artificial means as inevitably inferior to those raised within the colony by natural means. Michael acknowledged that queens raised under the supercedure impulse – arising when a colony considers that its queen needs to be replaced – are probably the best queens of all, but pointed out that supercedure is hard to predict compared with swarming and that queens heading prime swarms are often superceded anyway soon after the swarm establishes itself.

The other outstanding difference between this system and the modern norm is the approach to winter feeding. Most commercial beekeepers – with an eye on profits - take as much honey as possible and feed back sugar syrup to the bees to make up any shortfall below the amount they need to sustain them through the winter. This practice is avoided as far as possible by biodynamic beekeepers, who do their best to leave ample supplies of honey for the bees' winter stores and only feed sugar syrup – with a little chamomile tea added - when absolutely necessary, as when, for example, a period of bad weather in the spring causes a shortage of nectar and the bees are in danger of starvation. Refined sugar is certainly more difficult for the bees to deal with than their natural food and some believe that it causes dysentery and other disorders. In any case, no-one can dispute that bees prefer honey and that they know better than we do what is good for them.

We had an opportunity to examine and open one of the three colonies kept at The Hatch, which, for some of the group, was their first opportunity to see the inside of a hive. There was some added interest as the drones were at that moment being evicted by the workers in preparation for the winter, a normal occurrence but not well known other than to beekeepers.

This weekend reinforced my view that a mutually successful and sustainable relationship with our bees must be based on a truly holistic approach: we need to learn more about how the colony works as a complete, living entity and the manifold ways in which it interacts with its environment and with other living things. For too long we have been locked in an old-fashioned, reductionist approach , dealing with bees as if they were mere machines created solely for our benefit, instead of highly-evolved, wild creatures, with which we are privileged to work.

For me and many others this was an inspirational weekend, conducted by a teacher with a great passion for bees and deep understanding of their nature. I had already begun to apply organic principles within my own beekeeping and I am now convinced that the biodynammic route is one I shall investigate, mainly because it facilitates the bees in their natural processes and causes them the minimum amount of stress - surely the root cause of the manifold problems they face in the modern world.

I hope that other beekeepers, both new and experienced, will take the time to learn about this system and discover its advantages both for themselves and for the bees. I also hope that the BDAA will arrange more events like this one.

Philip Chandler