

COMPARISON: Bees in Trees v. Bees in Manufactured and Managed Hives

What is the difference between species-appropriate beekeeping and beekeeping in accordance with its very nature?

In a forest bee project at Dorneckberg (near Basel, Switzerland) we can monitor bee colonies living in trees in the forest and compare them with colonies in our hives. This encourages us to reflect on this form of life and the relationship of people to bees.

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(Translator's note: the German compound word wesensgemäss does not translate into an equally compact and handy term in English. The term appears twice in the German Demeter Beekeeping Guidelines, but the official English translation of the first instance there skirts round the translation problem by equating wesensgemäss with allowing the bees 'to express their innate behaviour', i.e. allowing species-appropriate behaviour. Furthermore, in the second instance, an asterisk by the word in the German version on labelling bee products refers to a footnote saying 'can be used optionally'. This is not included in the English version.)

MANY beekeepers have had a difficult beekeeping year. After an early, brilliant beginning to the season, there followed weeks, even months of a lot of rain, cold, and not much nectar. By the end of June, the brood nests showed the characteristic rings of open and capped brood that we would expect in the spring. And in many cases from May onwards particularly large colonies were already having to be kept afloat with food.

We asked ourselves what do wild-living bee colonies do in such situations? In fact, of six swarms that were either hived in the forest bee project at Dorneckberg forestry district, or who found the prepared log hives by themselves, all of them are alive so far. Would the bees in our care have survived without being fed? What does a bee colony need to survive, and what does it take to meet our requirements for harvestability? These are difficult questions.

SURVIVAL THANKS TO SWARMINESS

As Thomas Seeley has shown, 80% of colonies swarm when housed in cavities of 40 litres – their preferred volume. At the same time, about 70% of these swarms do not survive their first winter. The colonies and their brood nests remain small. Therefore they need less food and have a lot fewer mites in comparison with colonies in our hives, which with adding supers quickly

reach 120 litres. As a result everything changes. The swarm urge in our big boxes is much weaker, reaching less than 10% with hobby beekeepers this year. The colony strength and brood nest are both large, and correspondingly higher are also the food consumption and number of mites. If we beekeepers were to lose 80% of the young colonies in the first winter, we would need an explanation to try to account for the loss of our bee-friends.

We believe that the forest dwelling bees in our forests are not genetically very different from our own. As already mentioned, swarms find cavities in forest trees by themselves. They are primarily swarms that have escaped from beekeeping colleagues who actually would rather have stopped them. We have noticed in our forest bee project that these cavities do not usually meet the optimal 'Seeley-conditions'. In two beeches, which in the literature would be described as inappropriate habitations for bees, the foresters have found cavities of 160 and 220 litres in which bees have built their comb, and from one of which honey could even be harvested for pollen analysis.

We are therefore of the view that many wild living colonies survive, not thanks to resistance or tolerance behaviour but thanks to their pronounced swarminess. It may be that, just as in the apiary, so too in the forest they can survive only for 2-3 years without treatment against mites.

SPECIES-APPROPRIATE BEEKEEPING CONTRASTED WITH BEEKEEPING IN ITS VERY NATURE

Recently we beekeepers have been heavily criticised. Organisations devoting themselves to wild living bees in the forest accuse us with argumentation that is sometimes below the belt. We are factory farmers, cruel to animals, using inappropriate hives, endangering the wild bees, and are to blame for an unparalleled environmental disaster. Here is not the place to respond in detail to these accusations. Even though the wall thickness of our hives never reaches the 15-30 cm of wood in hollow trees, our colonies survive cold winters without difficulty. As regards factory farming, a look at the statistics should suffice. In 1950 there were 300,000 colonies in Switzerland whereas in 2020 there was only half that number. This calls for a differentiated interpretation. To our annoyance we often now hear the assertion that only wild living bee colonies are kept *wesensgemäss*. That is incorrect for two reasons. Firstly, the term *wesensgemäss* stems from beekeepers who participated in developing the Demeter beekeeping guidelines against the background of the lectures of Rudolf Steiner to the Goetheanum workers. Secondly, for a relationship between beings, whether it be between people or in the relationship of people with bees, it is necessary to have physical proximity, close contact and repeated encounters. All these



Bee colony in a beech in Dorneckberg forest



Log hive installed high in a beech tree.



View through bung hole to the comb inside (right)

features are not possible with colonies ten metres up trees. This attitude has been expressed succinctly thus: we are aiming for a situation in which bees can live completely alone and survive without human help.

But *wesensgemäss* beekeeping means proactively or culturally creating a route into the future for bees and people to follow together. In this sense, bees far from people in tall trees are at the same time far from *wesensgemäss* beekeeping, i.e. far from beekeeping in its most essential nature. Such a beekeeping can only arise because the bees enable a relationship to people, not for themselves, but for us! Naturally we should regard critically the evolution of this relationship leading to modern beekeeping: swarm control, foundation and queen breeding, as Rudolf Steiner has pointed out, have led to a mechanisation of beekeeping resulting in the suffering of colonies.

Deepening our relationship with bees

Two core ideas inform our work: we would like to enable bee colonies to express their capacities with natural colony reproduction through swarming, natural comb construction and avoiding artificial queen breeding. To that is added the continuous, endless effort to get closer to the essential being of bees. We are all aware that a friendship or even a loving relationship, if it is to remain alive, depends on an ongoing development on both sides, in this case bees and people. Goethe recognised that the essential being of bees meets the human being only inwardly. And that works only when both sides, bee or nature in general and human, give up something of their own and make something of the other their own. What we have already learnt from our bees is living in the fullness, trust without control and respect and love for the other. What bees mean for us in their spiritual essence we shall probably only learn in the distant future. But we want to get there! That is why the future belongs to the *wesensgemäss* and not the species-appropriate, biological or Darwinian beekeeping. It is more than just a matter of 'free from chemical residues', or that the human being should keep out. People's relationship to bees is the future, a future that is only possible because the bees are prepared to allow us insights at eye level into the darkness of their hive, and conversely, we at eye level are questioning, seeking and mindful, handling them while not using our findings primarily for their exploitation. Only this way can we learn from the bees for a better common future.



Bees at the hive entrance

Similarities and differences between species-appropriate and wesensgemäss beekeeping	species-appropriate	wesensgemäss
Colony reproduction	swarm	swarm
Comb construction	natural	natural
Queens	apiary mating	apiary mating
Colony size	small	large
Comb removability	fixed	removable
Location of hive	high in tree	on the ground
Feeding	none	as necessary with sugar
Mite treatment	none	regularly, as necessary
Human contact	very little or none	frequent and close
Colony density	very low	very high