THE MODERN TOP BAR HIVE

a simple, sustainable approach to small-scale beekeeping

So what is a top bar hive?

The principle is simple: a box with sticks across the top, to which bees attach their comb. My hives have low, central, side entrances, sloping sides and a pair of follower boards to enclose the colony. There are many variations on this theme and all have the essential guiding principle of simplicity of construction and of management.

There are no frames, no queen excluders, no ekes, no mouse guards, no supers, no foundation and there is no need for extractors, settling tanks, filters, de-capping knives... *in fact no need for any other equipment or storage space, other than that provided within the hive itself.* And if you have just spent an hour leafing through suppliers' catalogues, wondering how you can possibly afford to keep bees, that will come as some relief!

Top bar beekeeping really is 'beekeeping for everyone' – including people with disabilities, bad backs, or a reluctance to lift heavy boxes: there is no heavy lifting once your hives are in place, as honey is harvested one comb at a time.

From the bees' point of view, top bar hives offer weatherproof shelter, the opportunity to build comb to their own design – without the constraints of man-made wax foundation – and minimal disturbance, thanks to a 'leave well alone' style of management.

So what is wrong with framed hives and why should we consider such a radical alternative?

From the beekeeper's point of view, the box-and-frame hive works reasonably well. It is a simple matter to lift individual frames out of the hive to see what the bees are doing and - if you are fit and have a strong back - it is relatively easy to remove the honey crop.

From the point of view of the bees, however, it has a number of disadvantages:

- The frames are rectangular, usually wider than they are high, while bees naturally build comb in deep, catenary curves, taller than they are wide.
- The use of pre-formed, worker-cell size foundation forces bees to build comb according to our requirements, not theirs. They prefer to adjust the size of their worker cells according to season and build drone cells according to how many males they choose to raise.
- Bees like to build queen cells around the edges of their comb, which is difficult if foundation wax covers the full width and depth of the frame.
- They prefer to space their honey storage combs slightly wider apart than their brood frames, which is impossible if all frames are equally spaced.
- They prefer to live in cavities with plenty of space below their combs, while modern hives have only a small space often as little as a single bee-space between the bottoms of the frames and the floor.
- And the very feature that make this arrangement most suitable for beekeepers the fact that frames are movable and removable spells disaster for bees if their caretaker chooses as too many do to re-arrange their nest according to his whim, careless or ignorant of the needs of the bees.

In fact, most 'modern' hives are also less than ideal for beekeepers:

• When the lid and inner cover are removed, the whole colony is exposed at once, causing a sudden temperature drop and an instant, mass protest. The beekeeper

tries to silence this revolt by applying liberal doses of smoke, which, as often as not, aggravates the bees rather than subduing them, with painful and disruptive consequences.

- Frames are made to precise dimensions, which means that they must be purchased at no small cost from manufacturers equipped with expensive, precision machinery and laboriously assembled with hammer and pins. They are easily damaged by rough handling and are difficult to clean thoroughly.
- Foundation wax also has to be bought in as precision mills cost a king's ransom

 and fitted carefully into the frames with more pins and wire.
- The wax used for making foundation will contain a random mix of all the lipophilic substances that previous beekeepers have chosen to apply, as it is bought in by the millers from whoever cares to sell it to them. This may include sources that are less than scrupulous about the chemicals and medications they use.
- Then, when it comes to harvest time, we have the problem of weight. A full super of honey can weigh between thirty and sixty pounds, depending on the type of hive and number of frames. Not surprisingly, hernias and chronic back pain are commonplace among commercial beekeepers and many people, especially women, are put off even hobby-scale beekeeping by this consideration alone.

Top bar beekeeping is about as simple as beekeeping can get, while maintaining provision for occasional inspections, comfortable over-wintering and non-destructive harvesting. Everything you need is in one box – the beehive – which you can make yourself.

Top bar beekeeping can produce plenty of honey, but the emphasis here is on *sustainability* and *keeping healthy bees* rather than setting records for honey crops, which inevitably has a cost to the welfare of the bees. The essence of sustainability is to work well within the limits of a natural system: pushing any living thing beyond its natural capacity can only lead to trouble.

In my book, *The Barefoot Beekeeper*, I describe the top bar hive and its management and discuss the philosophy of natural beekeeping, in which we aim to work with the natural impulses and habits of the bees, respecting the integrity of the brood chamber, leaving them ample honey stores over winter and generally arranging things in order to cause their bees as little stress and disturbance as possible.

I hope soon to be able to welcome you to our Natural Beekeeping Forum, which has members from around the world who have chosen this most fascinating way to provide homes for honeybees and have a sustainable crop of honey.

Philip Chandler

Free DIY plans for building a top bar hive are available from the author's web site at <u>www.biobees.com</u> *The Barefoot Beekeeper* is also available from this site, as well as from Amazon or any bookseller using the ISBN 978-1-4092-7114-7.

The **Natural Beekeeping Network** discussion forum is at <u>www.naturalbeekeeping.org</u>

Friends of the Bees is a charity founded to conserve and protect bees and to research and promote more natural beekeeping methods. We aim to work with others to help restore the natural balance between honeybees and other insect pollinators. See <u>www.friendsofthebees.org</u> for more information.