Using A Natural Swarm to PRODUCE COMB HONEY FROM SUPERS OF EXTRACTED HONEY

— A PRELIMINARY REPORT —

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hile working with the Halfcomb Cassette³ for comb honey (see www.halfcomb.com) by the Juniper Hill System for Comb Honey4, one of us, Herman Danenhower of Danenhower Apiaries, Kutztown, PA, found a prime average size swarm of bees at a location where he had no means to house it. So, he borrowed a pair of honeyfilled shallow extracting supers from that apiary and installed the swarm in them, topped with a super of Halfcomb cassettes.

Danenhower realized that honey would have to be moved for the queen to lay, but to his surprise the bees instantly rushed the honey up into the super. The super was full within a week when the early intense natural flow from "honeysuckle bush" was about over and the swarm population had dwindled. The cassettes were free of pollen plugs.

A curious coincidence is that the Juniper Hill Plan for comb honey, in which a simulated honeyflow like this is induced (jump-started) by design, was concurrently being used to produce comb honey, including comb honey in Halfcomb cassettes. This incident was an exciting rediscovery of the principle of a simulated (artificial) honeyflow. There was no pollen in the super of Halfcomb cassettes noted above. In the Juniper Hill plan, pollen in the supers is prevented by a buffer of extracting frames.

Swarms had been used previously to produce comb honey by a different procedure. Richard Taylor in his books:

How to Produce Beautiful Comb Honey, 1977 and The New

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Comb Honey Book 1981, pages 26 and 40 notes that "An insufficiently appreciated value of a good prime swarm is that it can be used almost effortlessly to produce beautiful comb honey." According to

Taylor, "You need only to hive such a swarm on foundation only-no drawn comb-

with an excluder over the hive and two or three comb honey supers over that. Such a swarm will occupy the entire hive and supers at once and immediately begin drawing out the comb honey sections and filling them. But the two essential things to success with this are, first, to use only a large prime swarm, not small after swarms having virgin queens; and second, to be sure there is no drawn comb in the hive when the swarm is introduced into it.

"The reason for this is that if there is any drawn comb at all down in the hive, then the swarm simply settles into building up a good brood nest, entirely ignoring the supers, sometimes

for weeks, by which time it is too late to take advantage of the energy and honeygathering industry of such a swarm. But if the hive contains foundation throughout, then the supers, even if divided from the hive by a queen excluder, are just as attractive to the bees as the hive below, and they distribute themselves throughout, from top to bottom. Thus, you achieve at a stroke what is sometimes the main difficulty in raising comb honey, namely, inducing the bees to go up into the supers.'

Taylor's interpretation of the problem with empty drawn comb is that it is imme-

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BUSH COMB HONEY IN

THE HALFCOMB FROM DANENHOWER HONEY

Pennsylvania

HONEYSUCKLE

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diately useable for brood and distracts the bees from the start of building new comb above. Getting the bees to start comb building is the most critical step in the production of comb honey.

Even if only one of the frames is drawn comb, the start of work in the supers will be delayed. Why? This provides a place for the queen to start egg laying immediately in the new brood nest. The bees then, by instinct, continue to give priority to drawing out the other frames of foundation in the brood nest first before starting work in the supers.

In the above "surprising" result, using honey-filled frames, comb building is induced by the need to first relocate honey to make room for the queen to lay. The principle of jump-starting comb honey building by a simulated honeyflow, as in the Juniper Hill Plan, was rediscovered here by chance.

This is not a contradiction of the warnings of Richard Taylor about using drawn comb per se. The use of drawn comb *filled* with honey is an entirely different matter.

More recent information by Thomas Seeley in his book *The Wisdom of the Hive* (1995) pg. 191, explains the factors which regulate new comb building. The bees

never build comb until absolutely necessary and nectar is coming in. He says, "Comb-builder/food-storer bees will begin building comb only when two conditions are fulfilled: (1) the colony has a high influx of nectar and (2) its storage combs are getting nearly full.....Curiously, once a colony has started building comb, it apparently requires only a continued strong nectar influx for it to continue its building."

This discovery of a simple stand-alone procedure, using natural swarms for producing comb honey, has considerable potential because it is within the means and expertise of most beekeepers to produce some comb honey.

Extracted honey producers, large or small, could use readily available supers of extracting honey opportunistically at any time there is a swarm by keeping prepared comb honey supers on hand. (The only extra equipment needed.) Stray swarms could be solicited, or the "shook swarm" procedure (described by Richard Taylor in his aforementioned books) could be modified and improved by using frames of honey instead of frames of foundation.

NOTE: The reason that swarms housed on frames of foundation sometimes abscond within a day or so is because the new nest is so unnatural. Taylor later called the shook swarm a "stunt".

Since there was no pollen in the comb sections in this first trial using Halfcomb cassettes over frames of honey to house the swarm, it appears that the problem of pollen storage in comb honey sections, when using frames of foundation, may have been eliminated.

The reason for this appears to be clear. When the honey is rushed out of the frames of drawn comb to make room for a full set of brood, immediately useable space for pollen is also being cleared. Bees always store all of their pollen next to the brood where it is needed, if given a choice.

It has been shown by Seeley et al, and others, that bees regulate pollen collection by turning it on and off as needed to maintain a substantial reserve of pollen (approximately two pounds or a kilo) as a safety net for brood rearing. See Thomas D. Seeley, The Wisdom of the Hive, Part II, Chapter 8, Regulation of Pollen Collecting.

This procedure may be a way of intentionally feeding liquid honey to produce comb honey, an elusive dream in the past—never practical, and subject to concerns about adulteration.