

# Honey Do

The Business of Local Bees.

I'll admit it, I have a strong sweet tooth. But instead of a spoonful of sugar, I'll opt for a quick pick me up of a spoon of honey every time. Make mine sticky sweet and locally harvested, a bowl of "Dancing Bee" deliciousness, please. The golden elixir or liquid gold we call honey is actually just a simple by product of the business of bees, living in the microcosm of a hive, working together to get the job done.

I like to taste and buy different local honeys when I travel. Intrigued by the regional differences in the taste and color, and mystified as to how it all works, I went to visit Master bee keeper Jeff Knight and his wife Robin at the apiary adjacent to their home in Monroe, North Carolina. I have often bought honey and bee products from Robin at the Dancing Bee stand at the Matthews Community Farmers Market, and this season fell hard and fast for the NC Mountain sourwood honey the couple harvested last season. The taste and the difference between the Dancing Bee wildflower honey and this rich, luxurious second cousin, led me to further investigation.

Mesmerized by the process, and egged on a bit by Charlotte Living photographer Gerin Choiniere, I stepped in for an up close and personal look into one of the hives at Dancing Bee, finding myself eerily not afraid as Jeff uncovered the wooden boxes and pulled out a frame covered by busy bees paying me little to no attention at all. Jeff explained how the little ecosystem in a box works.

"It's like a little airport," he told me. "The bees come and go each on a single mission, each with its own particular flight pattern. They won't bother you as long as you are not in their way." Lesson one –



always best to stand to the side of a hive and not directly in front of one.

As each bee sets out on its own individual mission, honey, it seems, is actually the least of the bees' concerns. Their job is first and foremost to pollinate and then to populate. Honey and beeswax and all the beneficial healthy-to-human qualities that result, are simply a tasty, happy by product of the process.

#### WAXING POETIC

To start, the bees make honeycomb. In years past, bee keepers often packed honeycomb into jars to sell, and some still do; but most have come to realize that

it takes the bees some time to form the comb. If a bee keeper is anticipating a large honey harvest, it is better to let the swarm keep the comb and reuse it to rebuild on from year to year. Sometimes bee keepers share the comb with the bees, shaving off just a bit to use in lotions and salves, as Robin does for her emollient Dancing Bee hand creams.

As great as the beeswax is for creams, candles and such, it is really much more important to the bees. In the hive, it is the tiny octagonal chambers in which the bees will raise and feed their young, and store the nectar and pollen they collect as they move from flower to flower. To give the bees in new hives a jump start on that time consuming comb construction process, bee keepers fit the frames in the wooden hives with a flat foundation of bee's wax pressed with small octagonal impressions. It is just a base, and the bees take the building from there.

It is a fascinating bit of insectual commerce as 50,000-70,000 bees at a time at the peak of an active hive, work side by side, each with a job to do, without it seems, a communal disturbance, fight or a hiccup as they go.

In the year or so that is her lifespan and the lifespan of her hive, the queen bee sets the pace and leads the troops. Her all important job is to lay the eggs to ensure that the lifecycle of the nucleus or new hive will continue on after the year or less that those of her generation have to come and go.

Then there are the scouts, those bees that venture out to locate the blossoms from which others will draw out nectar and pollen. With an inbred "GBS" (pun intended) that hardly seems plausible, the scouts use their antennae to instinctively estimate

current weather and wind conditions as well as direction and distance from the hive. They relay that info on to those who will do the gathering by means of a little bee dance, frenetically shaking their tiny torsos as a way to send and process the detailed information until their message is received.

The gatherers or forager bees are the group that go to get the nectar and pollen, traveling from two to five miles from the hive on any one stockpiling mission.

Those gatherers have what can best be described as two separate stomachs, Knight explained the biology as a way to give me a more visual accounting of the process. The second “stomach” of these gathering bees is like a little storage tank; and on any particular mission their job is to go out and get whatever the hive needs.

Sometimes it is nectar, sometimes it is water, and somehow they have an intuitive knowledge to distinguish which liquid the hive needs more and when it needs it most. Unless a bee keeper has hives decidedly placed in the middle of acres and acres of a single crop, it is very hard to determine exactly which flowers provided the pollen and nectar for any given hive’s worth of honey.

While clover honey seems to be the prevailing commercial honey “flavor” across the nation, in the Charlotte area, most wildflower honey is made predominantly from nectar extracted from the flowering tulip poplar. In addition, the bees at Dancing Bee have local access to wild cherry blossoms, wild buttercup, blackberries, clover and buckwheat – it’s the local mix that determines the final flavor of any given batch of honey and why the taste can vary so from region to region, neighborhood to neighborhood, and sometimes even block to block.

Foraging bees also bring pollen back to the hive. It gathers on their backs like dust when they approach a blossom, then they use the little brushes on their legs to comb the pollen back to a safe transport position nestled in on the backs of their legs. While pollen doesn’t go directly into the nectar that becomes the honey, it is what helps to nourish the bees, and so it becomes a part of the process. This is why eating local honey helps to stave off a human allergic reaction during the season the mix of wildflowers are in bloom.

The pollen is fed to the bee larvae, and what nectar is not needed to supplement the nutritional needs of the young apoidea is injected into the honeycomb. If the nectar is too thick, the bees add a bit of water; if it is too thin, the worker bees rub their legs and wings together to generate heat which in turns thickens the nectar. Once the nectar in any



## VERY CULINARY

particular cell is just right, the bees seal off that cell with a cap of wax and move on to fill the next cell. The thickened nectar is what we call honey. The process is fascinating.

## TO EVERY THING THERE IS A SEASON

If you are a bee in and around Charlotte, your production of honey begins sometime in or around February, triggered by the blooming of local red maples and the pollen season which ensues. The hive is at its peak in early to mid summer, in terms of size and production. By late summer, the proceedings slow, and as winter cold settles in, the population of the hive decreases as older bees pass on and a nucleus of 10-15,000 young bees cluster together, moving around in a football sort of shape, keeping each other warm and alive until the first pollen of summer comes again.

If you are a bee, in your lifetime you will only produce about a teaspoon and half of honey – precious cargo for us all and good reason to always lick the honey spoon and never waste a drop.

Sadly, if you are a bee, there is also a good chance that you and the rest of your hive-mates might suddenly disappear, a phenomenon that no one seems to understand or is able to explain. We need the bees, not just for the honey, but for the cross pollination of plants they provide. Without pollination, plants don't produce seeds, and without the ability to reseed themselves in the wild, certain species may not survive.

To help ensure the health of bees, the Knights offered a few simply guidelines that all of us can easily follow. Try not to use pesticides on your yard, flowers or gardens – you'll be better off, and the bees will be, too. If you must use chemicals, use liquids instead of powders – bees could potentially bring a powdered insecticide back to the hive the same way they bring back pollen – an occurrence which could potentially kill off an entire hive or the better part of one before its time has come. Finally, if you must spray, try to do it when the bees are not out and about – the Knights suggest in the evenings after dusk or before 10 am.

Jeff and Robin Knight sell Dancing Bee Honey and products at the Matthews Community Farmers Market on Saturday mornings, For more info, visit [www.localharvest.org/dancing-bees-honey-M29154](http://www.localharvest.org/dancing-bees-honey-M29154).

