BEE VET

Festooning

Tracy **Farone**

The importance of language and action.

When I heard about veterinary bee medicine in the U.S. for the first time in late 2016, I laughed. I was 17 years into my veterinary career and thought I had heard it all. Nope. Bees – (giggle). Even with a background in tick and public health research, I initially thought the idea was just one more thing to do. I tried to dismiss the idea. But have you ever had something just keep "bugging you", until you checked it out? I started reading. Reading anything and everything I could about bees and bee medicine. I uncovered connections and discovered that my College (of employment) had a relationship with a veterinary school in Europe which boasted a post-doctorate program in bee medicine. I also discovered that my host family at the Crow Indian Reservation in MT (a trip I take every year with students) had connections with large 10K hive migratory beekeepers. I was intrigued.

Author in the beeyard.

I realized that bees have bacterial, viral, parasitic, fungal, nutritional, and toxic diseases, like other animals. Bee diseases can be diagnosed through exam findings and diagnostic testing, and treated with environmental, nutritional, and pharmacological interventions, similar medical approaches taught universally in veterinary schools. IPM – already in the wheelhouse. I was also concerned to learn about the many challenges honey bees, other pollinators, and beekeepers face. I wanted to learn how to help, as it became apparent that I was in a unique position to do something. But I needed to understand beekeeping first and eventually become a beekeeper.

I needed prep. I applied for and was awarded a sabbatical to study this new quandary of bee medicine coming to the U.S. So since late 2016, I have been on a journey spending thousands of hours studying the evolution of this new relationship and creating an apicultural research program at my College. This journey, I would like to share, and continue, with you.

In much of Europe, an origin of our beloved *Apis melifera*, honey bees have a had a doctor, just like any other agricultural or companion animal, for decades. Bee veterinary medicine is a typical course of instruction at veterinary schools, taught alongside all the other species veterinarians may serve: cattle, hogs, chickens, horses, dogs, cats, birds, sheep, goats, rabbits, etc. An apiary is an integral part of the students' educational rotations on European veterinary campuses. It is the norm for veterinarians to be educated, and contribute to the care of arguably our most important agricultural animal, the honey bee.

During my sabbatical, I traveled to France to visit ONIRIS veterinary college, (the one with the post-doc bee program). In the semester prior to leaving for Europe, I thought it would be a good idea to learn some French. So, on my daily two-hour commute to and from work, I listened to a French conversational podcast in an attempt to learn the language. Now, I do speak some French – badly. Once in France, I worried I would insult my French colleagues by butchering their beautiful language. But I tried. To my surprise, my attempt to learn their language was the key to opening-up real relationships and trust. They welcomed me like family into their homes. We shared many meals together, and they shared what was personal and important to them. My French colleagues took me all over France showing me large portions of their bee industry, from commercial beekeeping, to honey and wax processing, to their bee veterinary medical curriculum. Explaining much in French! I was overwhelmed. I still have colleagues who have become friends, which I correspond with regularly – in French.

After France, I spent some time in Scotland (sorry Outlander fans, I did not find Jamie Frazier). Scots take pride in doing things the way they like to do things, including beekeeping, but there is no real language barrier here, right? Well . . . while walking the Royal Mile in Edinburgh, I wandered into a kilt shop and found a Mackenzie gentleman who took the time to tell me about every tartans' family meaning, colors, and history for at least 45 minutes. I listened smiling attentively, but he once kindly asked if I "dinna" understand what he was saying. I dinna always, but I got the gist and greatly appreciated his effort.

Just outside of Edinburgh, I visited the University of Edinburgh, which boasts the Roslin (research) Institute, famous for the first cloned animal, "Dolly", the sheep, and the Royal Dick School of Veterinary Studies. Yes, Royal Dick. Language, remember – some things mean different things to different people, from different perspectives. I was taken on a wonderful tour of the facilities by local gentlemen who proudly told me all about the School's history, and the contributions and shenanigans of their founders, William Dick and more likely, William's sister, Mary Dick.

Of course, with the veterinary school, there was also a beeyard

and beekeeper/bee researcher who donned a very impressive beard. The apiary was hidden in plain sight, through a sheep field filled with perhaps Dolly's colleagues? Clones? While studying in the apiary, I noticed locked ratchet straps around the hives. I knew there were no bears in Scotland but thought maybe there may be other pests. So I asked the beekeeper about the locks. He said with a wink, "Awck, we dinna have bears in Scotland, but there are other Scots." Despite all the science I learned about bees in Europe, my take home lesson was that to learn the language of another group or person is the key in developing successful relationships.

Back in the States, I had a beekeeper, now a dear friend of mine, tell me the importance of being a "doer." Perhaps because he initially thought I was a stuffy academic, but as a clinician with 12 years in the field, I understood what he was saying, took no offense, and then helped him physically build a commercial beeyard. Bees are certainly doers – they get things done. Language is important not just to speak, but to listen and ignite mutual understanding and cooperation.

Festooning is a funny little bee word. It sounds like a mix between festival and cartoon. In bee biology, festooning is a very important piece of language to understand. Festooning, regarding honey bees, is defined as a behavior in which bees cling to each other, often in single chains, reaching out their limbs to each other to make connections, with the intent to build the framework of something new. Sometimes the behavior occurs to repair old comb or measure distances between spaces. Sometimes scientists are not sure why they do it. If you are a beekeeper, you have probably noted this behavior with a smile. It is fun to watch.

Students next to the shed.

This article series covering topics on bee medicine and connecting the worlds of beekeepers and veterinarians, will be appropriately called "Festooning", as I believe the bees give us a good example of what to do. Our relationship is still in early stages, but if we reach out to each other, think of the framework we could build. Throughout this series, I would like to share perspective on what I have learned by listening, observing, and working in the field with dozens of beekeepers, entomologists/bee researchers, and veterinarians in this vast field of apiculture. I will reveal the latest "buzz" on our common challenges with solutions, what vets can do for beekeepers, and highlight topics in biology, pathology, diagnostics, and treatments related to honey bees. BC

Dr. Tracy Farone, BS, DVM, is a Professor of Biology at Grove City College. She worked in various areas of private practice, academia, and research for over 20 years. She currently teaches a wide variety of bio-health related courses and leads student research. Since 2016, Dr. Farone has been researching beekeeping and bee medicine. She was granted a sabbatical to pursue apicultural studies and develop a small teaching and research apiary at her College. Dr. Farone has logged thousands of hours working with dozens of U.S. backyard, sideline, and commercial beekeepers. She traveled to France, Scotland, and Canada, where she met and worked with multiple bee experts. These experiences provided Dr. Farone with a unique perspective in the development of relationships between veterinarians and beekeepers. To share these lessons with others, Dr. Farone has created veterinary continuing education lectures, writings, and programs for local, regional, and national audiences, focusing on bee health. In free moments, Dr. Farone enjoys spending time with her family, running, horse-back riding, SCUBA diving, and of course, just "beeing" with her backyard hives.

Bee sign hotel.

Scottish beeyard.