

Bee By Bee

Larry Connor

It takes me, on average, five approaches to a subject in order to learn it.

One of the non-beekeeping books I value is one on writing by Anne Lamott; *Bird by Bird: Some Instructions on Writing and Life*. Lamott is both a writer and a teacher of writing. Her father was a writer and she tells stories about growing up with a writer-father and of learning to write herself by using humor while telling great stories. She tells a story she shares with new students in her writing classes: "Thirty years ago my older brother, who was 10 years old at the time, was trying to get a report on birds written that he'd had three months to write. [It] was due the next day, we were out at our family cabin in Boltinas, and he was at the kitchen table close to tears, surrounded by binder paper and pencils and unopened books on birds, immobilized by the hugeness of the task ahead. Then my father sat down beside him, put his arm around my brother's shoulder, and said, 'Bird by bird, buddy. Just take it bird by bird.'"

I value this book because it helps me face life's challenges as well as the blank computer screen. The author struggles to write, as I certainly do. And she has had more than a few bumps in life's path, and is willing to share them with her readers with a great deal of humor. It has helped me keep a balance, I think, between my science persona and my regular guy nature. It was very instructive earlier this year when I had a scheduled gap in my travel and speaking cycle so I was able to appear in a two-man show called *Greater Tuna*, where my fellow actor and I played 19 people and a dog in the fictional town of Tuna, Texas, the third smallest in the state. I faced the challenge of memorizing half a play's worth of dialogue as well as mastering 10 different characters, 10 costumes and 10 sets of mannerisms.

David, the other actor, and I sat down in February and recorded a CD of the play so I could to play it in the car as I drove from meeting to meeting. Maybe you passed me on the Interstate, muttering to myself in of several strong Texas accents as I labored to learn these lines. Lamott's advise provided me with the blueprint for how I should memorize the lines – one phrase at a time, then one paragraph at a time, repeating them over and over, so that I slowly built up my memory and confidence in the words in the show. It was a challenge: was it possible for my 60-year brain to hold this amount of information by the time the show opened in May? After all, I routinely forget the names of people I have known for years, or what it was I went into the store to buy for dinner.

At beekeeping meetings I often find beekeepers who are way over their head in the material being presented (sometimes they know it, painfully; other times, they have no clue). Usually I survey the audience to find the "new-bees" as well as the lifetime beekeepers, and even suggest they sit beside each other at lunch if possible. Of course, not everyone who says they are advanced beekeepers actually meet minimum standards for the craft; my telling them that would be a horrible mistake for both student and teacher! Using Lamott's approach, I need to build on what they know; not point out what they don't!

Lack of beekeeping experience becomes most apparent in beeyard demonstrations. Honest confessions of "I've never seen the queen before" are a bit frightening when the class is designed for advanced beekeepers. Of course, that is why these people have taken time out of their lives to learn more about bees and beekeeping, and

if it is necessary to back up or slow down to accommodate these people this is the only correct thing to do. So we take the time to show the "experienced" beekeepers a

queen bee for the very first time, and those who have seen a queen a thousand times can move onto something new they have not seen before. There is always something to teach inside a beehive.

As both teacher and student, we must use Lamott's bird-by-bird imagery; convert it to a bee-by-bee model of teaching and learning. As teachers we must be mindful that our subject – bees and beekeeping – includes a wide range of relatively unrelated material, and sequential instruction is advised. For example, in a bee school the problems of beekeeping – brood diseases, parasitic mites, and other concerns – might be introduced before the new students have had a chance to *really* learn the parts of the beehive, the members of the bee community, and how basic bee biology works. And a 45-minute lecture on bee biology is rarely enough time to give new beekeeper the depth of knowledge of bee biology needed to understand the microbiology of American foulbrood. And without time inside a beehive, where the eggs, larvae, pupae and adult bees are clearly and repeatedly observed, it is hard to see how a new beekeeper will be able to understand the preferential feeding of *Varroa* mites.

Many bee organizations teach beekeeping classes for new beekeepers, especially people who are thinking about starting a hive of bees. There are multiple approaches to this subject, but the successful clubs seem to offer an

One approach is to attend as many bee meetings as possible, to learn that 'one thing' they didn't know.

ongoing program of learning opportunities: sessions with mentors and monthly hive visits during the year. Other clubs might put on a winter six-week program and then are disappointed when few of the students started or stayed with bees.

In medical training, students are expected to see-do-teach any particular procedure: See a procedure, Do a procedure and Teach a procedure. We don't do that with new beekeepers on a regular basis. If each new beekeeper is given a thorough hive inspection to find a queen, and later is asked to do this on her/her own, then we can just as well as expect them to teach this process to other new beekeepers. It will cement the information into the mind of the beekeeper doing the see-do-teach, and will probably insure their success as a beekeeper since they will have integrated more of the information about bees than if they are repeatedly shown the same procedure without proof they understand what is happening.

Whenever I can during field events I like to hand the hive tool and smoker to a willing beekeeper to do the hive manipulations. The key then is not to criticize their methods, but to make suggestions in a helpful way so they may refine their way of working a hive. Just the simple act of removing a frame to inspect a colony is subject to many variations, but gentle suggestions on how to break the combs apart as well as systematically inspect for the queen will encourage the beekeeper, and those watching, to develop some sort of systematic approach to hive inspection. The key problem I have is to remember to give the beekeeper the hive tool back after I have made a demonstration of some technique; the goal is to build the confidence of this beekeeper in an instructive environment, not razzle-dazzle them with my beekeeping technique!

I find it very important NOT to criticize while beekeepers are working a hive. Stay calm when something horrible (to you) is being done. The demonstrating beekeepers will undoubtedly be nervous (or should be!), carrying with them the methods taught to them by other well-meaning beekeepers, and will be filled with the opinions and insights passed on to them, right or wrong. If the apiary is comfortable to work in (no defensive bees) and the human environment is open to discussion and lacks strong

critique, then all the beekeepers are likely to relax and take seriously the business of learning without themselves being defensive or distracted. It is a great time to clear up misconceptions of biology, and try to reinforce their need for a solid basis in bee biology before expanding a beekeeping operation with many hives.

Rather than dealing with right-wrong methods, I like to show beekeepers an *alternative* method to do something, such as searching for the queen. My observation is that for most new beekeepers, the identification of a queen bee is hard. Lacking hundreds of hours of beekeeping experience, they have trouble seeing the *differences* between queens, workers and drones, but instead are still struck with the *similarities*. A series of small nuclei hives will help train a small group of new beekeepers to become expert in queen finding, recognizing key bee behaviors, and become adept in brood stage recognition. Bring a large hand magnifier to the apiary; many beekeepers need to get their vision checked, but I don't bring that up until beekeepers try to learn to transfer larvae from worker cells to queen cells in a queen rearing class.

It takes me, on average, five approaches to a subject in order to learn it; five different methods of teaching or information exchange before I really know the material and it is integrated into my brain and body. This is why it is so hard to learn beekeeping by reading a book, regardless of who wrote it or how good it may be. Using

my acting experiences: when I learn lines for a show, I MUST use MULTIPLE techniques to learn the speeches word perfect; reading them, saying the words out loud, writing them out, listening to them repeatedly on a CD, and actual rehearsal with full set, sound, lights, costumes and props. Of course, some people learn faster than I do, but whether a person is learning facts about beekeeping or lines in a show, it takes them time, effort, countless repetitions, and varied techniques.

Lamott suggests you break things into the smallest possible unit to work with it effectively. In June it was my pleasure to help Dr. Marion Ellis put on his Master Beekeeper program at the University of Nebraska, outside Lincoln. This program is not like the EAS Master Beekeeping program (a testing of existing knowledge). Marion's program is modeled after the Master Gardner program, and is a focused teaching/learning environment



Marion Ellis, left, uses a part-by-part approach to teach honey bee anatomy in his Master Beekeeper class.

for beekeepers with different skill sets. I find the program ideal for teaching beekeeping in a three-day program, and sending the students on the road with a series of lessons and activities they must complete before they become Nebraska Master Beekeepers. I wish more states used this model for beekeeper training.

The Nebraska program is effective in breaking the complex subject of bees and beekeeping into smaller, manageable units. It also lays a solid foundation of general biology for the students to understand the workings of all insects and their relatives. Since this is a university program, Marion is able to rely on resources of the University for speakers (an introduction to all insects) and for technology. One effective tool was a micro camera video system that served as a microscope that is viewed on a computer screen. When a live bee was observed under this system, the beekeepers could see features they had probably only read about. Well, we hope they have read about it, anyway. It helps teach the fact that insects perceive the world differently than humans do, that their methods of seeing, hearing, tasting, feeling and smelling are quite different than mammals.

I liked the approach Marion and his students used to demonstrate the parts of the bee. They had a separate microscope set up to show each structure: wing, mouthparts, leg, etc., so the beekeeper could see the actual item and look at a drawing next to the microscope that showed them what was being shown. Again, this part-by-part approach uses the kind of analysis Lamont refers to in *Bird by Bird*.

Also in the Nebraska program are sessions on *Problem Solving*. These are parts in the program where an instructor helps students put the bits and pieces of what they have learned together in an effort to solve a particular problem or challenge in beekeeping.

There are many methods people use to apply this part-by-part, bee-by-bee, bird-by-bird business in their lives. One approach is to attend as many beekeeping programs as they are able, to fill in parts of their knowledge, or to learn the new information that is being presented, some for the very first time. My parents continued to

raise Christmas trees long after most people retire, and after my father died in 1989, Mom continued to attend grower meetings sponsored by the association and the university. She always said the same thing: if she was able to go to one of the meetings and learn ONE THING, it was a worthwhile meeting. It did not make much difference if it was a new method of pest control, or an idea to help with selling trees to customers.

This is the meeting time of the year for beekeepers. The honey crop is done; maybe it has been removed and extracted, maybe not. But for all beekeepers it is time to make plans to attend a meeting in your area that will help you learn your ONE THING at that meeting. Nobody will mind if you learn more than one thing; consider that a bonus. If you are able to get to the Northeastern part of the country, I have been working with the Back Yard Beekeepers and the Connecticut Beekeepers to organize the first Southern New England Beekeepers Assembly (SNEBA), to be held in Hamden, CT on November 18. Drs. David Tarpy and Diana Sammataro will discuss their latest research; Commercial beekeeper Mike Palmer from Vermont will discuss his method of making summer nucleus colonies and over-wintering them; I plan to discuss a variety of drone and queen management issues. For information and a registration form go to the new website: www.sneba.com. If that does not work, call me at 203 397-5091 for further information.

In January I have been asked to present the Serious Sideline Symposium II in Austin Texas as part of the American Beekeeping Federation meeting. We did this last January in Louisville, KY, and the response was remarkable. Sideline beekeepers tend to be overlooked, yet they keep the industry going by selling honey at local markets, running bee clubs, and oh, yea, teaching and running bee meetings. I hope you can attend both programs and get at least *One Thing* out of each. **BC**

For a copy of Larry Connor's new book *Increase Essentials*, contact your local bee supply dealer, or email the author at ebecbooks@aol.com

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