

The Missouri State Beekeepers Association Brood



Inside This Issue

How long has MSBA been around? Here's a hint, not just for this century... or just the last century either
page 3

What can you do to help beekeeping as a whole?
page 14

Spring is just around the corner... let's talk about Spring Hive Losses
page 16

Lighten up with a little humor from the hive
page 19

From English Major to Bee Biologist

By: Dr. Kirsten Traynor, PhD

Bees have fascinated us since before we had a written language. Cave paintings depicting honey hunts attest to our long-intertwined relationship with this insect that provides both sweetness and light.

In 1945, E B White published "Song of the Queen Bee" in New Yorker magazine, a rhyming rebuke of mankind's meddling with nature. The poem opens with "The breeding of the bee," says a United States Department of Agriculture bulletin on artificial insemination, "has always been handicapped by the fact that the queen mates in the air with whatever drone she encounters." The promiscuous mating habits of queens high up in the air stymied breeding efforts until honey bee geneticist Harry Laidlaw, Jr. had perfected the technique of instrumental insemination.

I confess, I am one of the meddlers. Two summers ago, I flew out to windblown Whidbey Island off the coast of Washington State. Known as The Rock, this island boasts a scraggly landscape of rolling grasslands edged by stalwart conifers standing shoulder to shoulder. For three days, I trundled from my converted garden shed room—complete with a circular stained-glass window, antique washstand, and sumptuous linens—at the Compass Rose B & B to Sue Cobey's farmstead and private honey bee insemination lab to perfect my technique of instrumental insemination.



I may be small and I'm just a bee
 But I won't have science improving me,
 Not me,
 I'm a bee.

From E B White's poem "Song of the Queen Bee"

Continued on Page 7

**Mark Your Calendars for the MSBA Spring Conference!
 March 15-16, 2019 in Cape Girardeau, Mo.**

From the President

by Cory Stevens

I'm looking forward to our Spring conference which will be held in my part of the state this year at Southeast Missouri State University. The last time MSBA had a conference in Cape Girardeau, Grant Gillard convinced me to give a presentation on my newly established queen rearing endeavor. That was October of 2010, and was my first MSBA conference experience. I went back through old newsletters on the website to find out when exactly it was held. I also found a write up on my speech, and a much younger looking photo of myself in Scott Moser's Presidential letter dated Dec 2010. I really enjoyed listening to Michael Palmer and David Burns at that conference. The great speakers and the company of other crazy people that loved to play with bees left quite a lasting impression on me. It's funny that many years later I find myself sitting on my couch, writing my first letter for the MSBA newsletter, and



looking forward to another conference in Cape Girardeau.

Things have changed over the years for myself and my bee operation. They are also changing a bit for MSBA. We've got some new faces in the Executive Committee since I was last involved, and new opportunities are coming our way. We recently partnered with Missourians for Monarchs, a well-structured organization focused solely on restoring and improving habitat for our state pollinators. I would like to extend a special thanks to Charlotte Wiggins for coordinating with that organization, and keeping me up to speed. We are also working on a few things that we hope will improve relationships between the local clubs and the

Continued on Page 4

Looking for Past Newsletters?

By Clayton Lee, Past President

A special thanks to Dolores Vivian for holding on to past MSBA newsletters!!! Her collection filled several gaps from the newsletters Roger Nichols had been saving. I finished scanning and Jeff posted them on our website. <https://mostatebeekeepers.org/newsletters/>

If you have a chance, read a few. There are many interesting articles. A couple that caught my eye included: December 1993 (pages 16-17) has an article by Tom Ladwig that notes "settlers love of honey spread bees in Missouri" and December 1994 has an article on races of honey bees.

Continued on Next Page

MSBA Membership

Membership dues remain at \$10 per individual. You may renew your membership by going to the MSBA website and utilizing PayPal or mail your check to me with your first and last names, address, telephone number, and email address. I gladly accept batch memberships if given the information on a typewritten list and either a check from the local club's treasurer or secretary.

With the change of the website some folks have renewed well in advance of their membership expiration. You should now receive notice the month preceding your membership expiration. While the website is going through growth spurts please contact me if you have questions regarding your membership. Some of you have paid until 2019! Thank you for supporting MSBA!

Wanda Johnston
MSBA Membership
401 NW Heady Avenue
Ferrelview, MO 64163
mailto:bees@kc.rr.com

MSBA May Be Older Than We Thought?

By Clayton Lee, Past President

The Missouri State Beekeepers Association – Was it established before 1903?

I enjoy looking into the history of MSBA. In the past, several folks explained to me MSBA was established in 1903. It was easy to convince me when I found an obituary for John Nebel that mentioned MSBA “had just sprung up” and he was elected president at a spring 1903 meeting in Moberly, Missouri. MSBA even documented their 100th Anniversary Celebration in the February 2003 newsletter.

Well, I have been doing a little more digging and found an article in the American Bee Journal, dated May 21, 1891 (Volume 27, Number 21, Page 669) that seems to document something different. W. S. Dorn Blaser writes that “The Missouri State Bee-Keepers Association held their fourth annual convention in Boonville, Mo., April 9 and 10, 1891.” This sheds a different light on the year MSBA was established.

If you are interested, there are several pages of information outlining the events at the convention in this article. President R. B. Leahy was the Chair and it was noted there are 88 MSBA members. You can view the article at <https://bit.ly/2sbgkT3>. **(Editor’s note: this same information also appears in the Annual Report of the State Board of Agriculture from 1891 on page 502 by visiting <https://bit.ly/2QqofFK>)**

I plan on doing a bit more digging to see if I find some detailed 1888 information. That is a long time ago – ha!

Beekeeper of the Year Pin Delivery

By Clayton Lee, Past President

I am looking for addresses or phone numbers for past award winners or their relatives to send Beekeeper of the Year lapel pins. Many have been delivered, but we are missing:

2011 - Steve Harris	2005 - Ted Jansen
2003 - Don Reinkemeyer	1998 - John Hartman
1997 - Kelly Bergman	1990 - Jim Hausam
1988 - Carol Brockmann	1987 - Louis Smith
1986 - Dr. Flernoy Jones	1985 - Mike Roling
1984 - Truman Hardin	1981 - Jay Tohtz
1980 - Jim Robins	1979 - Joe Maher
1978 - Carl Kalthoff	1977 - Joe Kibbey

If you have any contact information, please let me know. Thanks!! Clayton Lee, leeland55@gmail.com

MSBA Member Benefits

By Clayton Lee, Past President

Some folks ask about the benefits for becoming a member of MSBA. Check out the MSBA website: <https://bit.ly/2QucazC>

Would you like to join the MSBA Member Benefits Committee and help establish more benefits for MSBA members? Email Ray Shadow at trynbeez@outlook.com to find out how you can help.

Looking for Past Newsletters?

Continued from Previous Page

If you have any old newsletters that would fill some of our missing gaps (example: we are missing some of the January 1996 newsletter), please let me know. I would like to borrow, scan and post those for all to read.

Thanks!! Clayton Lee, email: leeland55@gmail.com

Why Bees?

By Zachary Lamas

Like many, my introduction to beekeeping wasn't planned. I didn't look at catalogs, read books or take classes ahead of time. It was 2009 when I purchased my first colony. I had graduated college the year prior, and had just bought my farm in central New Hampshire. It was a lovely 23 acres, south facing and mostly field with thick, loamy soil. Overall, not bad for a state known as "The Granite State". I had an old, but reliable 1953 International. My grandfather lent me a set of plows, and I tilled up an acre to plant a pumpkin patch. I decided that I would need a beehive for pollination, and purchased a nucleus colony. I installed it into some old equipment my grandfather had laying around. That was it. There was no more planning than that. I probably spent more time deciding which pumpkin seeds I should plant than thought I put into getting that colony.

In short, it rained most of that summer. It was one of those years we could have put a bucket on the roof, and called it a well. We didn't get our first cut of hay in until August.

The tomato houses succumbed to blight early in the season, and a well planned pumpkin patch became overly weedy. Yet, while other things were floundering, this little colony left to its own devices excelled. The next spring a friend showed me how to split this burgeoning hive, and that was the start to my beekeeping career.

Since then the path to keeping bees, and the more innate question of Why Bees has been as varied and riddled as any adventure I could have asked for. Why bees, is a question that is not so simple to answer. We will all be at a meeting together in March to share ideas about honey bees. This present interest of ours is not new or novel. In many ways our love for honey bees is simply a continuum held for much of human history. Cave paintings in Arana Spain depict the gathering of honey from a wild hive 6000 years b.c. Indigenous tribes from South America to Australia created complex religious and social customs to

From the President

Continued from Page 2

state organization, making us more effective as a whole. Gregg Hitchings is spearheading a committee which is geared toward providing quality presentations, educational material, and potential speaker suggestions to participating clubs. I think this resource has great potential, and is covered in more detail in Gregg's article. Another small group in the executive committee is working diligently to add additional benefits for MSBA membership. In the past when asked, "what do I get for being a member of MSBA?" The most common answer has been that we have top notch conferences, a great newsletter, and maybe some "hmm's" or head scratches. We're looking to address this issue directly by adding to that list, and doing a better job of letting people know the benefits of being an MSBA member. We're hoping that by directly addressing this

root issue we will see membership growth. Membership growth will allow us to do more to benefit bees and beekeepers in Missouri.

So far this has been a relatively mild winter, though we all know it's not over yet. I've used the bouts of unseasonably warm weather to get some additional stores on my colonies, just in case. On the days yielding cold or rainy weather I've been pondering my plans for the upcoming year. With every new year brings new potential. I'm hoping it will be a great year for the bees and beekeepers of Missouri.

Sincerely,
Cory

Why Bees?

Continued from Page 4

regulate honey harvests. It has been suggested that early humans that became honey hunters had surplus nutrition and developed increased cognition. From its earliest origins the honey bee has weaved its presence into cultures across the world. That long history and fascination of the honey bee culminates in many of us with the simple pleasure of gazing at the entrance of a beehive to watch the come and go of foragers. There is something innate about this experience, that feels good.

How my fascination with bees became an occupation is another story with no singular answer. I was milking a small herd, and raising pasture raised poultry in central New Hampshire. My ex and I had an acre market garden from spring through fall. We stayed busy between the farmer's markets and our CSA. I had an egg and milk route where I would make home deliveries on my way to a second shift job. I washed dishes 5 days a week at a college nearby our farm. She worked as a teacher's aide in a local elementary school. We were both very busy between the farm life and off farm jobs. When she left, and moved back to California, I struggled to find the motivation to keep the farm. The animals, daily life and chores I loved were wrapped up with a memory of someone I loved but wasn't there anymore.

Each February I would plant my early peppers inside a toasty farm house, while outside the New Hampshire winters were doing their thing. If for some reason you are not familiar, it is a very cold, windy sort of thing not conducive to planting. But in February I would have little pepper starts. By late march they were at first true leaf, and the tomato starts would be popping through the planting mix. The living room would be scattered with shop lights and green trays of a future market garden. From outside a milk can of warm milk would be brought in, and slowly winter would melt away as farm tasks changed through the season. Anyone farming experiences this, becomes bound to it. For me, having my first February without my wife planting peppers with me was enough to know I didn't want to be weeding the summer gardens without her.

I didn't order chicks that year. The cows were sold, along with a few hundred layer hens. I finished building a house we had started. Tenants moved in, which helped free up my finances. I was now cooking at one restaurant, and waitering at another. The beekeeping friend, an

older lady named Helen, who had shown me how to split my first colony, gave me three DVDs of Michael Palmer's presentations. I grabbed some boards from my grandfather's mill and made a few nuc boxes. Three colonies became 7. I loaded those seven colonies into the back of my brother's Mazda, took a week off from cooking on the line, and drove off to North Carolina with my brother. The next few years were a mixture of cooking, waitering or construction work weaved in with my growing apiaries. Those 7 colonies became 49. After mistakes too embarrassing to mention, they eventually became 160. And after many more mistakes, again too embarrassing to mention, became almost 400. The seasonality that used to be attached to planting dates and newborn calves was replaced by a seasonality of nectar flows and orientation flights.

For the last few years I lived between upstate New York and Vermont in the summer and North Carolina in the winters. Sometimes living in a house, often on a friend's couch or out of my truck, I would move my bees up and down the east coast. Almost always I was more tuned into my grafting schedule than which day of the week it was. Queen production started the last week of February in North Carolina, and ended in April as I migrated northward to work for French Hill.

Entering academics is a new phenomenon of my life. 10 years ago I couldn't wait to finish college so I could farm fulltime. I ended up asking so many questions about bees, that I have been itching to get back into school. So last year I sold my house and farm. I sold most of my bees, and travelled through Brasil and Mexico for a few months before starting at the University of Maryland. Now I get to work with amazing scientists at the Beltsville Beelab. I have some great new info on mite behavior. I literally can't wait to continue this research and publish. And maybe this is what answers the question, Why bees?

These fascinating creatures allow me to work myself to exhaustion. I can travel around the country, or the world, because of them. Their behaviors and actions leave us puzzled. They pique our curiosity and make us think. Beekeeping is so dynamic, I can see the many parts of me, in them. And that is what I love, oh so very much.

Best wishes, and excited to see everyone come March.

MSBA SPRING CONFERENCE

SOUTHEAST MISSOURI STATE UNIVERSITY

1 University Plaza, Cape Girardeau, MO 63701

FEATURED SPEAKERS



Dr. Kirsten Traynor of Flickerwood Apiary, an avid beekeeper, scientist, and editor of American Bee Journal. She has travelled the globe in a beeline, seeking out the best beekeepers, bee breeders and scientists. Her current research on pesticide impacts on bee health, along with her keen understanding of the top-notch bee science, make her an excellent speaker. Her presentations cover complex information in simple terms, making it easy for any audience to understand manner. She integrates a touch of humor with incredible detail and easy, practical management advice.



Zac Lamas is a PhD candidate at the University of Maryland. He studies mite feeding and does pesticide research on honey bees. Prior to joining the lab, Zac worked for Michael Palmer in Saint Albans, Vermont where he managed colonies for honey production and made nucleus colonies. While Zac worked for French Hill Apiaries he also ran a few hundred migratory hives between North Carolina and upstate New York. He is most focused on beekeeping management, and best practices for productive colonies and low overwintering mortality. Zac continues to be a contributor to the American Bee Journal.



Bob Finck worked as a Food Chemist for Allen Foods. Married 49 years, two married daughters, two twin grandchildren. Stated beekeeping in 1980 and joined the Eastern MO Beekeepers Assn. Immediately became "passionate" about honeybees. Beekeeping for 48 years. Has won 85 ribbons (40 (Blue) with honey and beeswax entries at the Missouri State Fair. Served two five-year terms as EMBA president. Enjoys helping new beekeepers overcome their problems and issues. Friday & Saturday.

March 15-16, 2019 (Friday & Saturday)



MISSOURI STATE BEEKEEPERS ASSOCIATION

FOR INFO: BRUCESNAVELY@HOTMAIL.COM

From English Major to Bee Biologist

Continued from Page 1

If someone had told me 18 years ago that I would have a career that involved sticking my bare hands into boxes of stinging insects, I would have burst out laughing. So how did I end up here, my brain filled with random bee facts?

The short answer is I won my first hive in a raffle. Not the bees, just the box. But unpack that box and there's a longer story inside. My beeline—a long and circuitous path—starts with a love of honey and wildflowers. I had no idea at the time I embarked that my path would take me through rural pockets of Europe to meet with bee breeders, the deserts of Arizona in pursuit of a PhD in bee biology, the heart of the Provence in France to better understand brood pheromones and as far as away as New Zealand, when beekeepers on the South Island were still reeling from newly arrived parasite *Varroa destructor*. My curiosity to better understand this insect we attempt to manage in our hives drove my unusual journey.

Where did that beeline begin?

In the middle of winter, when I ached for sunshine, I attended a home and garden show at the state fairgrounds in Maryland. The aisles between booths were crowded, people jostling against each other in damp wool coats, tucking scarves and hats into expo bags overflowing with vendor brochures. I had recently graduated from college with a BA in English and was living on a farm in Frederick, Maryland. I had come for inspiration, seeking design ideas for bold swaths of flowers I wanted to grow. Instead I found vendors selling acrid smelling silver polish and an ergonomic mop, all in somber shades.

Trudging through building after a building, I felt as damp as the day, but plowed on past endless sleek booths seeking to extract my money. A homemade wood stand plopped down in the middle of the eddying river of attendees caught my eye. Jars of honey arranged in a haphazard pyramid threatened to tumble. Old bee boxes, weathered at the finger joints, held up a sign for local honey and homemade candles. The booth was manned by a gangly man in his late fifties, snarled in casual conversation with a customer.

I paused, eavesdropping for a moment, catching snatches about poor forage and the disappearance of tulip poplar, a once prolific nectar source in his neck of the woods.

He caught my eye, dipped a wood stick into a sample jar, twirled it with a practiced motion, and handed me a dollop of honey without ever stopping his patter. I tasted the offering—delectable honey, earthy and sweet. I tossed the stick into the trash receptacle, still savoring the flavor.

“That’s a summer honey,” he explained. “Clover and wildflowers.”

“It’s wonderfully complex,” I responded. We struck up a conversation. He lived in the county next to mine and was always in search of good bee forage. At the time I was living on a rolling farm just shy of 24 acres and planting a wildflower garden in need of pollinators.

“Good spots for bees are hard to find,” he said.

“So is good honey,” I replied.

We struck a bargain and he agreed to bring hives to the property. I dubbed him Lanky Rick. Early that spring he trucked across my top field in a creaky white minivan and set up five hives. I lived along a stream in a valley loaded with black locust, where the back fields had returned to impenetrable scrub.

“A good place for bees,” my beekeeper assured me and then drove off.

The bees seemed to like their home. I kept weeding and planting, not paying much attention to the towers of boxes out of view on the other side of my top field. The white minivan rolled back onto my property in late May and Lanky Rick popped out.

“I’m going to go check on the hives,” he said. “Want to join me?”

He rummaged in the back of his van and pulled out an extra pith helmet and veil, holding it toward me. I walked across the field, as he drove his van to where his hives waited. He must have pulled out a hive tool and lit a smoker, but I was so excited that most of the details are a blur.

I was leaning against the old fence as he popped open a hive. He murmured to his bees. They had put on honey. He moved on to the second hive.

Continued on Page 8

From English Major to Bee Biologist

Continued from Page 7

“Girls, girls, why did you do that?” He pulled out two frames. Instead of building out the foundation, the bees had drawn wild comb in the space between. He took a hunk of the light yellow comb with translucent white cappings in his hand, then brushed off the few remaining bees.

“Honey, fresh from the hive,” he said, handing me a hunk. I pulled up my veil and popped it into my mouth. Bees keep their hive toasty when rearing young. The comb was still warm and the flavor exploded across my mouth. It tasted sharp, stealing my breath, a cacophony of flowers vying for attention, filling my nostrils. As my teeth sunk into the soft wax, silken honey spilling across my tongue, the flavor mellowed into a gentle river of vanilla tinged with lemon but more floral, as if a bouquet bloomed inside my mouth.

I chewed on that comb.

The sun warmed my cheeks.

I felt deeply connected to the land. This spot felt like home. I had moved so many times in my life. Never had I stayed long enough to develop roots in any one place. This concentrated elixir—two million blossoms condensed into a single pound of honey, over 80,000 flowers exploding in my mouth—was home. This farm, ensconced in a rolling valley crisscrossed by streams, meadows and large fields of corn and soy, had fed the bees that made it.

I knew so little of bees.

But they pulled at me. I inched closer to the hives, wanting to see the inner workings. Lanky Rick pulled the cover off the next hive, puffed a few jets of white smoke over the open colony. I saw the bees dart down, moving away from us. He pulled off the top box, setting it down on the upturned cover on the ground. How had the bees turned nectar into something so delicious?

I watched Rick inspect frames. A jumble of bees clung to each comb, an undulating, chaotic mass that seemed to have no rhyme or reason. I heard him tsk and mutter, then saw him pull out a small manila envelope from his truck and sprinkle white powder into the hives.

“What’s that?” I asked.

“Oh nothing,” he said. “Helps keep the bees healthy.” But his manner shifted. The smile and the friendliness evaporated. He quickly wrapped up his work and headed off, my first beekeeping experience over.

I returned to my work and my garden, but the bees stayed with me. That glimpse into the inner workings of the hive flashed in my mind as I pulled weeds, watered seedlings. One night while I slept, Lanky Rick returned under the cover of darkness, loaded up his hives, and drove away. I don’t know exactly when they disappeared. All I saw was the shadow of their departure captured in the faint tracks his minivan cut into my field.

His hives were sick, though I didn’t know enough at the time to recognize it. They had come down with American Foulbrood, a disease that requires an apiary inspection. Lanky Rick hadn’t registered the bees as required by Maryland law. I was too curious for his tastes. And so he absconded, along with his bees. They hadn’t been mine, but I missed them.

I needed to learn more. That following winter I signed up for an introductory beekeeping class taught in nearby West Virginia. Many short courses raise money through a raffle of donated prizes. I invested \$10 and bought a few tickets. I had no intention of keeping bees that year. I felt far too overwhelmed by the deluge of details on the many ways my bees could die.

My small investment won me a Styrofoam Beemax hive, a newfangled insulated hive style that had recently become available in the States. “Bees are in your blood,” the bee inspector who helped teach the class informed me. I had married into the name, but the spelling is somewhat unusual, so everyone assumed I was somehow related to the California almond broker Joe Traynor.

If I ordered now, I could still get starter nucleus colonies for this spring. And as any good beekeeper will tell you, you should never start with just one. A perfectionist, I didn’t feel prepared for this challenge. I didn’t know enough about how to keep my charges healthy.

That empty Styrofoam box glared at me. I stared back. The taste of last spring’s honey still warm from the hive

Continued on Page 9

From English Major to Bee Biologist

Continued from Page 8

taunted me. You can't bottle and buy that flavor. Only way to enjoy it again was to bring back the bees. I called a third-generation beekeeper known for high quality nucs. Yes, he told me, I could still order three. I became a beekeeper that spring, pushed into a bee suit before I felt I was ready.

Those three hives all survived their first winter. The next year I helped the nuc seller and grew my three colonies into more. By year four I was up to over twenty hives. I started writing for the bee journals. To learn how to rear my own queens, I attended a queen rearing course with Marion Ellis and Marla Spivak in Lincoln, Nebraska, driving cross country because I couldn't find one closer to home. Lawrence Conner was at that event. A former Shakespearian actor, he recited E.B. White's poem, drawing bemused smirks from the audience at the line "If any old farmer can keep and hive me / Then any old drone may catch and wife me." We were not old farmers, but a motley crew of bee enthusiasts.

On a long shot, I applied for a German Chancellor Fellowship from the Alexander von Humboldt Foundation. Marla Spivak kindly connected me with Otto Boecking at the Institute for Bee Research in Celle, Germany. Otto Boecking's specialty is varroa biology and he agreed to be my host. The institute where he is based teaches all the students, who wish to become professional beekeepers. These students, often only 15-17 years old, must come to the institute during the winter months to learn the trade—Germany still has a guild system for some professions, including professional beekeeping. I was awarded the grant in 2006 and spent 18 months in Germany, traveling over 55,000 miles by car to meet with beekeepers, bee breeders and bee scientists throughout Western Europe.

During this time mysterious honey bee losses grabbed headlines around the world. European beekeepers were fearful this newly named Colony Collapse Disorder would soon hop over the Atlantic. I reached out to contacts back in the States, interviewing Dennis van Engelsdorp and Jeff Pettis by cell phone as they crisscrossed the country collecting samples.

As my 18 months in Europe came to an end, I realized honey bees had snuck into my life and I felt most at

ease when working a hive. I needed to learn more, keep exploring how that chaotic jumble in a hive communicated, self-organized.

Getting into a biology graduate program when you have taken zero college level classes in biology is no easy feat. I reached out to bee scientists I admired. Marion Ellis intimated he would take me on as a student, but he thought I should find a course that would challenge me in different directions. Rob Page, who had recently moved from UC Davis to the School of Life Sciences at Arizona State University as its founding director, invited me out for an interview. As a graduate student Page had worked closely with Laidlaw, whose advances in instrumental insemination stimulated White's poem. At ASU, Page was building an interdisciplinary program and social insect research group. We talked. He showed me diagrams of gene maps I didn't understand.

"This is what we do," he said. "We investigate the genes that underlie behavior. If you're interested in that I will give you a chance."

At the time I had only a rudimentary understanding of gene regulation. I nodded enthusiastically despite my ignorance. Rob Page took a chance on an English major smitten with bees. He gave me one year to audit and attend as many biology classes as I wanted. At the end of that year, I had to pass the GRE Biology subject test to stay in the PhD program. I overloaded on classes and read the most highly recommended biology textbook cover to cover, all 1,200+ pages.

My PhD spanned both basic and applied biology, investigating how brood pheromones change honey bee physiology and influence foraging behavior. During my time at ASU, I won a Fulbright, spending an academic year in the lab of Yves le Conte, who first discovered honey bee brood pheromones. Bees, it turns out, are quite good at manipulating their caregivers. Humans have carried bees to every corner of the globe except the North and South Poles. But we shouldn't be surprised. They learn to manipulate from a young age. Young and old larvae have different nutritional needs. Young larvae need protein rich pollen, while older larvae need carbohydrates

Continued on Page 10

From English Major to Bee Biologist

Continued from Page 9

to complete pupation. And so the pheromones the developing young give off drives foraging behavior of the colony. Young larvae stimulate more pollen foraging, ensuring that the colony has enough protein rich food on hand to rear them.

Pursuing a PhD is a humbling experience. I have always feared failure. My first three years of research produced nothing. I ran several experiments. Bees have a way of surprising you and all my results were inconclusive. I was asking the wrong questions, trying to put bees in artificial settings that confounded their behavior. So I headed back to the drawing board and redesigned my experiments, building them up piece by piece on a strong foundation. The key to succeeding in science is not so much what you do, but how often you fall on your ass, pick yourself back up, brush off the dust, and try it again with a different approach.

While wrapping up my PhD, I became editor of *Bee World*, a quarterly magazine published by the International Bee Research Association. After graduating, I joined the lab of Dennis vanEngelsdorp working on how pesticides impact colony health and how to improve queen quality. I was editor of *American Bee Journal*, a position from which I resigned after 14 months. I'm currently in Berlin, Germany as a College of Life Science Fellow working on a book about honey bees and varroa.

It's cold, grey and dreary—a typical Berlin winter. On days like this I miss the Arizona desert, which bursts into gaudy bloom in late winter. The early morning sun lights the tufted sky on fire. It sneaks over the parched ground, coaxing the desert to open its ruffled flowers. Cacti bloom infrequently, so luring in pollinators requires a stupendous display. Big, bold and bright is the motto, and I always admire the pops of hot pink, canary yellow, and Cheeto orange. Work in the bee yard starts early, as soon as there is enough light to see. Before starting my foraging experiments, I would stand next to a hive and watch the bees fan out into the sky. The bees often dart in myriad directions, zooming off to explore different patches.

Like the many different routes a single colony pursues, my path has not been a straight beeline; my fascination with bees has taken me on a circuitous globe-trotting journey. Sometimes I find myself scampering over rocky places and carving my own wild track. That's okay, I've learned. Failure forces us to find new paths. Besides, it's in these scraggly places that we find the most spectacular wildflowers.

Don't Worry About the Money... It's Just a Hobby

By *Sandy Richey*

“Hobby” Love that word. Another word for money pit. Pastime. Diversion. Relaxation. Sideline. The wonderful thing about a hobby is that you do not have to be accountable financially for the money that goes into it because...well, it is just a hobby. Look, Dear, I saved so much money on that catalogue sale on more bee equipment. Oh and by the way, I am going to raise my own queens this year so I won't be able to provide you with any honey. Think how much money we can save by my raising my own queens. Now \$40.00 a month for honey for your coffee is little to contribute to my hobby isn't it? After all when you put the honey into the hot coffee there is nothing left of the natural nutritional quality of the honey anyway.

Beekeeping is a great way to learn from your mistakes. I pity the poor bees who have tolerated my mistakes for the last four years. “Experience keeps a dear school, but fools will learn in no other.” Benjamin Franklin

Hobby is a bit like the word “retirement”. There is a joke going around on the internet right now comparing retirement to being a teenager. In retirement you have a monthly allowance, a car, a roof over your head, credit cards, and lots of time for hobbies! My husband and I have been retired from teaching for eight years now.

My far too generous husband, Ray, and I have a joke as we sit and relax after a day of breaking our backs on hobbies. He asks me, “What did you do today, Sandy?” I always respond that I sat around eating Bon Bons after going for a mani-pedi and massage at the

Continued on Page 12

Oddity In The Apiary

By Phillip Pyatt, Zion's Bees

During the summer of 2018 a colony in one of my out-apiaries was tipped over. It appeared a combination of an animal bumping into the colony with one corner of the pallet not being properly supported were the perpetrators.

This occurred towards the end of the Black Locust flow so the colony had filled a little over two full mediums. About half was capped. When I discovered the situation I immediately corrected the problem just as anyone else would. Firmed up the pallet support and restacked the boxes trying to be careful not squish any of my helpers and especially not the queen. A fair amount of the honey had been robbed or lost to the ground. Fortunately, the bees had moved a good portion into the deep hive bodies.

Afterwards, the queen began to lay again in a very nice and full pattern. I had thought that there would not be any more problems with this colony. I normally do not use queen excluders with my production colonies, but had decided to try adding them after the main flow to keep the queen out of the supers I planned on pulling for extraction.

I decided that two weeks would be long enough for the rest of the brood to hatch and vacate the combs in the supers. So after two weeks I came to pull the supers. Not being worried about the queen, I started pulling frames from the top super, gently brushing bees off, and putting frames into a separate box for extraction.

Then in the second super I noticed some eggs, which should be impossible because the queen was below the queen excluder right? Could it be laying workers? Nope, the pattern was beautiful and only one egg per cell. Definitely a queen. Next question, were there two queens in this colony? Maybe a mother and a superseding daughter due to the colony being tipped over a few weeks prior? Nope, no eggs or open brood below the queen excluder. Ok, so now to look through the remaining

frames in the second super for the queen. Nope, so I apparently had brushed her off into the grass in front of the hive never to be found again. While this was not a great situation it was certainly not the end of the world. I usually have extra queens either in a queen bank or in spare Nucs.

After re-queening the colony things seemed to go pretty well. The queen began laying and although there had been a few unintentional forced egg laying breaks the colony was strong. After honey extraction was finished

I performed my summer Varro mite check. This apiary was doing very nicely. All tested at two percent or less, well almost all.

That pesky colony had to be the exception. Would you believe I counted forty-two mites from a half cup of sugar coated bees? Remember also that powdered sugar rolls are known to show a few less mites than

the same alcohol wash. Forty-two mites! I knew that colony was toast. I immediately treated with vaporized OA, and then with three weeks of Thymol essential oil treatments. I knew the colony would not make it into the fall, but I did not want to chance any of the mites hitching a ride to my other colonies.

Here is the oddity. Where did all of the mites come from? All of the hives in the apiary have robber screens installed year round. This particular apiary is my VSH Italian apiary. The only time the colony was "open" for robbing activity was during a major nectar flow. All colonies in the apiary tested at one percent or below for mite counts during the early spring test. So, I am left to wonder where all those mites came from. Could it be that this colony, while it was still strong found a weak and heavily Varro mite infested colony somewhere else to rob?

Phillip Pyatt, Zion's Bees
zionsbees@hotmail.com
Jackson County, Mo.

I counted forty-two mites from a half cup of sugar coated bees... I knew that colony was toast.

Christmas Honey

By Teilla Parrish-Lathrop

The estate auction was held on a really cold December day in the middle of a field with the wind pinching your skin with its cold fingers. There wasn't a lot, a few tractors and implements, mismatched tools, parts and pieces that accumulate over years on a farm.

It didn't take long to find what I'd come for, and it was so cold I was certain no one would be there to bid against me. That was good because this is only the second auction I've been to and I kept bidding against myself the last time. Every time the auctioneer "hooped" or "hey'd", I thought someone behind me was bidding. I got what I came for that time, but it would have been much cheaper if I'd just shut up.

The prize I was after this time was a big pile of wooden boxes painted white under two decades of dirt and dust. I walked by them slowly, trying to look like I was after the baler just behind the pile. I didn't want anyone to know I wanted them, so I was trying to be "casual" about it. Bee keepers are odd people. We are deeply reverent of these little bugs and sort of consider ourselves keepers of the universe. Superheroes in white netted suits. We are a little distrustful of pretty much anyone who doesn't "get" our obsession, and even though we are happy...proud even... to help each other and "new-bees", we are competitive. Good sports, but competitive.

When I saw the ol' guy wobble over to the pile I elbowed my friend and told him to go kick the guy in the knee. My buddy acted like he was surprised I would make such a request, but he wasn't. And he didn't. I walked back and began studying the sticker on the big green baler, trying to hear what the older gentleman was saying to his wife. A few minutes later the auctioneer started calling. They walked back out into the wind, and I did too.

There was a tap on my shoulder and I turned to look directly into his rheumy ol' eyes. I recognized him then as a guy from my bee club in town. He asked how badly I wanted those hive boxes. I narrowed my eyes to let him know I wasn't just going to walk away and let him have them. "How badly, or how MUCH?" I asked him, with just a touch of Clint Eastwood in my voice. He said he just wanted to know whether to stand out there in the cold bidding against me or to go sit in the warm truck. I told him I was willing to go to \$100 for the E-NOR-MOUS pile of equipment. He declared he would not be bidding against me, that he had all he needed for his bees and was simply looking for some to fix up and sell. I thanked him and said I would share if I got them and he needed some.

When the auctioneer moved to the pile I tried to settle myself down but when I heard somebody bidding behind me I panicked and kept hollering back at the auctioneer.

Continued on Page 13

Don't Worry About the Money... It's Just a Hobby

Continued from Page 10

spa. In reality, we are both up by 5am pacing the floor until it is light enough to get outside and work on our little hobby – a 15 acre farm with hungry animals, weeds to pull, cedar to chop, and yada yada yada.

And we do argue a lot. He wants to groom everything, and I say that if it blooms then it is bee food even if it is poison ivy. Then he had to go and get stuck in the ICU a couple of times over a yellow jacket sting. Now I won't let him on the hill with my bees so he builds me fancy hoists to do my lifting. We also built him a bug tight hunting blind with a rocking chair and a heater in it. And this fall we built a hymenoptera proof screened in porch where we can sit and enjoy a glass of ale and admire the results of our hobbies!

Ray says, "You are never too old to start something new." I started beekeeping at 68 years young. Wonder what new hobby I can pick up at 80?

Christmas Honey

Continued from Page 13

I got the pile for \$100, but probably could have won them for \$30 less...if I'd just been quiet. I could hardly wait to get them paid for and loaded into my truck! There were so many I had to go home and get a bigger trailer – which I stuffed FULL! I was very pleased with the turnout – wouldn't have been happier if I'd won a million dollars... BUT...

The thing I REALLY wanted would be at the sale the next day, at the late farmer's house in town. The pièce de résistance was a giant green can with a hand crank on the top and a spout in the bottom. There is a little wire "cage" in the middle, where you put two frames of honeycomb, then turn the crank as fast as you can to spin the honey out of the comb. The honey extractor was so old I barely recognized what it was. I knew, however, that the old gentleman would know what it was worth. I hadn't mentioned it to him while we spoke, hoping he didn't know about it, but he had intimated that he sold most of his equipment to a different guy in our club when he was having a health issue. I knew he had sold his extractor, but now had bees again.

The second day was a tiny bit warmer, but you couldn't feel it because it was raining. That cold winter rain that takes a little extra time to roll down your cheeks. There was a tap on my shoulder and I turned to look directly into his rheumy ol' eyes. Again. We had the same conversation as the day before: "How badly...?" he asked. "How badly or how MUCH?" I answered again – eyes narrowed to tiny slits. He said he was willing to go to \$75, so I made up my mind I'd go \$100.

I didn't say so, though, because I noticed he was cold, shaking and coughing a little. Instead, I commented that I wasn't sure about standing out in the cold rain till the auctioneer came around to this row of items. He said he didn't feel very well and wasn't particularly eager to do that either. For a moment I saw my grandpa in those runny old eyes, and my heart softened. A little. I offered to bid on it for him, to let him go on home. We agreed that if the old honey separator went for \$75 or less, I would buy it and bring it to him. If someone else bid more than \$75, I would take it up to \$100 and it would be mine. He and his wife moved slowly back to their car and I wandered around in the rain like I didn't have the sense to come in.

To my surprise, a lady beside me DID run the bid right up to \$75, \$85, then \$90! She wanted to put flowers in it. FLOWERS! I shouted "\$100" and the lady shook her head and turned her back on me. As I loaded it into my truck it was one of the most beautiful things I'd ever seen. I couldn't wait to get it home and get pictures of it and clean it up. And then.

The fact is, I didn't need it. I have one that is practically brand new. I don't have time or room on the kitchen table for another project right now. The old beekeeper needed it, and he needed something to fix up. I thought about it all night long and all the next day. I just lost my last grandma a couple months ago and it struck me how long her days had been without hobbies. I thought about how satisfying it was when I completed some dumb project or brought something back to life. And besides, it was already December and I'd been having trouble finding the Christmas Spirit. Somehow, though, the old beekeeper, Grandma, the green tank, and Christmas music kept spinning around in my head until I felt the unmistakable little spark of happiness begin to light somewhere deep inside me.

He'd given me his phone number, so I looked up his address and decided to stop by on the way home to give him the old honey separator. I stood at the door with my arms around the big green tank and his eyes widened in surprise, conveying that he'd never expected to see me or the separator again. He turned to write me a check and I said I wasn't taking the money, that I'd won the bid fair and square. I told him the tank was mine. And I was giving it to him. I told him why and asked that he fix it up and keep it as long as he had bees. I asked that when he finished with bees, that he send the tank back to me filled with wisdom, experience, and love. I asked, also, that he let me help him with his hives occasionally so I could learn from him. He and his wife seemed to think this was a great deal. I ended up sitting in that warm kitchen for more than two hours as they regaled me with stories about their lives, bees, farms, chickens, dolls, and racing cars. We had "people" and stories in common, and I realized they could have been grandparents I hadn't met. Yet.

As we talked, that tiny little ember of happiness caught fire and the warmth of Christmas Spirit poured over me, sweeter and stickier than the golden honey that once filled that old can. Sweeter and more golden yet, than the honey that will pour from it again this summer.

Working Together We Can Still “Help the Bees”

By Gregg Hitchings, MSBA Southeast Director

We beekeepers live in interesting times. The public is now very aware honeybees and native pollinators are facing serious challenges. Ask any group of beginning beekeeper students why they want to pursue the hobby and you'll get some traditional answers but you will also no doubt hear one seldom uttered a few decades ago, "I want to help the bees."

Those of us who have kept bees for years might consider this a lofty and somewhat simplistic goal for a beginner. But think about this...lofty or not, isn't that a desire each one of us possess? If a person makes a commitment to become a beekeeper in order to contribute to the cause, what actions can a beekeeper, once established, take to do the same?

Successful beekeeping today requires so much more information than it did when I was a kid. Trial and error is a technique for learning that doesn't really fit well with learning the basics of the craft we enjoy. We benefit from the knowledge of others. Experienced beekeepers contribute to "helping the bees" anytime they assist the learning of others. What is the most common and appropriate forum for an exchange of this information to take place? The local bee club.

Missouri has over forty bee clubs meeting regularly within its borders. All are different in various ways but are similar in at least one, the contributions of those who volunteer their time to ensure the meetings take place. In these meetings lies the opportunity for established beekeepers to share tips and techniques among themselves and to teach and encourage the newbies. Local clubs have the ability to provide personal and regular interaction so vital to knowledge and skill development.

The Missouri State Beekeepers Association (MSBA) cannot fulfill the role of the local clubs and it would be foolish to try. MSBA must continue to do what it does best, outreach on a statewide scale. MSBA has a great history of providing its members quality conferences

which are excellent at bringing some of the best bee experts and researchers in the country to share their latest findings and bee management strategies. There is a team of MSBA folks who strive to make these conferences happen. They are good at it and this is the way they serve the cause by serving Missouri beekeepers. Other MSBA members serve by maintaining the website and newsletters or by representing bees and beekeepers to the public at the Missouri State Fair. All volunteers, performing acts of service of value, just like those serving in local bee clubs.

However, MSBA does not have the ability to instruct, support and encourage, on a personal face-to-face basis, all those with an interest in beekeeping. That is a role which can effectively be carried out by the widely distributed and diverse local bee clubs across our state.

Quick question...who supports the local bee clubs? For years MSBA's focus has been in those areas mentioned above. However, there are those of us within MSBA who recognize the value of what's been done in the past and want it to continue but also wonder what could happen with a new method of engagement and cooperation between MSBA and Missouri's bee clubs. What could that look like? Could it lead to something such as:

- Assistance in establishment of new clubs where currently voids in the state exist.
- Development and encouragement of potential club leaders with both existing and new organizations.
- Support to encourage strong and appropriate monthly meetings with programs geared specifically towards up-to-date beekeeping issues and strategies.
- This might include the development of a "program database" which presenters can utilize to select, prepare and present appropriate programs to their club on the local level.
- Development of a "speakers bureau" of those with expertise who would be willing to visit and provide programs to local clubs.

Continued on Page 16

Forage Planting Suggestions

By Charlotte Ekker Wiggins, MSBA East Central
Regional Director, Advanced Master Gardener

January is a good time to plan how to increase nectar and pollen sources. Missourians have two excellent sources of seeds and native seedlings that can help to increase bee and other pollinator foraging areas.

Free and Discounted Seeds

The Bee and Butterfly Habitat Fund expanded into Missouri in 2018 with their “Seed a Legacy: Program, which provides custom seed mixes to landowners who meet their program guidelines. Projects that are 2 to 25 acres in size receive the seed mixtures at no cost. Projects 26 to 50 acres in size receive a 75% cost share, projects 51 to 75 acres in size receive a 50% cost share, projects 76 acres and larger receive a 25% cost share.

According to their website, the Bee and Butterfly Habitat Fund identifies private, public and corporate projects with the highest potential to create pollinator habitat, then design a precision habitat mix to maximize pollinator support on that individual project. Each project will receive free pollinator seed mixes, or heavily discounted pricing depending on the size of the project and the guidance to prepare, establish and maintain the project for a minimum of 5 years.”

The program started in 2015 and 2016 in 2 states and has now expanded into 12 states. From the beginning pilot program, the program has established 225 pollinator projects on 2,560 acres in 3 years. The 12 states available for pollinator project assistance in 2018 were selected based on their critical importance to monarch butterfly recovery effort, honey bee health and the role they play with pollinator habitat and health impacts, which includes Missouri.

Companies who want to contribute by funding the program can also participate.

To apply, visit <https://bit.ly/2LQrmdz>. Call 800-407-5337 or email info@beeandbutterflyfund.org for more information.

Inexpensive Native Trees and Shrubs

Another wonderful source of potential foraging trees and shrubs is the George O. White Nursery in Licking. The state-run nursery grows native Missouri trees and shrubs from seeds from state and federal lands, then provides seedlings to Mark Twain National Forest and Missouri Department of Conservation regeneration projects. The excess seedlings are then provided to the public for purchase.

Although ordering starts September 1 and may show some plants sold out, still place your order and pay for it once you get the invoice. If other orders are not paid, they move through the orders and offer the seedlings to the person who did.

Seedling bundles are 10 for \$8.95 and go up in seedling numbers and decreased seedling price per bundle.

Native trees and shrubs are a good source of bee nectar and pollen and are easy to establish since they are acclimated to local growing conditions. Excellent bee plants include buttonbush and rose mallow. The online catalog also mentions in plant descriptions whether the tree and shrub is a good bee food source.

You will find the catalog you can download and the seedling order form

here: <https://mdc.mo.gov/trees-plants/tree-seedlings/order-seedlings> and by calling (573) 674-3229.

Seedlings can either be shipped or picked up at the nursery later this spring. You can designate your preference when you place your order.

To ensure seedlings get a good start, plan on first planting them in pots this year so their roots get established, then moving them next year to their final growing location.

Charlotte will be discussing more about planting for bees at a Spring 2019 Conference breakout session in March. She has kept bees for 9 years on her 1-acre Rolla Monarch Way Station and wildlife garden. More at her blog homesweetbees.com.



One of several Missouri native trees, the Eastern Redbud, is a good source of nectar and pollen. Seedlings are usually available through the George O. White Nursery in Licking, Mo. (Photo by Charlotte Ekker Wiggins)

Spring Hive Loss

By Carl Korschgen

We all know the anxiety of caring for our bees through the winter, are relieved when the colonies appear healthy and strong as spring arrives, only to be horribly disappointed to have dead-outs six weeks later. In my 10 years as a Missouri beekeeper, I have experienced these feelings many times. In fact, so often that I finally made a commitment to try to understand the interplay between biological processes in the hive and spring weather. So here is a quick summary of what I found through extensive readings of Randy Oliver's articles and my analysis of spring weather data. My conclusion is there are two distinct types of colony losses representing completely different issues above and beyond diseases, parasites, or moisture within the hive.

Let's start with definitions of the end results.

LATE WINTER DEAD-OUT

This dead-out is caused by failure of a colony due to starvation, chill, and possibly extended unsuccessful winter brood-rearing effort. The symptomology includes lots of dead bees on the bottom board of the hive, dead bees head first into comb, and lack of honey.

SPRING TURNOVER DEAD-OUT

This dead-out is caused by failure of a colony to successfully transition through spring turnover. The symptomology will be a small cluster of dead bees on a frame, very few dead bees on the bottom board, possibly lots of pollen and honey. According to Randy Oliver, weakened

“SWITCHED” bees (explained below) intentionally abandon the hive in a process termed “altruistic self-removal.” Thus, what you might find in a spring turnover dead-out is a queen surrounded by a few of the last workers and all probably succumbed to chill.

NEW INSIGHTS FOR ME

For starters, here is the basic bee biology that I synthesized from Randy Oliver (Scientificbeekeeping.com). Winter bees with adequate food supply can live for a very long time. In fact, winter bees have a potential life span much longer than a Missouri winter. Even though the colony may be trying to raise some brood in winter, the queen and winter bees really are waiting for a springtime stimulus to begin egg laying and literally morph into nurse or forager bees. That stimulus is the first fresh springtime pollen (lots of possibilities depending upon your area – vernal witch hazel, willow, etc.) to come into the hive. At this point, all winter bees physiologically and behaviorally “SWITCH” to nurse or forager bees.

The loss of vitellogenin (molecule in the honeybees' bodies that allows them to store protein reserves, make royal jelly, promotes the longevity of queen) during this process reduces the potential life span of the 20,000 bee work force to about 35 days.

In a perfect spring the daily temperatures gradually warm, the queen starts laying approximately 1500+ eggs per day, the foragers are bringing in pollen, and the

nurse bees have access to pollen and honey to make bee bread to feed brood. After 21 days, 1500 new bees start to emerge every day. At that point, the old switched “winter bee” work force still has 14 days of life expectancy. As a matter of math, the old “winter bee” workforce will



Photos by Randy Oliver



Continued on Page 17

Spring Hive Loss

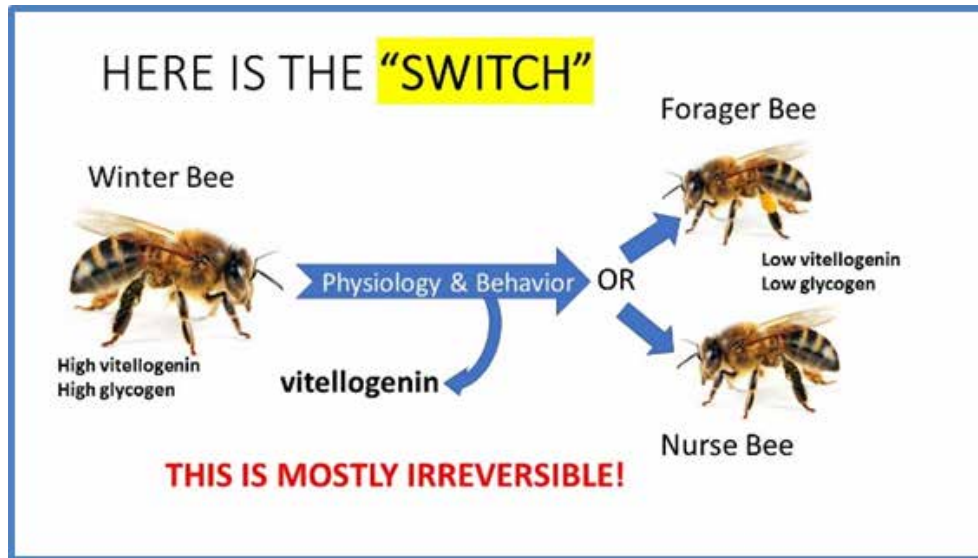
Continued from Page 16

have successfully completely replaced itself -- SPRING TURNOVER to 20,000 new bees.

But what happens if the spring does not go as planned? Our bees are headed towards a spring turnover dead-out catastrophe.

The weather during the spring of 2018 provided a prime example of this. In central Missouri and probably most of southern Missouri, there was a three-day warm spell in mid-February in which temperatures were above 60 degrees F. On the third day, Feb.

19, I observed bees loaded with light yellow pollen coming into my hives. Oh, how wonderful I thought, all my colonies are alive and it is going to be a great year!! But the next day springtime reverted to winter with a vengeance. An analysis of weather data from the University of Missouri Sanborn Field website showed that the mean average daily temperatures decreased for the next



50 days – until April 10. During that 50-day time period the average daily temperature was above 55 degrees F on only two days.

Spring 2018 was a setup for a complete spring turnover dead-out event in a hive.

1. Based on new springtime pollen, the bees had gone through the

Working Together We Can Still “Help the Bees”

Continued from Page 14

- Availability of MSBA-produced videos to update local clubs of various topics.
- Idea sharing among clubs on programs and activities which have worked well. Examples: club honey tasting contests, “dead-out” diagnosis activities, club ownership of extracting equipment for member’s use, demonstration apiaries etc.
- Assistance in promoting local beginning beekeeper classes and activities.
- Financial assistance/cost share to clubs sponsoring youth beekeepers.
- Improved communication and technologies allowing for better “trickle down” of information presented at spring and fall MSBA conferences to the local clubs.

Some of these are ideas we shared with representatives of local clubs in northern Missouri at our fall MSBA conference in Kirksville with positive results. We will continue these discussions during a breakout session at the upcoming spring conference in Cape Girardeau. Please consider bringing this topic up at your local club meetings in January and February and see if someone is willing to attend and participate in idea sharing with us. If you have any questions or are unsure if someone from your club will be available to join us in March, feel free to contact me at 573/880-2899 or at: gregghitchings@gmail.com

It’s a lofty goal to “help the bees.” An increased level of engagement between local clubs and MSBA might very well help us do just that.

Spring Hive Loss

Continued from Page 17

- irreversible “SWITCH” in mid-February so the life expectancy of the bees was reduced to about 35 days.
2. However, mean outside temperature for that critical 35-day period was only 42.2 degrees F.
3. The bees could not break cluster because the hive temperature was much less than 57 degrees F.
4. Any eggs/brood would have been chilled and died -- there were no replacement bees produced.
5. Flowering shrubs and trees were mostly dormant so there was little to forage on.

As a result, I lost five of nine colonies (and several colonies that survived were quite weak) and many of my beekeeper friends with similar management had just as high or higher mortality. The colonies that survived were in unique microclimates, especially hives in cold areas such on shaded side of buildings or in deep woods. The other exceptions were hives that were in agricultural habitats where pollen was not available to the bees during the February warm spell. These microclimates or habitats prevented the winter bees from going through the “SWITCH” too early and the healthy winter bees continued in “winter mode” for the next 50 days.

WHAT HAPPENED TO SWARMS?

In retrospect, there was another startling ramification of the spring weather of 2018. I believe wild bee colonies had the same catastrophic spring turnover failure as my bees. In 2017, I and several other mid Missouri beekeepers had great success trapping wild swarms. We were anticipating another successful swarm year in 2018. But it did not happen – to the extent that few of us ever even saw scout bees around our traps and no or few swarms were captured. A high percentage of wild colonies probably had died.

HERE IS A GOOD QUESTION:

How can we change management practices to reduce spring turnover dead-outs in future springs?

These are options to delay the “SWITCH” or assist the bees if the “SWITCH” has taken place.

1. Place winter hives in cold locations. This assumes that they are healthy bees with abundant honey stores.
2. Place winter hives in habitats that do not contain plants that bloom extremely early.
3. Closely monitor spring weather and plant phenology. If an unseasonably warm spell occurs when pollen might be available, block entrances to the hive so that scouts/foragers cannot bring pollen back to hives.
4. Do not artificially stimulate the “SWITCH” by feeding pollen too early.
5. Provide heat retention capability to hive by removing or closing screened bottom boards; restricting all entrances to minimal opening but ensure adequate venting of moisture; and adding insulation above brood boxes.
6. At time of the “SWITCH”, add supplemental feed such as candy board, sugar solution, or pollen patty, above the cluster. Feed externally on warm days
7. Monitor internal temperature of hives
8. Lastly, in the event of another catastrophic spring, I have moved my hives from a field to the lean-to of a barn where I can safely increase the ambient temperatures of the hives with several types of electrical heating devices. I will return hives to field locations mid-April.

I realize that some of this information may contradict conventional guidance about beekeeping. But based upon what I have learned in the past several months, I am going to change several of my beekeeping management practices. As we always say, what might work for me may not work for you. To be continued...

Carl Korschgen has been a member of the Boone Regional Beekeepers Association for 10 years. He is a retired research biologist with the U.S. Department of Interior and lives in Columbia, Missouri. This article is based on a presentation made to the BRBA in October 2018.

How About Some Honey?

By Teilla Parrish-Lathrop

My little two wheel wagon, "The Bee Buggy" was loaded and spilling over. I worked the 4 beehives at my house and was headed down the dirt road a couple miles to another bee yard. The wagon is roadworthy, unless you're in a hurry, so I was creeping along at a pace that invited my big hairy ol' dog to meander alongside, trying to pull items of interest off for himself. It was so hot that it never occurred to me he'd follow me half a mile to the neighbors' who have 3 equally big hairy dogs.

I was oblivious to the chase that ensued, with my neighbor following the 4 squabbling dogs back to my house in his 4 wheeler, until I pulled into the bee yard about 30 minutes later (told you I had to go slow). The frantic message from the neighbor's wife said there was a dog fight at my house and he (husband) needed help, so I unhooked the Bee Buggy and raced back to the east.

Pulling into the driveway only confused me. There were no dogs or husbands anywhere, the neighbor's 4 wheeler was sitting cross-ways in the road, and just like "Children of the Corn", two of his grown sons sat wild eyed in a pickup with the windows rolled up tight. I yelled through the glass, trying to get them to open the windows. "Nope", they shook their heads slowly. "Bees", they said in creepy unison. Standing there with my bee suit half on, tied around my waist, I started to laugh. "I just worked with those bees", I yelled. "They won't bother you!" I promised. "Nope", they said. "I'll take your 4 wheeler to the end of the driveway and you bring my truck!" I yelled. "Nope, we aren't getting out", they mouthed through the window.

Just about then, the first of 15 or so bees landed in my hair and told me how unhappy she was with the entire morning events. It turns out that, in Army terms, she was the "LRRP Unit", or "long range reconnaissance patrol" and she immediately called for support troops. I scrambled onto the 4 wheeler as the first platoon descended on me. I was trying to untie my sleeves to get my suit on and get that 4 wheeler running so I could get the heck out of there! AND IT WOULDN'T START!!! I was

scrambling for cover in a hail of stingers and they just kept coming wave after wave!! It finally started but now I was sweating heavily and my eyes were swelling shut. I yanked that suit up around my shoulders and tried not to count the number of bees now trapped inside with me. My hands were slick and I couldn't get that thing to go "forward" and looked to the boys in the truck for help. Their heads continued twisting slowly, side to side. I STILL couldn't get my veil up over my face, nor could I get that thing out of reverse, so I panicked and drove it all the way down the driveway. BACKWARDS!

Pretty pleased that I hadn't hit anything, I motioned for the boys to come take the 4 wheeler home and take me back to my truck. "Nope", they said wordlessly, so I backed the 4 wheeler another 1/8 mile down the road. One of them got out and ran to the 4 wheeler, slammed it in "drive" and blasted out of there like he was on fire. I approached the passenger side for a ride back to my truck and heard the door lock slam down before I could yank it open. "LET ME IN!" "NOPE", and he thumbed me toward the bed of the truck. He reversed up the driveway to within about 50 yards of the truck and I swung one (fully suited) leg over the tailgate to get out. He must have been having trouble with HIS shifter too, because before my foot got square on the ground, that sucker took off in a cloud of dust, pelting me with gravel all the way to the road. Pretty sure I heard him laughing, too.

The last two or three girls on the assault team kamikazied themselves on my face (they die when they sting you, you know), and I got back in my truck and headed toward the neighbors' to offer a Benadryl. I'm not saying they were mad, but those two boys stood sentry, arms crossed and somber, as Mom picked stingers off husband sitting in the yard in his "drawers". I put it in "park" and started to get out but those boys advanced slowly toward my truck, heads pivoting slowly side to side. I heard "danger music" in my head, threw it in "reverse", and backed all the way down the drive!

Wonder how much honey it'll take to put the neighborhood back in order?

Funny (Now) Bee Story

By Tom Keith

While I've been playing with a few bees for about 2-3 yr now, I'm still being trained.

I picked up a nuc a little while back and brought it home one morning. Dummy me, I thought 'well, they're a long ways from home, I want them in a different hive, they're already in a stir from being locked up, I'll just go ahead and move frames to desired hive.'

How'd that work for ya, you ask? Well, thinking this would be a quicky, I put on my jacket, veil and gloves but didn't light up the smoker. As expected they started objecting. And as I nervously clattered some frames together they took massive offense. Possibly the larvae grew wings also (or so it seemed). I pulled out about halfway through thinking I'd shed them and come back, but just walking away and walking through the local brush didn't faze them. So I came back to finish and they increased their surliness. They were going into a longitudinal Langstroth hive, but after getting the frames in I couldn't get the top boards sealed due to the consternation.

By this time, they had found they could just penetrate my jeans, and my ears when the veil brushed my face. They found a small zipper hole in the back of the veil and made their way inside where my face was and started working my beard line. (The first one apparently left a trail for the rest). I loosely closed the lid so the mass in there might find their way and tried to bail for good, to come back another day.

Strolling away in my large yard didn't work, standing still in low foliage didn't work. As before, nothing worked. Then it dawned on me - they had not oriented and thus had no idea where home or anything but ME was. And they were determined to not lose me. By now, the relative humidity and temp was 135, at least inside the gear, the outside temp was over the 90s and headed up. They were lighting me up like a Christmas tree.

Short story... I eventually lost most of them, stripped and collapsed in the AC where my loving wife washed me down and poured fluids in. I was very close to heat exhaustion.

I went in later with smoke, quietly closed them up and could've done it with nothing.

MORAL FOR NEWBIES:

1. Don't bother them until they know where Home is.
2. Work slowly, deliberately and don't send shockwaves thru them.
3. Keep working them until you can consistently achieve #2. I still get nervous. All that does is heat up the suit, cause you to bang something and prob the bees smell it on you.
4. Wear a hat with a brim that will hold the veil out. (at least til you get better at it than I am)

Have a Funny, Entertaining or Educational Story You'd Like to Share?

We could all use a good laugh now and then and of course it's always safer to learn from someone else's mistakes than your own. If you have a story you'd like to share for the next newsletter, email them to erictmsba@gmail.com

MSBA Most Frequently-Asked Questions

January 2019 – Answered by Charlotte Ekker Wiggins, msbacharlotte@gmail.com

1. Why should I join MSBA for \$10 a year?

Missouri State Beekeepers Association represents the interests of Missouri beekeepers. The non-profit 504 organization run by volunteers gives beekeepers an opportunity to work together on issues of mutual interest. In addition, the association hosts two conferences a year; members get a discount on conference registration. Members also get a current bi-annual newsletter and have a Facebook page where information can be shared: <https://www.facebook.com/groups/msbainfo>

If you have any other questions, please feel free to email msbapresident@gmail.com.

2. I am trying to get started in beekeeping and looking for resources and information. I don't really know where to start or turn for reliable sources. I have done some research on-line but that only gets me so far and they mostly recommend local Beekeeper groups which is good but I don't know where to find them. If you have any suggestions...."

Attending a local beekeeping club is a great way to start. Many local clubs offer basic beekeeping classes fall through late winter, when bees are not keeping beekeepers so busy. If you haven't found your local beekeeping clubs, check this consolidated list to find the club closest to where you live: <https://mostatebeekeepers.org/local-clubs/>

If you are on Facebook, MSBA has a group page where beekeepers can share pictures and information, it's a good place to learn as well: <https://www.facebook.com/groups/msbainfo/>

MSBA also hosts annual conferences with keynote speakers and workshops, excellent place to learn, meet other beekeepers and get equipment from attending vendors. You will get a better conference price by joining MSBA (\$10/year per person) and that will also give you access to our newsletters and other helpful online information. Here's where you can easily join online:

<https://mostatebeekeepers.org/become-an-msba-member-today/>

To be a good beekeeper it helps to know what are the best management practices. Here is a quick guide to beekeeping with MSBA's best management practices: <https://mostatebeekeepers.org/best-management-practices/>

MSBA also has a number of other resources: <https://mostatebeekeepers.org/links/>

Good luck and let me know if you need more help!

3. I was told there are people who will buy the honey bees, the honey, and the tree in my yard. I was wondering if you could direct me to people who do this.

In spring, there are some beekeepers who may work with you to remove bees from a tree but I haven't heard of anyone paying to get the bees. At this time of the year, bees don't have enough time to establish themselves out of a tree in a hive. My recommendation is you wait until next spring to see if you can find someone willing to remove the bees for free.

If you would like to sell products from your apiary at the Missouri State Fair this year, please contact Dean Sanders for information by emailing deansandhoney@yahoo.com

All MSBA Information You Need Is Available By Visiting Our Website

Missouri Beekeepers Association **Executive Directors**

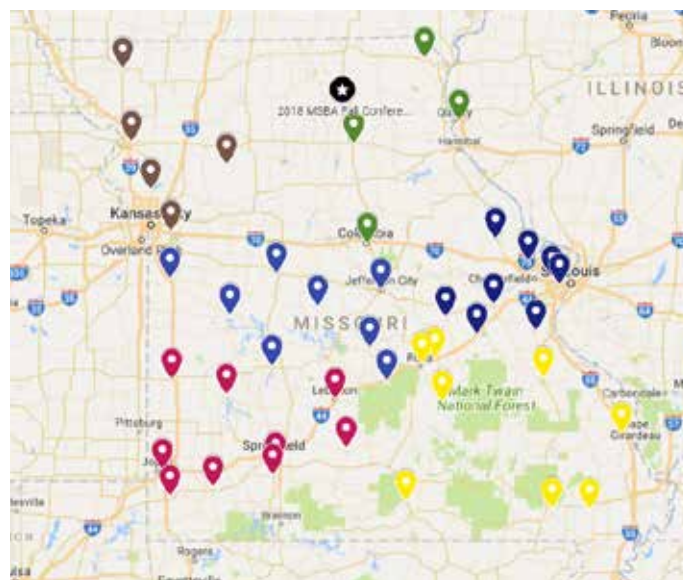
Find The Current List of Directors and Contact Information By Visiting Our Website

mostatebeekeepers.org/executive-committee

Looking for a Local Club?

If you're a new beekeeper a local club will be invaluable to you.

If you're a seasoned veteran you'll be invaluable to a local club.



Find Your Local Club By Visiting
mostatebeekeepers.org/local-clubs