AMERICAN BEEKEEPING FEDERATION

QUARTERLY

VOL. 77, NO. 1, 2019

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AMERICAN BEEKEEPING FEDERATION
QUARTERLY

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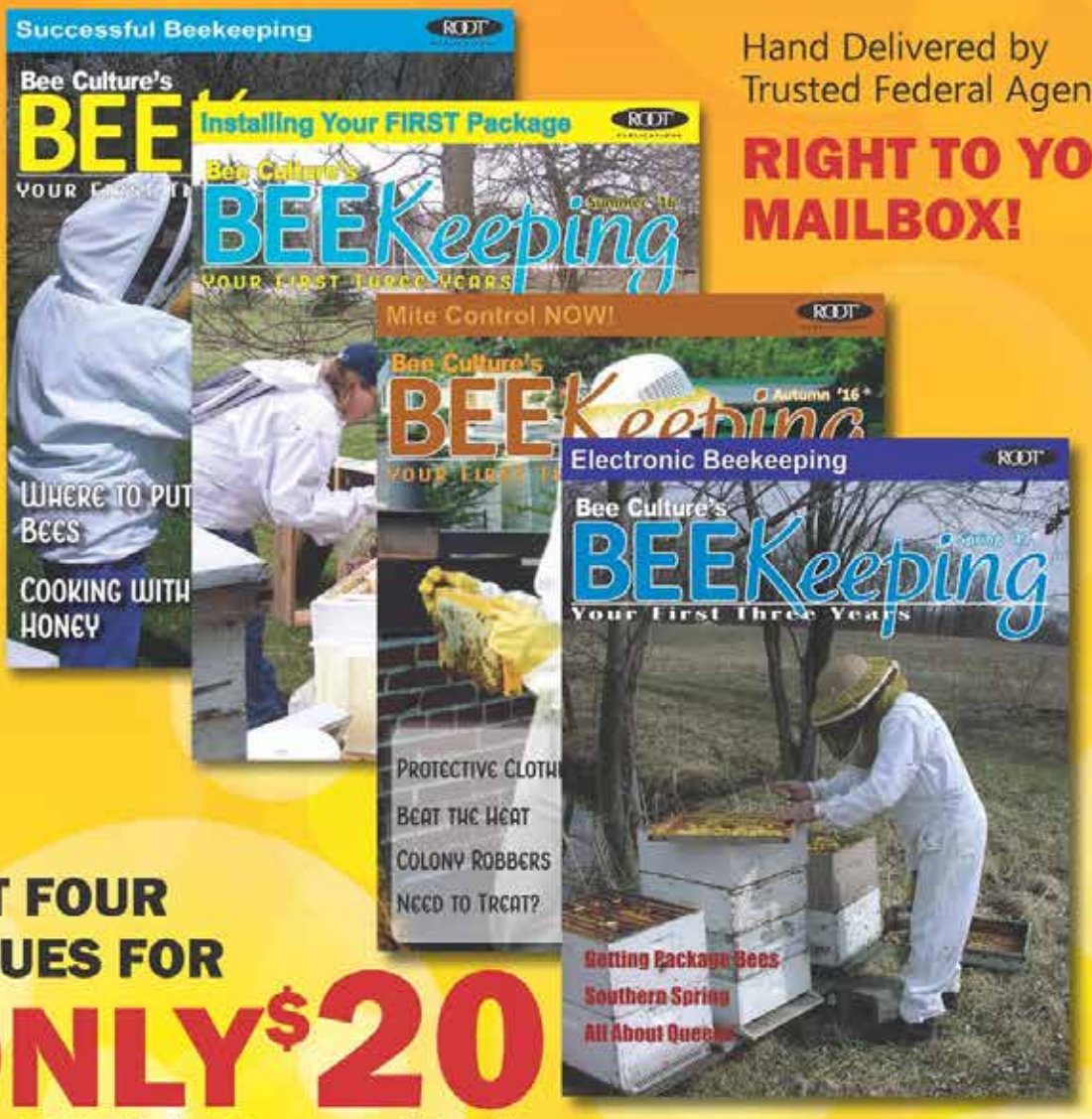

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Welcome to a Bee-utiful 2019!

TIM MAY, ABF PRESIDENT

> WE'RE LOOKING FORWARD TO ANOTHER OUTSTANDING YEAR FOR THE ABF THANKS TO THE REMARKABLE EFFORTS OF OUR VOLUNTEERS.

I'd like to welcome all the new members who joined the ABF onsite during the 2019 ABF Conference & Tradeshow in Myrtle Beach. I hope your first ABF experience was both enjoyable and informational. The annual conference is a great event where many beekeepers meet lifelong friends from all levels and aspects of beekeeping.

I thought we had a great event and would like to thank all who participated. Dr. Marla Spivak, Dr. Reed Johnson and Dr. Dennis vanEnglesdorp brought us up-to-date on their current research during the three keynote presentations. Thank you for all you do to help this industry.

I would also like to thank our conference manager, Tara Zeravsky, and the Meeting Expectations staff both onsite and offsite for all they did to produce such a great event. Putting on an event of this size takes so much time and coordination, and, once again, it went on without a glitch.

We did experience one unfortunate issue. Due to the government shutdown, we were unable to receive updates from the USDA or the EPA. Fortunately, we were able to fill those slots with some great presentations. I would like to thank those presenters and panelists who filled i n at the last minute.

The ABF-themed sandcastle seemed to be a big hit and was a favorite photo opportunity for local and state organizations. The daily progress by the artists was interesting, and the final product was really impressive. Thanks to The Sand Lovers for their talent and creativity.

During the conference, four members were elected to the ABF Board of Directors. I would like to welcome Dennis Langlois (Florida), Warren Nelson (Nebraska), Kent Pegorsch (Wisconsin) and Tim Wilbanks (Wisconsin) to the board. I am looking forward to working with you throughout the next year.

I would also like to thank the four board members who concluded their terms in Myrtle Beach for their work and dedication to the ABF. Emily Brown (Maryland), Mario Jakob (Florida), Darrel Rufer (Minnesota) and Blake Shook (Texas) have been essential members of the ABF Board of Directors. Your contribution to the ABF is appreciated.

We're looking forward to another outstanding year for the ABF thanks to the remarkable efforts of our volunteers. If you have interest in joining a committee or becoming a contributor to *ABF Quarterly* or *ABF E-Buzz*, please contact our headquarters office for details. We're all in this together.

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for November, December 2018 & January 2019

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Our Beekeeping family wishes all of you the best in 2019!

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If you are a member of Facebook, you can be a fan of the ABF Facebook page. All you have to do is simply search Facebook for "American Beekeeping Federation" to access the page and click the "Like" button to become a fan.

Everyone is welcome. To date, we have more than 27,000 fans and are reaching new fans each day.

If you have a Facebook fan page for your business or local beekeeping association, let us know and we'll add you to our line-up.

Please feel free to post your beekeeping photos on our page, write on our wall and keep sending your friends to our page. Stay tuned for ABF updates, fun facts, recipes and photos of our ABF members doing what they do best!

JOAN GUNTER,
ABF VICE PRESIDENT

> THE ABF CONFERENCE & TRADESHOW HAS GROWN OVER THE YEARS TO BECOME A PREMIER EVENT OF OUR INDUSTRY.

The American Beekeeping Federation had the opportunity to host our industry's best and brightest during the 2019 ABF Conference & Tradeshow in Myrtle Beach, and everyone involved certainly delivered on the "Bee Innovative" theme.

On Wednesday, January 9, Dr. Marla Spivak, professor of Entomology from the University of Minnesota, delivered a message on "Restoring Bee Health: Molecules to Landscapes."

Dr. Reed Johnson, from The Ohio State University, delivered the Thursday keynote. Dr. Johnson's presentation spoke to "Interactions between Insecticides and Fungicides Applied to Almonds during Bloom."

"Mites Matter!" was the keynote presentation on Friday, January 11, delivered by Dr. Dennis vanEngelsdorp, from the University of Maryland and president of the Bee Informed Partnership.

Along with an array of other exceptional speakers and presenters, the conference was a huge success. The 900+ attendees were entertained by a vast variety of industry topics as well as a large vendor tradeshow. Area school groups and attendees were entertained by Sarah Red Laird's Kids and Bees program sponsored by the Foundation for the Preservation of Honey Bees.

The foundation held its annual face-to-face meeting onsite in Myrtle Beach. The scholarship winners were awarded their scholarships during the foundation's annual luncheon. They also had the opportunity to present before the general session. The opportunity to mingle with the scientific community and the beekeeping community was invaluable to these graduate students. They are our future researchers.

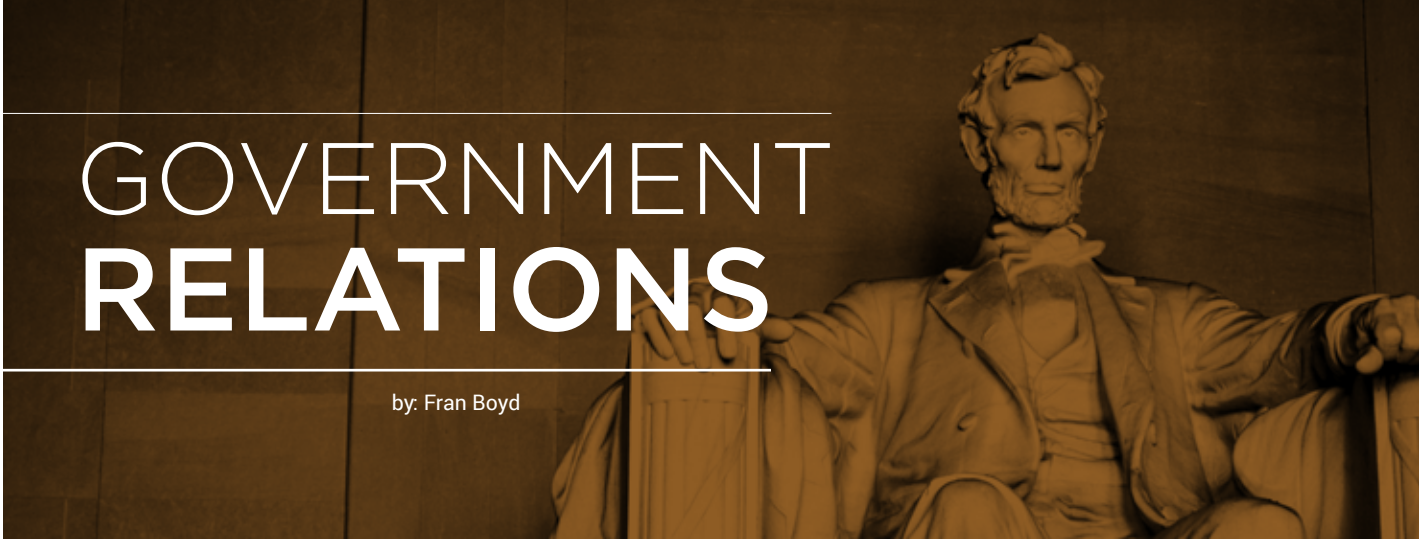
Kids and adults alike were captivated by the beautiful sandcastle that was built throughout the event along with the scavenger hunt held in the vendor tradeshow.

Speaking of shopping, the silent auction always holds the attention of those looking for unusual, must-have items. There were many auctions held throughout the convention, including the honey auction, that could satisfy anyone's shopping needs.

The American Honey Queen Program held a reunion celebrating 60 years of the program. All past queens and princesses who were in attendance had a wonderful time reminiscing and sharing stories of their reign. Oh, if those crowns could talk! The years of experience and dedication to this program are phenomenal. Thank you, ladies, for your time and support.

Congratulations to our 2019 Honey Queen Hannah Sjostrom and our 2019 Honey Princess Nicole Medina. You will serve the industry well.

The ABF Conference & Tradeshow has grown over the years to become a premier event of our industry. With the help of Meeting Expectations, an excellent Board of Directors and leadership from within, the American Beekeeping Federation continues to supply its membership with the most relevant and up-to-date information for beekeepers. If you aren't a member, consider joining our growing family. It's a worthwhile investment in yourself.



GOVERNMENT RELATIONS

by: Fran Boyd

I hope everyone who attended the ABF convention in Myrtle Beach thought it was as informative a gathering as I did. I enjoyed being able to spend time with beekeepers from across the country, discuss with them the "on the ground" problems they face as well as explore in more detail the legislative and regulatory accomplishments the ABF enjoyed last year.

This included passage, in my opinion, of one of the most honey bee and pollinator friendly farm bills in recent years. We will now have to work closely with USDA and FDA to make sure the gains made in the legislation are implemented correctly and promptly by the responsible agencies. Of course, the recent federal government shutdown of over 30 days has significantly delayed the implementation of the legislation. The department is currently setting priorities for the implementation of the programs.

President Trump delivered his second State of the Union address trying to strike a unifying theme in front of a divided Congress. During his speech, the President made a few mentions of food and agricultural policy but focused considerably on what he thought should happen with regard to trade policy. He asked Congress to quickly take up and approve the new U.S.-Mexico-Canada Agreement (USMCA). He also highlighted in his remarks "that during the last Congress, both parties came together to pass a sweeping new farm bill and virtually ended the estate tax on small businesses, ranches and family farms."

House Agriculture Chairman Collin Peterson and Ranking Member Mike Conaway Announce Agriculture Subcommittee Rosters for the 116th Congress

Chairman Peterson (D-MN) and Congressman Conaway (R-TX) announced the make-up of the House Agriculture Subcommittees. While we have issues that cut across several of the subcommittees, the two primary subcommittees that bee and pollination issues come before and that are important to our efforts are the Biotechnology, Horticulture, and Research Subcommittee and the Conservation and Forestry Subcommittee.

The new Chairwoman of the Horticulture Subcommittee is Stacey Plaskett (D-U.S.V.I.), and the ranking member is Neal Dunn (R-FL). The Democrat members of the subcommittee are: Antonio Delgado (D-NY), TJ Cox (D-CA), Josh Harder (D-CA), Anthony Brindisi (D-NY), Jeff Van Drew (D-NJ), Kim Schrier (D-WA), Chellie Pingree (D-ME), Salud Carbajal (D-CA), Jimmy Panetta (D-CA), Sean Patrick Maloney (D-NY) and Al Lawson (D-FL). The Republican members of the subcommittee are: Glenn Thompson (R-PA), Vicky Hartzler (R-MO), Doug LaMalfa (R-CA), Rodney Davis (R-IL), Ted Yoho (R-FL), Mike Bost, (R-IL), James Comer (R-KY) and Jim Baird (R-IN).

The new Chairwoman of the Conservation and Forestry Subcommittee is Abigail Spanberger (D-VA), and the ranking member is Doug LaMalfa (R-CA). The Democrat members of the subcommittee are: Marcia Fudge (D-OH), Tom O'Halleran (D-AZ), Chellie Pingree (D-ME) and Cindy Axne (D-IA). The Republican members of the subcommittee are: Rick Allen (R-GA), Ralph Abraham (R-LA) and Trent Kelly (R-MS).

If any of these members happen to be your representative, please reach out to them and their agriculture legislative assistant. Let them know that you are a beekeeper in their district and that you would like to make sure they are aware of the importance of healthy bees and a strong beekeeping industry to the success of agriculture in their congressional district.

Hours of Service Petition

The hours of service petition, or "request for temporary exemption" as the Federal Motor Carrier Safety Administration (FMCSA) prefers to refer to it, which was submitted by ABF, AHPA, the National Cattleman's Beef Association, the Livestock Marketing Association, the American Farm Bureau Federation and the National Aquaculture Association was published in the Federal Register for comment on February 6, 2019. The petition was submitted to the FMCSA for livestock and bee haulers to get additional drive time upon the completion of certain training and documentary requirements. During the past month, we've strongly urged all state organizations and members who haul bees to submit their own comments voicing their concerns with the current situation and their support of the request made by the industry's petition. The comment period closed on March 9, 2019.

The petition filed by ABF and the other organizations would apply to livestock, fish and bee haulers and would modify the hours of service (HOS) for those haulers for a period of five years. Current rules limit drive time to 11 hours and limit on-duty hours to 14. Instead, we requested livestock/bee haulers be granted approval to drive up to 15 hours with a 16-hour on-duty period, following a 10-hour consecutive rest period. Any livestock/bee hauler wishing to operate under the extended drive time would be required to complete pre-trip planning and increased fatigue-management training.

FMCSA requires petitions for exemption to explain how the petitioner would ensure a level of safety equivalent to or greater than the level of safety that would be obtained without the exemption. Our petition identified Australia's performance-based, fatigue-management HOS system, which is tailored to livestock haulers as a model for this exemption.

In addition to submitting comments, ABF also identified members of Congress who have been supportive of this issue and urged them to submit comments in support of the request as well.

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What's So Super About the Super Organism the Honey Bee?

4-H WINNER ESSAY THIRD PLACE WINNER

by: Ben Tellano

Did you know that bees' pollination is responsible for about one-third of our food supply?[1] Bees pollinate ninety percent of Earth's crop species. Just in the United States, it is estimated that bees' work of pollination produces $16 billion worth of food crops.[2]

What would life be like if honey bees didn't exist? Honey bees are responsible for many tasks. Honey bees pollinate plants and flowers. Many cattle used for milk and meat eat mainly alfalfa and lupins, both of which need to be pollinated by bees. In addition, canola oil production, pharmaceuticals and even clothing made from cotton are dependent on the honey bee.[3] Our world depends on the mighty honey bee for its existence.

The magnificent honey bee survives because it is a superorganism. A superorganism consists of many organisms that function as one organism.[4] A honey bee colony is "a symphony of highly coordinated behaviors all designed to promote the entire hive."[5] Dr. Keith Delaplane, entomologist and professor at the University of Georgia, states that a colony is a superorganism since it behaves as an integrated unit, undergoes a period of growth and reproduction and possesses "cells" that perform different tasks.[6]

Georgia Master Beekeeper Tom Handford states that a superorganism carries out tasks in a multilevel caste system seamlessly from the very start and that each bee works a single function that, with need, can switch to adapt to other functions as needed by the whole.[7] For example, a worker bee can adapt its function, ranging from housekeeping to scouting to foraging, depending on the need of the hive.[8,9] Honey bees can also communicate with each other through pheromones and dances.[7,9] Honey bee colonies are superorganisms because they work together to survive, and, without one another, the entire colony would collapse.

Colonies require much work and many bees to function. Different bees take different roles in a colony.[10] In a typical honey bee colony, there are about 300 drones, 50,000 workers, 9,000 larvae and one queen.[4] The main role of the queen bee is to lay as many eggs as possible. Drones, the male bees, "are responsible for passing the colony's genes on to the next generation by mating with queens from other colonies."[10] Worker bees do the "housekeeping" work of the colony. Removing waste from cells, feeding the larvae, building honeycombs, removing dead bees and carrying water to the hive are many duties that worker bees perform.[10] When workers stop working for the colony and switch to egg-laying, the colony quickly deteriorates.[11] The colony is dependent on each bee doing the task it is designed to perform.

Thermoregulation is an example of how a honey bee colony functions as a superorganism. Individual bees are cold blooded and cannot thermoregulate themselves. According to Steve Nofs, a honey bee colony acts like a warm-blooded organism because it keeps the brood area of the nest at around 93 degrees Fahrenheit even when outside temperatures go above 100 degrees or way below zero.[12] When the interior of the hive rises above 93 degrees, worker bees cool the interior by fanning air over droplets of water.[10] When the temperature dips below 93 degrees, worker bees come together around the brood area and vibrate their wing muscles to produce heat.[10] Bees maintaining the perfect temperature in the hive is an example of how the honey bee is a superorganism. Without the bees regulating temperature, they would all die.

Another great example of many honey bees working as a superorganism is swarming. Swarming occurs when the colony gets too large and needs to split.[4] Swarming must start during the early summer since much work needs to be completed before the following winter.[13] A new swarm will need to find a suitable place for nesting, occupy it, construct combs, raise new workers and store enough supplies to last through winter.[13]

When starting a new swarm, the queen bee rearing begins, and the mother queen lays the eggs for the future queen bee.[13] The eggs are laid in queen cups which are constructed by worker bees.[13] The daughter queens grow rapidly, and the mother queen eats less and less while the worker bees eat

more.[13] During swarming, many workers become dormant and hang on the combs which is a sign that swarming is imminent.[13] The scout bees working inside and outside of the hive are the ones that begin swarming.[13]

When the scout bees notice the developing queens reach the pupal stage and there is sunny weather, they vibrate their flight muscles which sends out a signal that the swarm is about to depart.[13] When the scout bees fly in excitement around the hive, it's time to depart. The bees cluster together and follow the scout bees out of the hive. After several hours to days, the scout bees democratically decide the location of their new home and lead the swarm there.[14] Back at the original nest, a few thousand worker bees, a few queen cells and food remain.[13] After a few days, the new queen will emerge, and the colony's population will rebound and build up. Swarming is an important part of survival for honey bees, and it illustrates how honey bees act as a superorganism because they all have individual jobs that, together, act as a single organism. The colony communicates effectively and acts democratically when making decisions that affect the entire hive.

Not only is our community dependent on the honey bee for our food, but the honey bee colony can teach our community how to work together and communicate with each other effectively. The honey bee teaches our world that every individual's designated work is important and, just like in a honey bee colony, each individual's survival is dependent on the others. Also, the superorganism honey bee colony depicts the phrase "the whole is greater than the sum of its parts." The cooperative behavior experienced both in our world and in the honey bee colony determines the survival of us all.[15]

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Meet Our New Board Members:

DENNIS LANGLOIS
Director Representing State Delegates Assembly

Dennis Langlois has a long history with nature, growing up in the bayous of Louisiana. One night amid the woods, a young Dennis captured a bee and gently cupped it in his hands, careful not to damage it in any way. From that moment, intensely studying this wondrous insect, Dennis somehow knew his destiny was with the bees.

Some 20 years later, Dennis was called upon by his aunt and uncle to get rid of bees that had moved into their shed. Not wanting to kill them, he looked everywhere for other alternatives. Finally, a beekeeper and close friend helped Dennis remove and relocate the bees to his backyard. During the process, Dennis discovered that his mission in life was to dedicate himself to the education and preservation of one of nature's most invaluable creatures. The rest is history!

WARREN NELSON
Director Representing State Delegates Assembly

Warren Nelson started beekeeping 27 years ago. His hobby soon got out of control and turned into a business. He and his wife Jane started Valhalla Bee Farm making creme honey. That evolved into bottling and distributing bottled honey and beeswax.

Dr. Marion Ellis trained Warren to be able to judge honey and honey products. Since then, Warren has judged at the Iowa, Illinois, Missouri and Kansas State Fairs and has presented with Dr. Ellis during the ABF annual conference in Anaheim, California. He enjoys judging so much that he is now training his daughter in the fine points of judging.

Warren and Jane had an opportunity to purchase a beekeeping supply business a few years ago and have enjoyed helping new beekeepers get started. Warren is the immediate past president of the Nebraska Beekeepers Association—a position he held for a total of 16 years—and is honored and excited to start his tenure on the ABF Board of Directors.

TIM WILBANKS
Director Representing Commercial Beekeepers SIG

Tim Wilbanks is a fifth-generation beekeeper. He grew up in Claxton, Georgia, working in his family's commercial package and queen rearing business.

In 2016, Tim acquired Lee Heine's package bee business in Watertown, Wisconsin. This began a new chapter for the Wilbanks family, and they relocated their business and primary residence to southeast Wisconsin. There, Tim and his queen bee, Sarah, and brood, Ansley, Harrison, Reed, Priscilla and Beatrice started a new company, Heritage Honeybee. On any given day, the children will be seen alongside dad in the operation, helping customers, checking the bees and usually begging to stick their finger into a honeycomb.

KENT PEGORSCH
Director Representing Small-Scale/Sideliner SIG

Kent Pegorsch began beekeeping at age 16, helping a local beekeeper. In the 1980s, along with honey sales, Kent was a Dadant dealer and hauled package bees from Alabama. In 1987, Kent and his wife, Bernadette, purchased Main Street Marketplace, a gift store in Downtown Waupaca. In the more than 30 years they have operated the store, it has grown from one storefront to encompass four storefronts. One storefront is dedicated to honey sales and honey bee education.

Kent currently operates about 200 colonies, selling his honey through the family business under the Dancing Bear Apiary label. Kent is currently serving his second term as president of the Wisconsin Honey Producers Association and is vice president of the Nicaragua Bee Project—a nonprofit corporation that trains Nicaraguans in beekeeping and helps them acquire their first colonies.

Kent is looking forward to serving on the ABF Board of Directors and supporting the beekeeping community.

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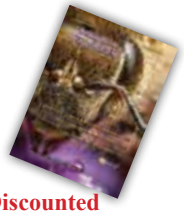

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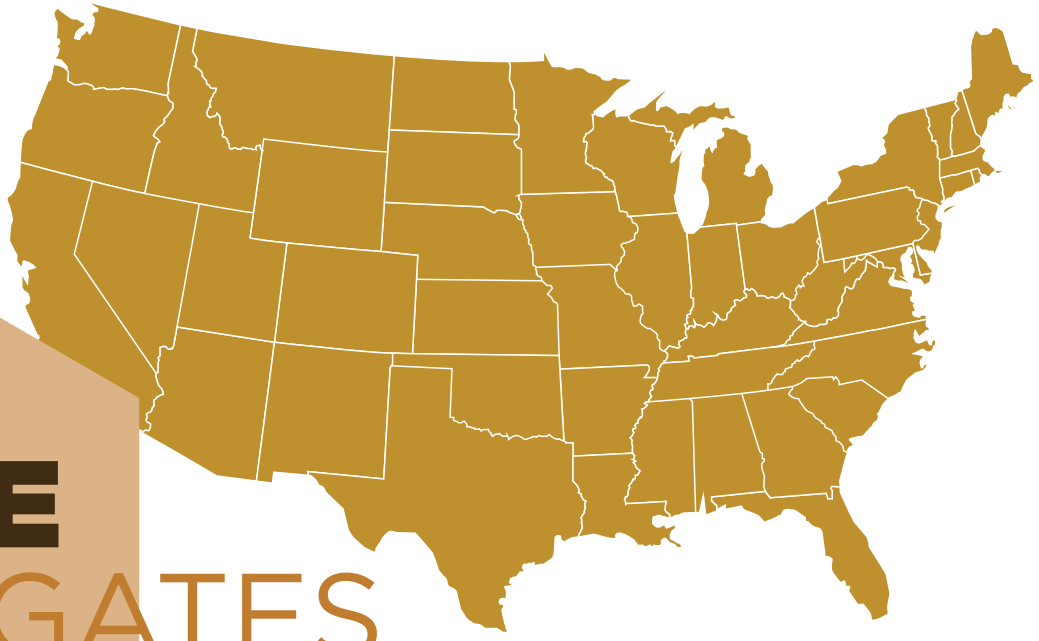

STATE DELEGATES

Each state having ABF members may appoint a State Delegate to serve as a liaison between ABF and its state association and local clubs. Each State Delegate acts as a Membership and Legislative Coordinator—communicating important membership and legislative information between ABF and the state and local clubs.

Let's grow together! Don't miss this opportunity to publicize your state meetings.

State Delegates meet bimonthly on the 2nd Tuesday of that month. Let us know if you want your state more involved with the membership and legislative happenings of the American Beekeeping Federation.

DON'T SEE YOUR STATE MEETING LISTED?

Contact your state beekeeping organization. State Delegates should submit state-level meetings by emailing us at *info@abfnet.org*.

STATE MEETINGS

ALABAMA

2019 Alabama Beekeeper Spring Picnic
May 4, 2019
Landmark Pavilion
Millbrook, Alabama

2019 Alabama Beekeeper Fall Convention
September 20-21, 2019
Clanton Conference & Performing Arts Center
Clanton, Alabama

FOR MORE INFO OR DETAILS:
www.alabamabeekeepers.com

CALIFORNIA

2019 CSBA Annual Convention
November 12-14, 2019
Pechanga Resort & Casino
Temecula, California

FOR MORE INFO OR DETAILS:
www.californiabeekeepers.com

OHIO

41st Annual Tri-County Spring Beekeeping Workshop
March 1-2, 2019
Fisher Auditorium
Wooster, Ohio

OSBA Traveling Speaker Program
Visit our website for more information on listing of dates and locations.

FOR MORE INFO OR DETAILS:
www.ohiostatebeekeepers.org

WISCONSIN

Wisconsin Honey Producers Spring Meetings
Central District: March 2, 2019
Wisconsin Rapids, Wisconsin

Southern District: March 2, 2019
Milton, Wisconsin

Northeastern District: March 3, 2019
New London, Wisconsin

Northern District: March 9, 2019
Ashland, Wisconsin

Southeastern District: March 9, 2019
West Bend, Wisconsin

Northwestern District: March 16, 2019
Knapp, Wisconsin

Western District: March 16, 2019
La Crosse, Wisconsin

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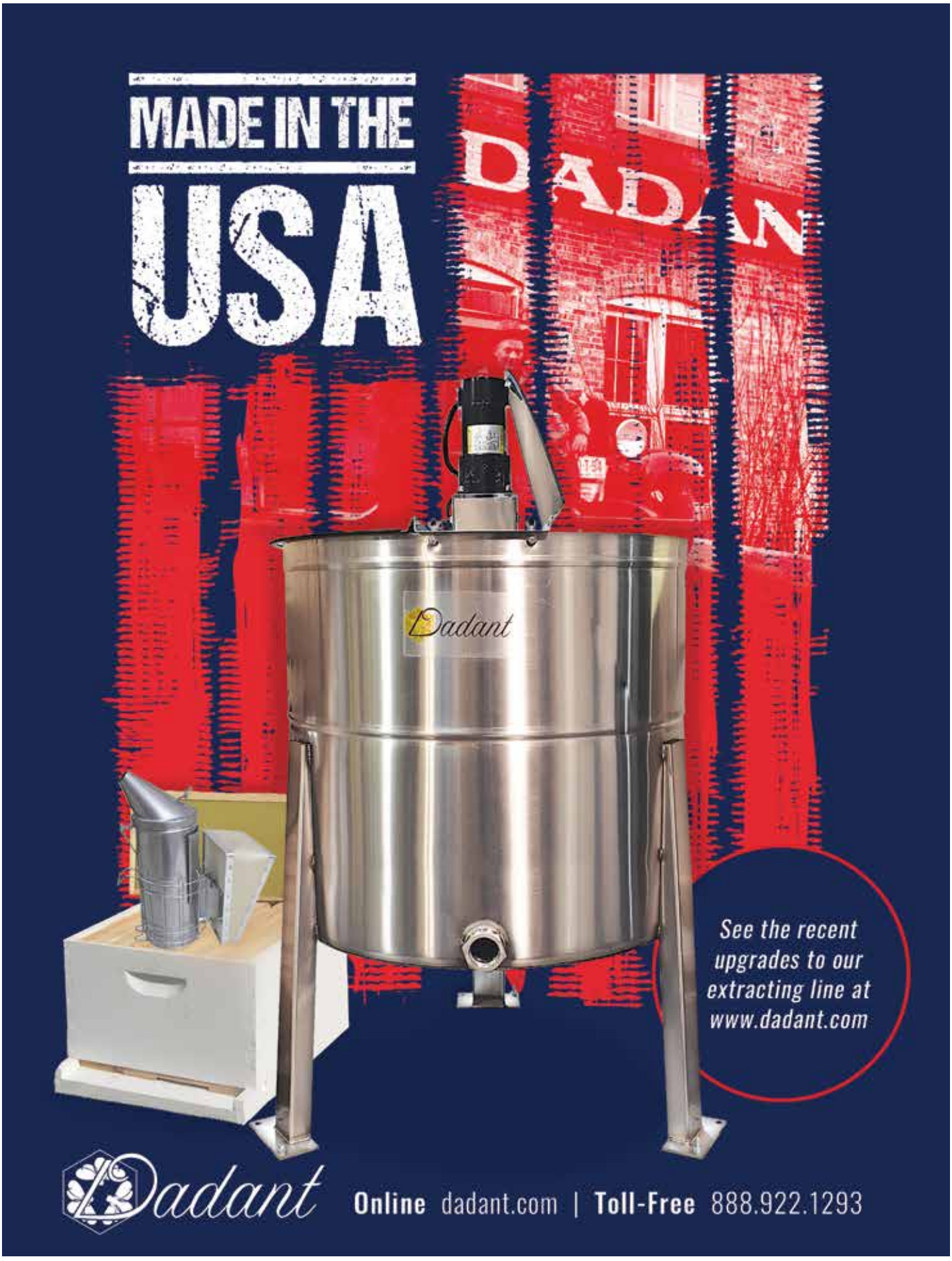
www.wihoney.org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BEE INNOVATIVE

2019 ABF CONFERENCE & TRADESHOW

American Beekeeping Federation

CONFERENCE RECAP

Held January 8-12, 2019, at the Myrtle Beach Convention Center Hotel, the 2019 ABF Conference & Tradeshow was a smashing success with more than 900 participants in attendance from 18 different nations. We truly represented the conference theme, "BEE INNOVATIVE." Attendees revered spending time with each other, sharing tips and techniques as well as challenges they incur while beekeeping in their respective parts of the world.

We kicked off this year's event with the Presentation of Colors by the Myrtle Beach Fire Department and a welcome by Kerry Owen, President of the South Carolina Beekeepers Association. General session followed with presentations from industry experts including Dr. Samuel Ramsey from the USDA-ARS Bee Research Lab in Beltsville, Maryland, whose presentation, Tropilaelaps Mites: A Fate Worse Than Varroa, was awarded with the coveted Hoopingarner Award after being voted the best scientific program of the conference. The day concluded with a welcome reception in the tradeshow with entertainment provided by the 2019 American Honey Queen candidates.

Thursday's agenda featured SIG meetings for the Small-Scale/Sideliner, Package Bee & Queen Breeders, Honey Producer/Packer and Commercial groups. Each group offered programs unique to its members, during which ideas were exchanged and new information was presented. The ABF Auxiliary lunch and meeting celebrated 60 years of the American Honey Queen Program and featured presentations from the 2019 American Honey Queen candidates. The evening concluded with an optional social activity at WonderWorks, where more than one ABF member succeeded in powering a bicycle in a vertical, 360-degree circle.

The renowned Kids and Bees program was held on Friday morning, coordinated by the Bee Girl, Sarah Red-Laird. Close to 400 local children participated in hands-on, interactive activities with nearly 40 ABF volunteers there to assist. Children, teachers and parents walked away with a greater understanding of the honey bee and its importance to our livelihood.

Nearly 100 attendees participated the Foundation for the Preservation of Honey Bees luncheon where David Mendes was honored with the prestigious Founder's Award. The 2019 Foundation Scholars presented their research:

- Jennifer Albrecht, University of Nebraska-Lincoln
- Joe Milone, North Carolina State University
- Anthony Nearman, University of Maryland
- Emily Noordyke, University of Florida

Congratulations to these scholars who each received a $3,000 scholarship from the foundation to continue with their course of study.

The ABF annual business meeting was also held on Friday during which Tim May (Illinois) was confirmed as ABF President for 2019 and Joan Gunter (North Dakota) was confirmed as Vice President. Newly elected members of the ABF Board of Directors were also confirmed and can be viewed on the ABF website at www.abfnet.org. Following the meeting, the 2019 American Honey Show auction was held, with all proceeds benefitting the American Honey Queen Program. Special thanks to Mary Kettlewell and the judges for their time and expertise. For a complete list of winners, please see page 21.

The final day of the conference began with the commercial breakfast and a panel discussion on current issues. More than 200 beekeepers from all over the world participated in this session to share information and ideas. The breakfast was followed by a workshop designed for those interested in "Growing into a Commercial Beekeeping Operation."

Saturday also featured an array of interactive workshops, where attendees had the opportunity to learn:

- Habitat, Nutrition, Health and Longevity of Bees;
- Skin Care with Beeswax and Honey;
- Queen Rearing Essentials;
- Honey Bee Morphology and Anatomy;
- Encaustic Painting;
- Improved Overwinter Survival; and
- Much, much more.

The ABF annual banquet closed out the event on a high note. With just at 300 members in attendance, the evening was spent celebrating the ABF, participating in the always-exciting sweepstakes drawing and live auction and coronating the 2019 American Honey Queen and Princess. Congratulations to Hannah Sjostrom, our 2019 American Honey Queen, and Nicole Medina, our 2019 American Honey Princess. Thank you for all the amazing work you are going to do on behalf of the ABF.

We were pleased to present four awards during the banquet. First, awards of appreciation were presented to Bob Miller and Regina Robuck for their many years of dedication to the ABF and the integral roles they played in the success of the organization. Next, the President's Award was presented to Tim Tucker for all the amazing and significant work he does for our industry and organization like pulling together the *ABF E-Buzz* newsletter each month. Finally, Dr. Samuel Ramsey was announced as the recipient of this year's Hoopingarner Award.

Be sure to join us for the **2020 ABF Conference & Tradeshow, January 8-11, 2020,** at the Renaissance Schaumburg Convention Center Hotel in Schaumburg, Illinois. We look forward to seeing you there! If you are interested in becoming a sponsor or an exhibitor, please contact Molly Sausaman: *msausaman@abfnet.org*

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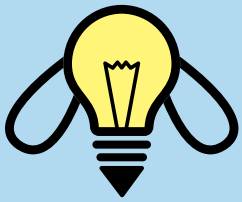

CONFERENCE FEEDBACK:

"This conference tagged all the bases—talking with other beekeepers, gathering new research information and combining those to build better beekeeping practices."

"Mushrooms, space labs, varroa on the belly, tank mixing pesticides...Such a range of good stuff."

"The ABF Conference & Tradeshow is the greatest opportunity to build relationships with potential customers, maintain relationships with current customers and represent my company as a member of the beekeeping industry and community."

"As a hobby beekeeper, it was exciting to be around so many icons of the industry."

"Each year, I look forward to the ABF conference for the exchange of bee information with beekeepers from different levels and interests of beekeeping."

"Kids and Bees was awesome! And, I loved meeting fellow beekeepers and making some great new friends!"

"Thanks for all the hard work it takes to put on such great conference!"

2019 AMERICAN HONEY SHOW

MYRTLE BEACH, SC

Class A: Water White Honey

Sponsored by Sioux Honey Association

- First Place: Tom Montavon – Kingston, Illinois
- Second Place: Judy Schmaltz – Clarkson, Michigan

Class B: Extra White Honey

Sponsored by Dutch Gold Honey

- First Place: Carmen Conrad – Canal Winchester, Ohio
- Second Place: Charles Lorence – Aurora, Illinois
- Third Place: Nick Thill – West Bend, Wisconsin

Class C: White Honey

Sponsored by Barkman Honey

- First Place: Carmen Conrad – Canal Winchester, Ohio
- Second Place: James & Karen Belli – Wadsworth, Illinois
- Third Place: John Simmons – Alton, Illinois

Class D: Extra Light Amber Honey

Sponsored by Acorn Bee

- First Place: Carmen Conrad – Canal Winchester, Ohio
- Second Place: Norbert Neal – Elk City, Kansas
- Third Place: James & Karen Belli – Wadsworth, Illinois

Class E: Light Amber Honey

Sponsored by Ashurst American Honey

- First Place: Norbert Neal – Elk City, Kansas
- Second Place: Charles Lorence – Aurora, Illinois
- Third Place: Lee DelSignore – Goulds, Florida

Class F: Amber Honey

Sponsored by Burleson's Inc.

- First Place: Norbert Neal – Elk City, Kansas
- Second Place: Jeremy Margaron – Mechanicsburg, Illinois
- Third Place: Tanya Rudometkin – LaPine, Oregon

Class G: Dark Honey

Sponsored by GloryBee, Inc.

- First Place: Carmen Conrad – Canal Winchester, Ohio
- Second Place: Norbert Neal – Elk City, Kansas
- Third Place: James & Karen Belli – Wadsworth, Illinois

Class H: Chunk Honey

Sponsored by Gene Brandi Apiaries

No entries.

Class I: Round Comb Sections

Sponsored by Ross Rounds

- First Place: Judy Schmaltz – Clarkson, Michigan
- Second Place: Jim Rodenberg – Wolf Point, Montana
- Third Place: James & Karen Belli – Wadsworth, Illinois

Class J: Comb Section Honey (Wooden)

Sponsored by Tuckerbees Honey

- First Place: James & Karen Belli – Wadsworth, Illinois

Class K: Cut Comb Honey

Sponsored by Gunter Honey Farm

- First Place: James & Karen Belli – Wadsworth, Illinois
- Second Place: Dan Piechowski – Redgranite, Wisconsin

Class L: Creamed Honey

Sponsored by Mann Lake Ltd.

- First Place: Carmen Conrad – Canal Winchester, Ohio
- Second Place: David Crawford – Circleville, Ohio
- Third Place: John Piechowski – Redgranite, Wisconsin

Class M: Beeswax Block (Natural)

Sponsored by Dadant & Sons, Inc.

- First Place: Tony Rekeweg – Decatur, Indiana
- Second Place: Charles Lorence – Aurora, Illinois

Class N: Artistic Beeswax

Sponsored by Texas Insurance & Financial Services, Inc.

- First Place: James & Karen Belli – Wadsworth, Illinois
- Second Place: Judy Schmaltz – Clarkson, Michigan

Class O: Beeswax Candles

Sponsored by Ellingson's Inc.

- First Place: Derald Kettlewell – Greenfield, Wisconsin
- Second Place: Charles Lorence – Aurora, Illinois
- Third Place: Carmen Conrad – Canal Winchester, Ohio

Class P: Artistic Beeswax Candles

Sponsored by Bee Culture

- First Place: Carmen Conrad – Canal Winchester, Ohio
- Second Place: Judy Schmaltz – Clarkson, Michigan
- Third Place: Deborah Klughers – East Hampton, New York

Class Q: Beeswax Art

Sponsored by Bee Culture

- First Place: George Hansen – Colton, Oregon
- Second Place: Deborah Klughers – East Hampton, New York

Class R: Honey Gift Box

Sponsored by Central Life Sciences

- First Place: Carmen Conrad – Canal Winchester, Ohio
- Second Place: James & Karen Belli – Wadsworth, Illinois
- Third Place: Kim Kester – Stockton, Georgia

Best of Show: Honey

Carmen Conrad – Canal Winchester, Ohio

Best of Show: Related Products

James & Karen Belli – Wadsworth, Illinois

FROM BLOOM TO BOOM

An Investigation of Oregano for Pollinator Health & Human Wellness

by: Melanie Kirby

Oregano flowers with oregano honey—a unique botanical flavor considered medicinal by locals. Photo: Zia Queenbees, photo by Melanie Kirby.

This story begins with a farmer. Along the way, he befriends a beekeeper. They both turn to another friend, a scientist, working downriver.

But let's start the story off with that farmer. His name is Todd Bates. He is an illustrious farmer known for his distinctive attention to detail. He is a botanist tinkerer. His education in botany has propelled him into "discovering" plant varieties that may seem like roadway or trailside nonsense, including a novel variety of hops, Neo mexicanus hopus, which is a wild hop strain that is being grown exclusively in Washington and brewed by Sierra Nevada Brewery among others.

Back in 2014, *The Smithsonian* magazine published an article about Todd's hop discovery. His keen eye for investigating the hidden marvels of plants has taken him on a journey from wild harvesting to strain selection and cultivation. Which brings this story to his newest cultivar, Oregano de la Sierra, which is also known as wild bergamot or Rocky Mountain bee balm.

A few years back, after Todd sold his wild Neo mexicanus hopus strains to brewers, he brought a few Oregano de la Sierra plants down from the Sangre de Cristo alpine range to his high-desert farm at 6,000-feet elevation. He began following a strain that was acclimating to his lower elevation. Todd's farm, New Mexico Native Plant Recyclers, is located along the Embudo River which merges into the Rio Grande about a twenty-minute drive south of the Taos Gorge (or a little longer if you decide to whitewater raft the Rio).

Todd grew the strain and began to cultivate rows of it that he could then harvest. He modified a blower and a bicycle cart with a hedge trimmer that he can roll up and down the rows to cut the leaves and flowers. Then, in one of his green houses, he spreads the cuttings out and separates the leaves from the gorgeous purple flowers. Dried, the leaves are a culinary delight. And the flowers, well the flowers are as well. Chefs all over Santa Fe began seeking Todd out.

And then Todd met some beekeepers. Through mutual friends, Todd became friends with Zia Queenbees. Todd shared his curiosity for plant extracts and would, on occasion, swap his bottles of black pepper soda pop for mead and propolis tincture. One day, Todd shared how he was noticing many different kinds of pollinators visiting his oregano.

He called me up saying, "I think the bees are getting drunk off my oregano flowers. Maybe they are self-medicating?!" Well, this got me thinking. What is oregano? What chemical properties does it contain that might be beneficial for bees? It is

Todd's homemade harvest wheelbarrow cuts only the top of the plant and leaves the rest allowing for multiple harvests. Photo: The Taos News.

Melanie Kirby of Zia Queenbees and Rob Heyduck of NMSU collecting an Oregano de la Sierra honey sample. Photo: NMSU, photo by Jane Moorman.

already known that oregano is used for viral issues in poultry and rabbits. It is considered to be an antiviral and an antibiotic.

So off I went to tell Mark, who then said, "Well, we should check it out. I've got a couple sickly hives down the road that I'm about to requeen, but maybe we should take them to Todd's and see if anything happens." A couple weeks passed, then Mark went to check on the hives at Todd's and lo and behold, they were looking much better.

Todd said, "Well, you know there is so much carvacrol and terpenes in oregano…you know, oregano is not a distinct plant, it is actually a flavor." So off we all went to see who we could connect with to investigate the awesome potential of this flavor.

Which brings this story to New Mexico State University's Alcalde Sustainable Agriculture Science Center, about 10 miles downriver from Todd's farm. Horticulture scientist Rob Heyduck answered the call. Together, the farmer, the beekeeper and the scientist composed a grant proposal for the New Mexico Department of Agriculture. In 2016, the "From Bloom to Boom: An Investigation of Oregano de la Sierra (Monarda fistulosa variety menthifolia)" project was awarded a Specialty Crop Block grant to fund research into the potential of this plant for pollinator health and human wellness.

The goal is to examine and promote Oregano de la Sierra as a new crop or accessory planting to positively affect pollinator health and produce a hive product and field crop that can be processed in a number of ways. This project brought in collaboration from the Beltsville, Maryland, Bee Lab for viral analysis, the Bee Informed Partnership for Varroa and Nosema analysis and the San Juan College Hyder Chemistry Lab for nectar, honey and pollen analysis.

Herbal compounds have gained interest both by farmers and researchers as the quest for finding and propagating healthy forage for livestock and value-added products increases. Through advanced testing and analysis, science is now able to better support the observational properties that land stewards have been noticing and recording for a variety of wild and cultivated plant species. Interest in finding and promoting herbal compounds for immune system support and for nutritional forage is important for organic and sustainable agricultural pursuits and markets.

Extracts of oregano (Origanum vulgare) has been shown to positively affect animal health and production in such varied organisms as poultry (Giannenas, et al. 2010), fish (Zheng, 2009) and rabbits (Botsoglou, et al. 2004) and was shown to attenuate or eliminate Staphylococcus aureus and Staphylococcus epidermidis biofilms in vitro (Nostro, et al. 2007). The majority of this bactericidal effect is attributed to carvacrol and thymol, two main constituents in the essential oil of oregano. As a result, products have been developed that make use of these properties and are currently mostly produced in Europe (RopaPharm International, the Netherlands and RostoFarm, Germany).

Monarada fistulosa var. menthifolia is a widespread but highly variable North American native plant (alternately known as bee balm, wild bergamot or Oregano de la Sierra) and possesses a similar chemical profile to oregano including p-cymene, carvacrol, thymol, α-pinene, β-pinene, sabinene hydrate, α-terpinene, citronellyl acetate and β-caryophyllene (Zamureenko, et al. 1989). It is also a known honey plant (melliferous). Specific to bee health, thymol has been used to successfully control Varroa mites and prevent fermentation and the growth of mold in bee colonies (Calderone, 1999; Floris, 2004).

This project is encouraging, as it has brought together a cross section of agricultural, apicultural and scientific professionals from different specialties to collaborate on pollinator health. The Hyder Chemistry Lab is still analyzing the chemical composition of the nectar, honey and pollen samples. The viral analysis showed that viral loads, Nosema and mite counts all seemed to decrease after bees had exposure to oregano.

There is still more to be investigated on this flavorful plant, such as which exact phytochemicals and in what concentrations are actually doing what and do they transfer into the nectar and honey? If the positive properties of Oregano de la Sierra do transfer to hive products, then medicinal oregano honey could also be beneficial for human health and wellness. Regarding the outcome of the research, Heyduck said, "Todd works with oregano as an herb you can add to food. We hope that this research will bring about natural value-added products. Also using the Oregano de la Sierra plant in revegetation mixes, habitat enhancement and pollinator gardens could add something medicinal for the pollinators in the area."

For more information on the project, visit www.herbs4bees.com.

BULLYING AS RELATED TO MODERN BEEKEEPING

by: Albert Chubak

Bullying is not just exhibited by students, it may be the office jerk who you wish would just quit. Bullying is a form of control where the instigator is wanting to usurp power or force an ideology on another person. Society sees differences as not necessarily bad, evil or corrupt—just different. What is good for one is not always good for all. One thought, method, practice or application is rarely universal, as many situations can exist that need variation.

In beekeeping, many think one system or practice or belief should be universal and should not be questioned. Many beliefs are shared in books written by those in the bee world and claim to be "the way it is." However, beekeeping is a regional thing with adaptation to the environment, local conditions and personal limitations all playing a part in what method, hive, system or application is, will or could be used.

Regularly, there are social media posts where the "all-knowing," seasoned beekeeper will share his or her "word" on what should be followed in relation to a hive type. Many times, this insight is not wanted nor sought and comes off as critical and demeaning. Bullying, in any form, is ignorant, short-sighted and displays character weaknesses and faults.

Historical Development and Where We Are

There was a time beyond our days when the craft of beekeeping was excitingly new, and almost anything was accepted, tried and even patented. Every thought, idea, method or structure was detailed and submitted for a patent number then labeled and accredited as a "patented beehive." As the beekeeping ideas were tried, slowly some faded away. Many of those ideas are now lost, and the equipment that was carefully designed then are now rotted and lost for a century or more.

The victor in the battle of the 19th-century beehives was Lorenzo Langstroth's hive. It too evolved from the original designs to ultimately a simpler version. This simple design had the greatest commercial potential, and though this hive did not meet every beekeeping need then or now, other systems and styles have evolved.

Joining an Extended Family

Today there are about 800 beekeeping clubs in the U.S. According to the USDA, in December 2017 there were 3,032,060 commercial honey bee colonies in the country. Additional undocumented colonies exist in hobbyist apiaries, increasing that total significantly. An estimate on the number of beekeepers in the U.S. is quite elusive but is believed to be about two million.

Many beekeepers are private in how they manage their colonies, yet others are quite outspoken. The adage "ask ten beekeepers a question, and you'll get ten answers" is quite realistic. With the advent of social media, many have sought their beekeeping enlightenment via venues like YouTube and Facebook.

Those joining the ranks of "beekeeper" initially view others as, perhaps, their new family. Comradery is expected, but for those who choose a variant hive, sometimes a door is opened that leads the beekeeper into defense mode. This defense is a result of ostracization, ridicule and simply bullying. Instead of a welcoming hand or word of friendship, many are avoided as their choice of hive is not the standard Langstroth hive.

The World of Beekeeping Is Not All Seen through Langstroth's Lens

Variant hives have always existed, with the most common 21st-century styles being:

- Warre hive;
- Top-bar or Kenyan hive;
- Horizontal or long-box hive;
- Flow Hive;
- Mini Urban Beehive;
- Slovenian hive; and
- Barrel hive, tubular hive and others unmentioned.

Each hive system serves a specific need due to regional issues or adaptation to environment, personal limitations, honey production, bee health, growth cycles, emotional needs, medical needs, diet, age, millennial status, ease of use and, of course, beauty. Those with variant hives seeking beekeeping answers may be bombarded with responses typical of the Langstroth method. Those loyal to this 19th-century adaptation in beekeeping may be zealous in defending their hive choice and opposing others as "second-rate" or "novelties." However, it is narrow-minded to think one hive style can serve every need.

When the Flow Hive made its initial debut on social media, many traditional beekeepers were vehemently opposed to it while new beekeepers were mesmerized by it. Many traditionalists tried to explain the reasons why it was bad or foolish without ever trying it. Nevertheless, "not everything needs to be tried to expose faults" is a valid expression. Experience can replace some testing, but testing is the best route. Many reasons have been touted in opposition to this new hive system, but many beekeepers have now successfully used it. Is it a perfect system? That answer is to be decided by the ones using it.

My Belief Is Better than Your Belief

Bullying may come differently to different people. It may be harassment, talking down, mocking and using pejoratives such as "you're stupid," "how could you ever think that would work" and "I know better than you." Sadly, many who profess beekeeping knowledge base their insights on their understanding of the Langstroth method. It is like claiming to know how to ride a bike based on knowledge of driving a car. If you need information on how to ride a bike, information on the car may be completely unrelated. Sure, there are similarities, but the method in question may be entirely unique and related only to the Langstroth method.

A comment copied from social media says, "If you suggest something, and 20 experienced people immediately tell you it is a bad idea, this is not a pile-on, nor is it bullying. It is the voice of experience trying to keep you from making a mistake. If those same 20 folks spout off about a hive or frame system that they have never used and, in many cases, have never seen—that is not experience. That is contempt prior to investigation."

Basing a Belief on a Myth Is like Believing in a Fairytale

There are myths in beekeeping—beliefs that are actually false but are promoted and taught by many.

- ***Myth: A colony needs 80 pounds of honey to survive a winter.*** Smaller colonies require less stores. Carniolan bees go through winter with smaller colonies and can survive with less. Italian bees build up to large colonies that consume a great deal of resources, even in winter. Winter periods also vary in length and temperature.

- ***Myth: You can't start a colony without a queen.***
  As long as there are nurse bees with open brood laid by a mated queen with available resources of carbohydrates, protein and water, the colony can create a queen.
- ***Myth: All honey bees are aggressive.***
  Defense bees are protective. Nurse bees are non-aggressive.
- ***Myth: Plastic foundation is the only way to have perfect frames***
  Smaller frames with starter strips of thin surplus can create perfect honeycomb.
- ***Myth: Only a double-deep or equivalent hive can survive the winter***
  Small colonies have survived the winter in nature for 30 million years. Methods and hives exist that prove this false.
- ***Myth: A swarm in May is worth a load of hay, a swarm in June is worth a silver spoon, a swarm in July isn't worth a fly.***
  Swarms can always be added to an existing colony. Double queened colonies also generate faster, larger bee populations. Mini colonies can be started as late as October that survive the winter.
- ***Myth: The size of the hive is equal to how much honey can be produced.***
  Honey production is related to available forage and health of the colony. A smaller colony/hive can out-produce a larger colony/hive based on location, health and age of the queen.
- ***Myth: Only a 3-pound package or a 5-frame Nuc can build a colony that can survive the winter.***
  Colonies started by June with as little as two 6" x 6" frames of open brood with nurse bees can not only create a locally mated queen but also survive winter in any North American climate.
- ***Myth: Bees prefer a vertical hive compared to a horizontal hive.***
  Many methods/hives exist globally, showing bees adapt to their chosen hive.
- ***Myth: Drawn wax takes lots of resources for a colony to produce.***
  Wax is produced quickly when nectar is abundant. Inducing wax production can be facilitated by feeding when nectar is slow.
- ***Myth: One hive style is perfect for every application.***
  Many needs exist for having honey bees, ranging from medical apitherapy to apartment dwellers to pollination gardens to seniors or children and those with disabilities. A one-size hive does not fit all needed applications.
- ***Myth: The best hive is the Langstroth hive.***
  There are many hives, and each has pros and cons. The Langstroth hive is the best commercial hive, as it is adapted to facilitate honey production and migratory pollination. It is not, however, a great hive on which to learn. It is heavy, requires extraction, utilizes plastic foundation and can be overwhelming to a new colony and beekeeper.

Having Provable Insights Are Wonderful to Share

The standard of scientific study requires results to be verifiable through an independent source. If the results cannot be replicated, then the results are not valid. It is difficult to claim something is false without testing. Testing just once may not be adequate, as the attempt may also be flawed or skewed by other factors or may have a personal bias being reflected in the attempt.

Everyone has an opinion, and perceptions vary. Many folks rally behind teams and fill stadiums for contests of skill and strategy. Sometimes underdogs prove victorious. In beekeeping, similar contests can be seen daily on social media. Which beekeeping method is the best? That entirely depends on the needs of those who are beekeeping. Until beekeepers realize there are many reasons to possess and raise bees, hive styles will equally vary.

Learning How to Be Kind to One Another

The true teacher understands a student may learn in many ways, one of them is in failure. Failure is a powerful teaching experience. It is also vital that the teacher first learns about the subject in question. Speaking generally about beekeeping is a broad topic, whereas speaking about a specific method requires an understanding of that method. To teach requires kindness and tact.

According to Karanveer Pannu, the number-one cause of bullying is ignorance. Suggested guidelines to prevent beekeeping bullying online or otherwise include:

- Do not speak down to the person or use derogatory comments.
- If you do not have specific understanding related to the item discussed, say nothing at all.
- Seek to understand the needs of the individual.
- Suggest where information can be obtained, if known.
- Refrain from trying to redirect to a personal agenda.
- Understand many views can be right, but the missing key may be what "they" want, not you.
- You may not know everything about beekeeping, even though you are a beekeeper. This is okay.
- Sometimes helping may be just listening.
- Understand the question before you respond.
- Keep your personal feelings to yourself.
- Avoid manipulation, as it is the act of intentionally trying to redirect to your way of thinking.
- If related to the Internet, know that many may see your comments besides those in the discussion.

A recent discussion on a Facebook site was initiated by a new beekeeper wanting access to bees. Instead of specific help solving her issue, discourses followed relating to the "poor" choice of beekeeping equipment. In the end, do we "eat our own" or nurture them to succeed despite what we think is good for them?

GO BIG OR GO HOME!

by: Dr. Dewey M. Caron

We are well aware of the consolidations in the bee supply business within the last few months and the role that equity firms played in one going out of business and the other buying out a competitor to enable it to get bigger. And beekeepers are getting bigger, holding more colonies and operating in more states each year. The number of newly starting beekeepers may have peaked, but there are still a good number of "newbees" ready to start.

Our industry is not singly involved in going BIG. A recent article, Tree Fruit Companies on Sales Block, by Dan Wheat (Capital Press, January 8, 2019), started with these statements: "Several tree fruit companies in Central Washington are being sold or have gone out of business as costs and competitive pressures continue to force consolidation in the industry. … Out-of-state private equity firms are involved in some of the acquisitions." Many of the recent consolidations involve sale/consolidation of multi-generation family owned businesses.

There are plenty of reasons for this movement according to the article. Apple packer Jon Alegria, who packs Washington apples for an outside investor is quoted as saying, "More apple varieties are competing for limited grocery shelf space, and it takes $60,000 per acre to acquire and plant land versus $25,000 ten years ago. Land, labor and more organic production are all increasing costs, making the industry more capital-intensive, and that's why outside investment is coming in. … It's easily tripled in the last three to five years."

Michael Butler, a Seattle investment banker reports, "Mid-size companies running at 30 percent of packing capacity don't have the income they need to pay debt on new packing lines, and, without controlling 10 percent of industry sales, a company can't be a long-term competitor." Fourth Leaf Fruit Co., whose last known owner was a Vancouver, B.C., investment firm, was cited as an example. Its apple production, mostly exported, was about 1.35 million, 40-pound boxes of apples annually. It is now closed.

David Henze, the company's last manager is quoted as saying, "You have to be big, grow your own fruit, have the best varieties and state-of-the-art equipment. …. In the next five years there will be fewer than 10 apple packers in the state." The Washington Apple Commission currently lists 69 tree fruit companies in the state—46 of them packers only, 13 being packers and marketers and 10 are marketers only.

Well so what? What does this mean to us? Apple growers were probably the first farmers who paid beekeepers to move colonies to their growing areas. Records go back to the 1800s from Annapolis Valley in Nova Scotia, Canada (which, by the way, is still famous for its apples with 1,000 family farms still productive). And apples are still a major crop that need bee pollination.

Apples are grown commercially in 32 states. Currently, Washington is by far the largest apple-growing state in the U.S. with 58% of apple production. New York (11%) and Michigan (8%) round out the top three. Remaining top 10 states, Pennsylvania, California, Virginia, North Carolina, Oregon, Ohio and Idaho, all have 5% or less of apple production. In Oregon surveys of annual pollination income in the Pacific Northwest (Washington, Oregon and Idaho), apples and related fruit represent about one-third of pollination income for Tri-State beekeepers (estimate excludes almond rental, *American Bee Journal* Volume 157, September 2017).

The U.S. apple industry estimates there are 7,500 apple producers who, collectively, grow 240 million bushels of apples on average each year on 322,000 total acres of land. Annual value is estimated at $4 billion. China leads the U.S., followed by Poland, in world apple production.

World Atlas says, "Apples are a deciduous variety of fruits which grow on trees in mostly temperate regions around the world. The apple is one of the most popular and healthy fruits. The apple fruit was originated from Central Asia, and, with time, it was spread all over the world. The apple has many health benefits as it contains vitamins and minerals."

As my native Vermonters were fond of saying, "An apple a day keeps the doctor away." Today, apples are credited with helping avoid diarrhea and constipation and with providing human diets resistance towards such diseases as Parkinson's, cataracts, Alzheimer's, gallstones and even certain cancers.

As consolidations continue in basic agricultural industries, as reported here for apples, it moves the beekeeper one or two layers away from having friends who contract for pollination services or beekeeper products. Fewer multiple-generation growers means having to deal with absentee owners or managers who might have to check with the "head office" before using our bees. Increasingly, managers hire crop consultants, adding yet another layer to what in the past has often been a handshake agreement between grower and beekeeper to "bring in the bees." And, fewer growers means the need for more colonies by an outfit and less competition which could dampen rental price competition.

Change is inevitable. We must be good businesspersons to survive. Although honey production was down last year in the U.S., survival means not so much to produce or provide services but rather to negotiate a fair return for our products and services. Consolidation and "GO BIG or GO HOME" appears to be the words of the year in the apple industry, offering both a challenge and an opportunity in our past business practices.

Related Story

Apple orchards surrounded by agricultural lands are visited by a less diverse collection of bee species than orchards surrounded by natural habitats, and production improves in such orchards that have a broader selection of species visiting apple blossoms. "Orchards that have bee communities that are more closely related to each other did worse in terms of their fruit production, and the communities that are more broad across the phylogeny did much better," said Dr. Heather Grab, PhD, a postdoctoral researcher at Cornell University. Study published in *Science*. 2019. DOI: 10.1126/science.aat6016.

THE HONOR OF BEING A MENTOR

by: Albert Chubak

A teacher's relationship with a student remains for a lifetime. An English teacher in high school, seeing a low-level reading desire in a student, gifted him a non-typical book, *Reilly's Luck* by Louis Lamour. The condition was once the book was read it was to be returned. This male student hid the book and took it to his car, and there it stayed. Later that night, the novel was rediscovered and was returned the next day to the insightful teacher. To his surprise, another book, again by the same author, was ready to be handed back. The next day, it was returned to only find yet another book ready to encourage the thrill of reading. Not long after, the desire to have more and quicker intervals caused the young man to purchase copies to quench the need to experience more of this imaginary western world. Since that high school day, this young man has loved reading!

This same example of how to teach new beekeepers is similar. No matter how many stories by Chaucer, Shakespeare and even Dante's voyage to hell couldn't initially entice a single page to be lifted. Many want learning at little-to-no expense or invested time. Beekeeping should be fun—it is, initially, a hobby. Only once the student gains the love of the craft does the thirst for more independent learning occur. How does the mentor encourage or stimulate such a love? It begins with an interest in bees and a desire to know what makes the bug tick. Classes can be attended, but, as the English class experience noted earlier, a class setting may not challenge or stimulate the student.

MENTORS

Obviously, mentors need to possess experience and an ability to teach with patience. If the mentor raises the bees for the student, then the teacher becomes an "enabler," and little is gained for the student. Lessons require trial and error, mistakes and life-altering wipeouts. Does the teacher encourage another ride or a new vehicle? Teachers teach best with an outline and goal of what is needed to learn. An animal can be skinned many ways and so lessons can vary. Instead of entire books being read, perhaps a page or two or a Google search with a specific question will suffice.

Beehives vary as do needs and personal limitations. A frame that can be removed and inspected is required by the USDA. Most begin with a package of bees with a caged, newly mated queen. This is like starting a garden with greenhouse-germinated seedlings. The plant is relocated at the whim of the gardener. Once the package of bees is installed and the queen is released, the journey of expansion and learning commence. Once the bees are growing, now the lessons appear. What, when, how, why, ahh…do I or should I, can I, but then what if? The story plays on, and sadly, failure occurs despite all good intentions.

Understand that a bee colony is a world in itself. A queen exists with attendants, nursery and caregivers known as nurse bees, custodians and engineers, cooks, wax producers, dock workers, disaster clean-up and restoration personnel, inventory control with supply trains of food, water and medicinal supplies, some are undertakers, marines, scouts with messages and others are support staff. Each active colony has drone immigrants from the surrounding area to support their own male fraternity. The hive is also populated with thousands of support organisms. These can live symbiotically within the bee and inside the hive. Bees create a hive envelope on the inside walls of their hive—it is populated with numerous microorganisms. The beekeeper is the guardian to this developing world and can assist but needs to learn what helps and what does not.

Look for a mentor who:

- Has successfully overwintered a colony;
- Is someone you like to be around and can talk with;
- Is accessible in some way—in person, on the phone or via messages, email or telepathically if that works;
- Preferably uses or understands the hive style you chose;
- Does not do everything for you;
- Has colonies you can see and try; and
- Has good communication skills.

WHAT IS THE GOAL OR OBJECTIVE OF THE NEW BEEKEEPER?

Many get into beekeeping as they want honey. There are those who are looking for a hobby, friends, social support group, pollination gardens, therapy, gardeners, seeking something new and on and on. Many want to love bees, but blind love can result in tender lumps from the lovely ladies. All things require experience and learning even if it is just for "fun." Understanding that a beehive is first an incubator and later a honey production plant is key. If key available resources (water, pollen, nectar and propolis ingredients) exist, then the colony can grow. Growth can be maintained when invasive threats are minimized by the beekeeper. Then, and only then, is surplus honey possible.

Initially, honey appears to be the focus of many to generate income from beekeeping. There are many revenue avenues to explore. A walk through a beekeeping convention will show additional income streams.

Some products are directly related to the bees inside the hive:

- Liquid honey, creamed, comb, blended, enhanced, natural, medicinal, varietal flavors, location-based varieties, award quality, even low-quality honey has market appeal in bakeries and waffle shops;
- Granular pollen, pollen paste, bee bread, pollen-enriched products that are blended;
- Propolis, tinctures, wood coatings;
- Royal jelly blended with other items; and
- Beeswax, candles, woodworking pastes, lip balms, butcherblock coating and hand creams.

Items related to hive making:

- Woodenware for Langstroth, top-bar, Warre, mini hives, observation, Flow Hives, etc.;
- Nuc equipment;
- Landing boards;
- Candy boards;
- Entrance reducers;
- Pollen traps;
- Propolis screens;
- Hive stands;
- Frames in varies sizes and styles;
- Repair pieces;
- Foundation in various sizes, types and products;
- Screened bottom boards;
- Small hive beetle traps;
- Queen cages;
- One-way traps;
- Robber screens;
- Various feeders;
- English garden lids, telescoping covers, inner covers; and
- Hardware to secure boxes together and so on.

There are many ways to generate income with bees—it is not all honey. Add clothing, molds, photos, art, research, articles, transportation, pollination, nutrients, educational lessons and projects, organizations, awards, threat maintenance and control and on and on. This all begins with bees inside the hive.

MENTORING IS AN ART

Years ago, an insightful mentor guided this "newbee" and, to this day, doesn't know how important he was. He inadvertently taught and instilled a desire to question what is done and why. He clearly loved and cursed this sometimes-hurtful, industrious insect—the honey bee. I now, too, share my love with others mostly because of him.

Commercial Beekeeper SPOTLIGHT

BEST HONEY FARM

In 1967, Oren Best started keeping bees in junior high school as a 4-H project, and that developed into an FFA project. At the time, Michigan State University's Dr. Bert Martin came out with research stating pollination by honey bees greatly increased the yield of blueberries per acre. Oren was approached by several blueberry growers to put his bees to work in their fields (his bees were visible from the road). He became a pollinator.

When he was 16 years old, Oren had 50 beehives and wrangled his friends into helping him move them by hand. When he graduated high school in 1972, he attended Michigan State University's Ag Tech program where Dr. Martin created a beekeeping class just for Oren. In 1976, he married Rosie. On their honeymoon, they went to Mayhew, Mississippi, and purchased packages.

DESCRIBE WHAT YOUR BUSINESS CURRENTLY DOES IN THE INDUSTRY.

We just recently dropped our Michigan pollination of apples, blueberries, cherries and pickles, mostly due to insecticide pressure. We still pollinate almonds and produce honey, wax and most of our own queens.

WHAT CHANGES HAVE YOU MADE TO ADAPT YOUR BUSINESS TO THE CURRENT INDUSTRY CLIMATE?

Due to the tracheal mite infestation in the late 1980s, we started taking our bees to the South for the winter. The tracheal mite made it difficult to overwinter bees in Michigan. We became migratory beekeepers, so we converted all our equipment to uniform migratory pallets. Oren also became a truck driver and started spending his winters in the South. We also bought out numerous commercial beekeepers who could no longer keep up with the mites.

We are in partnership with our son Dennie and his wife Cana. Our grandson, Zeke Cappon, also works with us. All our family members have participated on the farm at one time or another.

WHAT ARE YOUR MAJOR CONCERNS ABOUT THE BEEKEEPING INDUSTRY AND HOW THEY WILL AFFECT YOUR BUSINESS?

Our first concern is the dwindling forage areas for bees. We are also concerned about the effect of pesticides on bees. It is also hard getting labor, more so than it has ever been. The administration of mite prevention has also gotten very expensive. It doesn't matter if you have one hive or if you have 10,000 hives—each hive has to be worked regularly.

ARE YOU EXPERIENCING HIGHER THAN NORMAL ANNUAL LOSSES? IF SO, WHAT ARE YOU DOING TO PREVENT FUTURE LOSSES AND HOW ARE YOU MAKING UP FOR THOSE LOSSES?

We are experiencing much higher than normal annual losses, compared to the 1970s when 5% was considered high. We are increasing mite control techniques and raising our own queens—selecting stock for mite resistance.

WHAT IS THE STRANGEST THING YOU'VE EVER SEEN IN A BEE YARD?

The strangest thing we have ever seen was a bee stuck on a thorn, right in the top of its head. Do bees have a blind spot? Several times we have seen newborn fawns lying in bee yards. We did have the cops called on us once, as someone thought they had a UFO in their field at night.

WHAT IS THE MOST PRODUCTIVE CROP OR FLOWER THAT YOU'VE SEEN YOUR BEES WORK?

The most consistent crop we produce is from Spotted Knap Weed (Star Thistle). It is now listed as a non-native invasive species. Our government is aggressively eradicating it.

WHAT IS YOUR FAVORITE TYPE OF HONEY?

My favorite type of honey is Basswood. A predominate Basswood will knock your socks off!

WITHOUT MENTIONING NAMES, WHAT IS THE BEST AND WORST BEEKEEPING ADVICE YOU'VE EVER RECEIVED?

A poor beekeeper will make a decent living in a good area. But a good beekeeper will go broke trying to keep bees in a poor area.

Best Advice: Don't store all your supers in one barn (the beekeeper giving this advice had a fire in the 1940s).

Worst Advice: Let the bees take care of themselves.

WHAT IS YOUR FAVORITE BEEKEEPING TASK?

My favorite beekeeping task is checking new queens after they are mated. I love to see the honey come in but hate to extract it. I'd rather be out in the bee yard working the bees.

WHAT BEEKEEPING TOOL OR PIECE OF EQUIPMENT DO YOU ENJOY WORKING WITH THE MOST?

My favorite piece of beekeeping equipment is my airplane. I like to check for new areas, locations of other beekeepers and the areas around my existing yards.

You also don't appreciate the value of a forklift (Bobcat, Swinger or Hummerbee) until you must move hundreds of beehives by hand.

WHAT DO YOU THINK THE BEEKEEPING INDUSTRY WILL LOOK LIKE IN THE FUTURE?

There are a lot of backyard beekeepers springing up that may step into the shoes of commercial beekeepers. The income prices of beekeeping (pollination, honey) are going to need to increase.

WHAT IS THE MOST IMPORTANT PIECE OF ADVICE YOU CAN GIVE TO A FUTURE COMMERCIAL BEEKEEPER?

The best piece of advice I think I could give a future beekeeper is that they need a good solid plan and should have a longtime beekeeper look it over. Oren once told a young beekeeper that he needed a spouse with a good job and health insurance.

WHY ARE YOU A MEMBER OF THE ABF?

We have been members of the ABF for over 30 years. We have attended numerous ABF conventions and have enjoyed attending the seminars, as well as visiting with the other beekeepers. It seems to be a springboard for the beekeeping year.

The ABF keeps us informed of research and changes that help beekeepers. It has also helped pass legislation that has aided us in the success of our business.

QUEEN Committee Report

by: Anna Kettlewell, *American Honey Queen Program Chair*

The American Honey Queen Program capped off the 60th anniversary of this amazing ABF program during the 2019 ABF Conference & Tradeshow in Myrtle Beach. We were honored by the attendance of 20 former American Honey Queens and Princesses spanning from 1969 to 2018. It was amazing to meet the women who served in decades past and hear their remarkable stories. Most incredible was seeing how much the program has positively influenced these women's lives and how their promotional work for ABF did not stop upon completion of a year of service to the ABF. Many maintain memberships in our organization, keep up with the happenings of the organization and today's queens and continue to promote the industry through their lines of work or volunteer efforts.

American Honey Queens and Princess from the 1960s through present day reunited in Myrtle Beach! Thank you for sharing your incredible stories and your continued promotion of honey throughout the decades!

On behalf of the American Honey Queen Program Committee, I thank the members of the American Honey Queen Program's alumni association, which coordinated the homecoming of our former queens. Based on the positive experience, I look forward to seeing more and more of our former representatives at conventions each year. We loved hearing your stories, seeing your photos and scrapbooks and learning about your lives since ABF travel! Are you in touch with a former American Honey Queen looking to reunite with the ABF? Please put her in touch with me or have her contact our alumni association at *beta.epsilon.epsilon@gmail.com*. Photos from the convention reunion will be available through this group and on the American Honey Queen Program's Facebook page throughout the year.

I also extend our thanks to our 2018 American Honey Queen and Princess, Kayla Fusselman and Jenny Gross, for their work on behalf of the American Beekeeping Federation. During the convention, Kayla and Jenny reported on their work, promoting in 25 unique states, nine on multiple occasions, over 42 major promotional trips and 279 combined promotional days. This does not include the countless hours of behind-the-scenes work they conducted on social media, correspondence and reporting. Our representatives had extensive media coverage for the industry this year, valued at over $300,000. Thank you, Kayla and Jenny, for positively representing our products and industry in 2018. We wish you the best in your futures and look forward to seeing how you continue to promote the industry like our many alumni!

We thank all our participants in the Beekeeping Brainbuster! Pictured are Jim Belli (Illinois), Desirée Gracie (Massachusetts Honey Queen) and Darrel Rufer (Minnesota).

We enter the 61st year of ABF promotions with American Honey Queen Hannah Sjostrom of Wisconsin and Princess Nicole Medina of New Jersey! Each of these women brings a unique perspective and skillset to their new positions, and we look forward to seeing these skills in action. The Queen Committee conducted their media, presentation and business training in late January and early February, and we are excited about the 2019 promotional year. I thank the 14 volunteers who took time out of their busy schedules to provide expertise and tutelage to our new representatives. Your skills and talents will aid tremendously in 2019 promotions!

We are eager to get the 2019 promotional year started! Recipe brochures are hot off the press and available for order—contact Tami Kuehl at (308) 745-0154 or *cbinvoices@cooknbeals.com*. Copies of this great resource come to you for free with a promotional visit from the queen or princess. Thank you to everyone who has submitted dates and contacted me about promotion possibilities already. Keep the requests coming!

Queen Hannah and Princess Nicole are eager to visit as many states as they can and promote in as many venues as they can this year. We continue to seek visits to Alabama, Idaho, Utah and Vermont, where queens and princesses have not been in over two decades. You may contact me at *honeyqueen99@hotmail.com* or (414) 545-5514 to discuss promotion opportunities and trip requests. Hannah, Nicole and the entire American Honey Queen Program Committee look forward to working with you this year!

Former American Honey Queens and Princesses were reintroduced to the ABF during the banquet. We thank them all for reconnecting with the ABF and for their continued support of the ABF and the American Honey Queen Program!

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AMERICAN HONEY QUEEN REPORT

Hannah Sjostrom

My name is Hannah Sjostrom, and I was recently selected as the 2019 American Honey Queen! I am ecstatic to be granted this opportunity and can't wait until I can start buzzing across the states! During the American Beekeeping Federation convention, I had the amazing opportunity to meet many of you and get to know more individuals involved in this wonderful industry. I thank all of you for the generosity and kindness that was extended to me in Myrtle Beach.

For those of you who were unable to attend the convention, let me introduce myself. I am the daughter of Douglas and Kim Sjostrom of Maiden Rock, Wisconsin. Maiden Rock is a small town of 100 people. Located an hour east of Minneapolis and St. Paul, Minnesota, on the bluffs overlooking the Mississippi River, is the five-generation family farm I call home. I am 20 years old and currently a junior at the University of Wisconsin-Eau Claire working toward a nursing degree. My goal is to spend my nursing career in the oncology department. Prior to my college career, I spent 10 years in 4-H, where I showed items in almost every category at the fair! A few of my favorite categories to show in were goats, chickens, agility and obedience with my dog and various honey and beeswax products. A few of my other hobbies include hunting, fishing, attending church and anything that involves the outdoors or helping others.

My background in beekeeping started when I was born. I belong to the third generation of beekeepers in my family. I follow in the footsteps of my father and my grandfather, Edwin Sjostrom, who both have been longtime members of the American Beekeeping Federation as well as my mother and my grandmother who recently passed, Merle Sjostrom. The Wisconsin Honey Producers Association (WHPA) has always been an important part in our beekeeping endeavors. I have attended almost every fall convention since I was born, and, in 1980, my aunt, Laurie (Sjostrom) Hilden, represented the WHPA as the 1980 Wisconsin Honey Queen. My grandpa and dad started beekeeping as a 4-H project for my father when he was 10 years old. That was during the time when they got their first packages of bees in the mail from the Sears and Roebuck magazine!

Since then, we have expanded from those two hives and maintain around 200 hives. I grew up working with our bees alongside my family, and my goal is to take over our family business and continue to expand the number of colonies we manage.

Growing up, my family also made sure to include honey in lots of recipes. One of my favorite recipes is a Honey Chocolate Sauce that my grandma, Merle Sjostrom, would only make for special occasions. Every Christmas and on our birthdays, she would always make this recipe for us to put over the homemade ice cream we all made together. I'm so pleased to share it with you to enjoy! Beekeeping is at the center of many of my wonderful family memories, as I'm sure it is for you, too.

I extend my deepest gratitude to all of you for this amazing opportunity to serve as the American Honey Queen this year. I am extremely excited to promote the honey industry across America and cannot wait to meet many of you! To schedule a promotional event with me or Princess Nicole, contact Anna Kettlewell at (414) 545-5514 or *honeyqueen99@hotmail.com.*

GRANDMA MERLE SJOSTROM'S HONEY CHOCOLATE SAUCE

- 1 cup semisweet chocolate chips
- ½ cup honey
- 2 tablespoons butter
- ½ teaspoon salt
- ¾ cup evaporated milk
- 1 tablespoon vanilla extract

In a heavy saucepan, combine the semisweet chocolate chips, honey, butter and salt. Stir over low heat until the chips are melted; stir until smooth. Gradually stir in evaporated milk and vanilla. Heat through; about 2 minutes. Do not boil. Yields 1 2/3 cups of sauce.

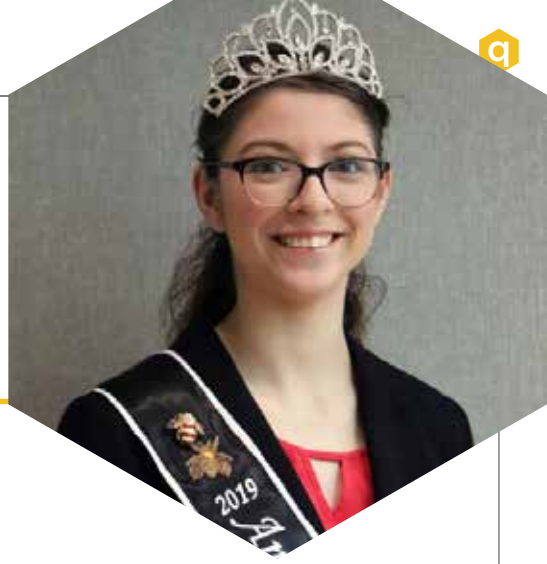
Queen Hannah teaches South Carolina students about the different jobs of the bees in the hive during the Kids and Bees program.

Queen Hannah introduces herself during the general session of the ABF convention.

We are excited to teach and speak at a variety of promotions and would love to come to your state. If you are interested in inviting Princess Nicole or me to your event, please contact Anna Kettlewell at (414) 545-5514 or *honeyqueen99@hotmail.com*. Have a sweet day!

AMERICAN HONEY PRINCESS REPORT

Nicole Medina



My name is Nicole Medina, and I am your 2019 American Honey Princess. I am the youngest of five children. While my family is big, we grew up in a rather small home, meaning that my siblings and I spent the majority of our time exploring the outdoors! Most people hear "New Jersey" and picture the bustling cities, crazy drivers or, of course, the Jersey Shore. My New Jersey is nothing like that. I grew up in Green Township in Northwest New Jersey, a small town with little farms scattered all over. We have one big farm stand called Tranquility Farms, and it is the area's biggest attraction. Here, my sister works as a manager, and this is also where my family has our bees.

The summer of my freshman year of high school was when my father found 100 abandoned beehives. Curious to know why our local honey was no longer being sold, my father went to the farmer and found out that the beekeeper had disappeared. After further investigation, we found the hives were infested with American Foulbrood. Doing as the state apiarist instructed, we burned all the hives. Not knowing what to do next, we turned to our local beekeeper group, the Sussex County Beekeepers Association. This group was welcoming and eager to help us out. To return the favor, we started volunteering during the Sussex County Farm and Horse Show, also known as the New Jersey State Fair.

My beekeeping and honey queen experience began when I was 13 years old and my family hosted 2014 American Honey Princess Elena Hoffman. Inspired by Princess Elena, I decided I wanted to try beekeeping. My father is the beekeeper in my family and was very excited when one of his kids showed interest in bees. During one of my first visits to the bee yard, we found a swarm. My father asked me to help him catch it by simply holding a box to catch the bees. When he shook the swarm, he miscalculated, and the bees landed on the hood of my sweater instead of inside the box! Somehow, keeping a level head, I removed my sweater and shook the bees into the box. Realizing that honey bees were gentle, I decided to continue pursuing my interest!

The next year, I volunteered during the Sussex County Farm and Horse Show with a new wealth of knowledge. This paid off when I helped 2015 American Honey Queen Gabrielle Hemesath and my father rescue a swarm from a carnival ride! In 2016, I was named the Sussex County Honey Queen. Several former queens encouraged me to strive to become the New Jersey Honey Queen, even though our state program had been dormant for nearly a decade. In 2018, my state reestablished its honey queen program, and I was crowned the New Jersey Honey Queen! I am grateful for each former American Honey Queen and Princess I worked with in the past. From each, I learned something new that I used as the New Jersey Honey Queen.

With each event I attended last year, I never knew what to expect, but I was never let down. There was not a single low moment, and it was an experience that is immeasurable. I am incredibly thankful to the past royalty who have inspired me to push on and to all the beekeepers in New Jersey who believed in me, particularly to the Sussex County beekeepers for watching me grow and supporting me every step of the way.

I look forward to making each of you proud in my year as the 2019 American Honey Princess. Most importantly, I thank the American Beekeeping Federation for allowing me such an honor. I look forward to the year ahead as one of your spokespersons and hope to inspire others as your program has inspired me.

I am looking forward to promotions in Wisconsin and Florida in the upcoming months and to meeting and working with many of you throughout the year. To schedule an appearance from me or Queen Hannah, please contact Anna Kettlewell at (414) 545-5514 or *honeyqueen99@hotmail.com.*

Princess Nicole explains the different parts of a bee under a microscope during the Kids and Bees program in South Carolina.

Princess Nicole presents to the ABF Auxiliary during the ABF convention.

Princess Nicole displays award-winning beeswax during the American Honey Show auction.

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