

Williamson County Area Beekeepers Association

NEXT MEETING:
TUESDAY November 26th
7:00-9:00 Program
Georgetown Public Library

Meeting Dates

Meetings are the 4th
Tuesday of each month.

2019 Club Officers:

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Lisa Hoekstra

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Ginny Stubblefield
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Tuesday November 26th
No meeting in December
Tuesday January 28th
Tuesday February 25th

November Program

7:00 pm Presentations from our 2019 Scholarship Recipients



Picture by Bryan Orms

Research Pearls

They say love is blind, but if you're a queen honeybee it could mean true loss of sight.

An article from Phil Ainslie, President

New research finds male honeybees inject toxins during sex that cause temporary blindness. All sexual activity occurs during a brief early period in a honeybee's life, during which males die and queens can live for many years without ever mating again.

UC Riverside's Boris Baer, a professor of entomology, said males develop vision-impairing toxins to maximize the one fleeting opportunity they may ever get to father offspring.

"The male bees want to ensure their genes are among those that get passed on by discouraging the queen from mating with additional males," said Baer, senior author of the study that discovered these blinding findings published today in the journal *eLife*. "She can't fly if she can't see properly."

The toxins identified by the team are proteins contained in male bees' seminal fluid, which is a substance that helps maintain sperm. Earlier work by Baer's team also discovered honeybee seminal fluid toxins that kill the sperm of rivals. All honeybees make these proteins, though some may make more of it than others.

Roughly 10 years ago, Baer and his international team began analyzing which proteins could be found in honeybees' fluids.

"We found at least 300 of these 'James Bonds,' little secret agents with specific missions," he said.

The team was not entirely surprised to find a protein that attacks the sperm of other males, as this behavior can be found in other insects. But they were surprised to find the protein that impacts genes responsible for vision in the queen's brains.

To test whether the protein had this effect, Baer's team presented inseminated queens with a flickering light, and measured her response to it via tiny electrodes in her brain. The vision and corresponding flight-impairing effects kick in within hours, but Baer notes that it is likely reversible in the long term because queens do tend to fly successfully later in life when they establish new colonies.

Studying the seminal fluid proteins required an interdisciplinary team of entomologists, biologists, biochemists, and more to identify them and examine their effects on the queens.

Age matters: Young larvae boost pollen foraging in honey bees

As larvae age, the diet they're fed changes. So too do the pheromone signals they emit. In a paper published in the advanced online edition of the journal *Animal Behaviour*, ASU alumna Kirsten Traynor, a research associate with the University of Maryland, Robert E. Page Jr., ASU university provost and professor in the School of Life Sciences, and Yves Le Conte, a researcher with Institut National de la Recherche Agronomique, show that adult bees foraging for food use the changing pheromone signals of the young to adjust what nutritional resources they collect.

Honeybees were found to return to the hive with one and

one half times more protein-rich pollen, when exposed to young larvae as compared to old larvae. The researchers also discovered that significantly fewer foragers return home empty -- a finding that Traynor believes could have an impact in agricultural enterprises.

Bees in the city

Bumblebees and honeybees are two species of bees that form colonies. The colonies of bumblebees are smaller compared to their honeybee cousins, who's hives can house tens of thousands of individuals. But both of these colonies have complicated compositions and structures that help them thrive.

For bumblebees, recent studies showed that colonies located in urban areas may actually be more successful than nests located in agricultural areas. Reporting in the journal *Proceedings of the Royal Society B*, scientists found that city bumblebee colonies produced more individuals compared to their country counterparts. Biologist Ash Samuelson, who is an author on that study, talks about why urban environments might be a haven for bumblebees.

Deformed wing virus genetic diversity in US honey bees complicates search for remedies

Deformed Wing Virus (DWV), one of the leading causes of honey bee colony losses, is much more genetically diverse in the United States than previously thought, according to a study published by Agricultural Research Service (ARS) scientists in *PLoS Biology*.

The discovery of these high levels of genetic diversity indicates the job of developing new treatments or a vaccine targeting DWV is going to be much harder than scientists previously thought.

With a divergent virus population such as in the United States DWV, there are likely to be variants already present in the population with the potential to not be affected by any genetic sequence-specific treatments. What was a minor fraction of the virus population could then quickly become predominant once the targeted variants are eliminated.

Fish and Bees "Talk" with Help from Robot Translators

Robots integrated into groups of zebrafish and of one-day-old honey bees allow the two species to influence each other's behavior.

A robot interacting with young honey bees in Graz, Austria, exchanged information with a robot swimming with zebrafish in Lausanne, Switzerland, and the robots' communication influenced the behavior of each animal group, according to a study published in *Science Robotics* today (March 20).

“It’s the first time that people are using this kind of technology to have two different species communicate with each other,” says Simon Garnier, a complex systems biologist at New Jersey Institute of Technology who did not participate in the study. “It’s a proof of concept that you can have robots mediate interactions between distant groups.” He adds, however, that the specific applications of such a setup remain to be seen.

As robotics technology has advanced, biologists have sought to harness it, building robots that look and behave like animals. This has allowed researchers to control one side of social interactions in studies of animal behavior. Robots that successfully integrate into animal populations also provide scientists with a means to influence the groups’ behavior.

Honeybees infect wild bumblebees through shared flowers

University of Vermont

Summary:

Viruses in managed honeybees are spilling over to wild bumblebee populations through the shared use of flowers, a first-of-its-kind study reveals. This research suggests commercial apiaries may need to be kept away from areas where there are vulnerable native pollinator species, like the endangered rusty patched bumblebee.

Honey bees can help monitor pollution in cities

University of British Columbia March 11, 2019

Summary:

Honey from urban bees can tell us how clean a city is and help pinpoint the sources of environmental pollutants such as lead, new research has found.

Honey is able to provide such localized “snapshots” of the environment because honey bees typically forage for pollen and nectar within a two- to three-kilometer radius of their hives.

“We now have four years of consistent data from Metro Vancouver, which provides a present-day baseline that will allow us to monitor even tiny changes in our environment very efficiently,” said Dominique Weis, senior author and director of the institute.



Williamson County Area Beekeeping Association Meeting Summary - October 22nd, 2019 meeting.

The meeting was opened by Phil Ainslie, President, at 7 pm.

Presidents Announcements

1. A review of the constitution by the board members will be undertaken and suggested changes, should there be any, will be presented at the next meeting.
2. Don't forget, “Bee Buzz” will be at Rudy's BBQ, at the IH35 location, in Round Rock from 2 pm -4pm. This is an informal, come and go, meeting to talk about any aspect of bees that you please. The meetings will be on the Sunday following the monthly WCABA meeting.
3. The WCABA is still in need of mentors to support our members. You can get more information from the WCABA website under “Mentor/Mentee program”.
4. Michael McPherran has numerous books for sale, and a BJ Sherriff SS66 beekeepers suit for sale, new at \$125. Michael will have the books available to look at at the back of the room.
5. The advertised program of “winterizing your beehive” unfortunately will not be provided at this meeting.

Beekeeping 101/102 - Products of the Hive by Dodie Stillman and Barbi Rose.

Information was provided by Dodie on the production of wax followed by a great hands on experience making various items from wax including food wraps, walnut candles, seals and small wax bowls.

Door Prizes. - Several lucky winners

The meeting was not officially closed

The next meeting will be held on Tuesday November 26th from 7 pm - 9 pm at the Georgetown Library.

Gillian Mattinson.
Secretary, W.C.A.B.A.

Scholarship Recipients Hit Record Sales at Hill Country Fair

The Recipients from the 2019 Ed Wolfe – Robert Bost Memorial Scholarship Program hit a record high in honey sales at the 23rd Annual Hill Country Arts & Craft Fair held on November 2-3rd in Sun City, Texas. The honey sales help support the program in the coming year and offer the youngsters an opportunity to practice the art of selling their product and talking to the fair goers about bees and their experiences in beekeeping. This year's recipients are Quinn Bramwell of Cedar Park, Bailey and Reece Brett from Georgetown, and Eli Crozier from Florence, Texas.

Jimmie Oakley, Scholarship Program Chair, set up the Honey Booth on Friday afternoon at Sun City so everything was ready to go on Saturday morning when the Fair opened. The Honey Booth contained the table display of various size containers of honey, the banner identifying the program, educational posters showing the bee's life cycle, and an observation hive with live bees that always attracts a lot of attention from the public.

On Saturday morning the booth was opened by volunteer Sterling Kinghorn and his mother Julie of Round Rock, and although a cold morning to start out, honey sales warmed everything up quickly. Quinn Bramwell and his dad Aaron worked the booth through the noon hour with brisk business that continues to grow revenues and shrink inventory. There was growing interest in the bees as several visitor's had questions about the observation hive. The early afternoon was filled by Bailey Brett, her brother Reece, and their dad Shannon. All took their turn at selling honey and educating the public. Late afternoon to closing Eli Crozier and his dad Joshua manned the booth and ended a very productive and profitable day for the Honey Booth. Sales were so good that Mr. Oakley had to go back to the Farm and bottle more honey to replenish depleted stocks of 1 & 2 #'ers.

On Sunday morning Dodie Stillman and her husband agreed to be present to open the Honey Booth for a shorter and warmer day. Sales took off again with the honey bears being the darling of the day. Eli Crozier had so much fun on Saturday that he talked his dad into bringing him back to another shift on Sunday and stayed through the breakdown and load up part of the schedule - thanks!

With selling honey, taking money, explaining about the bees and showing off the bees in the observation hive the youngsters put to use the knowledge and experience they have gained working with their bees this year. It appears a good time was had by all.



The Honey Booth location at the Fair



Aaron Bramwell answer youngster's Bee question



Dodie Stillman and her husband opened up the booth on Sunday

Worker Bees at the Hill Country Fair...



Sterling & Julie Kinghorn bundled up ready to sell



Quinn Bramwell talks to customer with backup from Arron



Bailey closes the deal on another honey sale as Shannon observes



Eli Crozier and Joshua, his Dad, pull the last shift and wrap things up

In Conclusion...

Gross sales for honey on Saturday was a whopping \$1,439.00, with Sunday receipts of \$389.00, for a total of \$1,828.00 for the two-day Fair. After paying for the wholesale honey purchased from Bost Apiaries, the net income, including cash donations, was \$903.00.

Thanks to all who worked in the booth or otherwise helped to make the event successful!

Jimmie Oakley – Scholarship Chair

More Hill County Fair Pictures...



The Brett's, Shannon, Bailey, & Reece



The Bramwell's, Quinn and Aaron.



Eli Crozier awaits the next customer while Joshua exchanges info with a fair goer

Winter Beekeeping

Reprint from Laura Colburn, (former) WCABA Program Chair

How to Prepare Your Hives for Winter

As the temperatures finally begin to dip, there are a few tasks you should do for your hives to make sure they're prepared for overwintering: check for mites and treat if necessary; ensure hives are queenright; remove queen excluders and reduce entrances; make sure hives have enough food.

It's crucial to send your hives into winter with very low mite counts. Hopefully you've done your fall sample, but if not, on the next warm sunny day, take the time to do a sugar roll or other sampling method. If the results show mites greater than 2%, treat as soon as possible.

While you're checking your hives for mites, confirm all your hives are queenright. You don't necessarily need to see the queen, but you do need to see evidence she is still present and laying: eggs and very young larva. If your hive has lost its queen, it's too late for them to raise a new one before winter. Your options are to find a supplier nearby or to merge the queenless hive with a queenright hive.

As winter progresses, the cluster will slowly move up. If you forgot to remove the queen excluder, your queen will be left down in the cold. Be sure to remove queen excluders before the cold weather arrives. Speaking of colder weather, the bees are buzzing to keep the cluster warm. As the warm air escapes and rises, it collects on the inner cover, which can then lead to cold condensation dripping back down, chilling and even killing bees. You can provide upper ventilation by simply placing a popsicle stick under the inner cover. There are other methods, such as upper entrances or protected holes drilled into the top box. All are effective at providing much-needed ventilation.

Outside the hive, reduce the entrance to its smallest opening to prevent cold winter winds from whipping in the entrance. You may also need a mouse guard. This is an addition to the entrance that allows bees to come and go when the weather permits, but prevents mice from squeezing in and making a mess of your combs. Above all else, you need to ensure your bees have enough to eat for the winter. They need at least one medium full of honey and two or three frames of pollen. These resources are not always on a single frame, so take note of what's on the frames of brood. Often there will be a ring of pollen around the brood cells, surrounded by a ring of honey. The frames with brood should be centered in the brood box with a couple of frames of honey to either side. The majority of the honey needs to be above the brood. The hive usually takes care of this arrangement. If your hive doesn't have those resources, you'll need to plan on feeding all winter. Feed a liquid 2:1 syrup when the temps are above freezing and a solid fondant patty if temps fall below freezing for more than a few hours. A pollen patty may be necessary, but not until closer to the end of winter. It's also not too late to plant perennials for your bees. Trees, shrubs, and even some herbs will do well over winter and establish strong roots to survive the harsh summer heat and drought.

Understanding the Winter Cluster

L.L. Langstroth wrote, "If the colonies are strong in numbers and stores, have upward ventilation, easy communication from comb to comb, and water when needed, and the hive entrances are sheltered from piercing winds, they have all the conditions essential for wintering successfully." From early spring through summer and fall, the bees in your hive are working cooperatively to raise brood, clean the hive, control the temperature in the hive, convert nectar into honey, store pollen for brood rearing, and of course, caring for the queen. The hive is a busy place most of the year. But that activity changes significantly when the temperatures fall in late fall. As winter approaches a new crop of bees are raised to be fatter in order to create and retain heat and to survive the winter as brood rearing slows or stops. Unlike the short-lived foragers of summer, these winter bees may live three months or longer.

When outside temperatures fall below 50 degrees, the bees draw closer together, forming a cluster towards the bottom-center of the hive structure between frames. A hive with a healthy population will have enough bees to cover the surface of those center frames, even nestling into empty cells for the closest contact. The bees towards the center are the warmest, and they are able to care for the queen and any brood that hasn't yet emerged. They are able to disconnect the muscles that control wing beat and vibrate those muscles to heat the cluster. Bees towards the outer edges of the cluster help retain the heat with the tiny hairs covering their bodies. Clustered bees in contact with honey can pass it through the rest of the cluster to where it's most needed, just as they pass nectar during the warmer months: mouth to mouth.

It's important to note they are not heating the hive structure, but are rather heating the cluster of bees, although the heat they create will of course eventually escape and rise. This is why the cluster moves up over the winter and early spring month and why it's important that honey stores be situated directly above the brood cluster going into winter. Honey to the sides of the cluster are difficult to reach when it's cold and can leave bees stranded if temperatures suddenly drop. The rising heat is also why ventilation is crucial. Warm air rises towards the cover, then forms condensation, which in turn drips cold water down onto the cluster. To provide necessary ventilation, add upper entrances, either by a notch in the inner cover or a 5/8" hole cut into the top box, or crack the lid with a Popsicle stick or coin.

The hive slows their consumption of pollen and honey while in the cluster and move about the hive when temperatures allow. It's in the later weeks of winter and the early weeks of spring that consumption rapidly increases and when the bees are at the greatest risk of starvation. Kim Flottum of Bee Culture Magazine says 80% of the food consumed during the whole winter will be consumed in the LAST 20% of winter, when brood rearing starts.

If you have managed your hive during the summer, ensuring they have ample honey and pollen and are free of pests and diseases, they should do well through the winter.

WCABA Members Show Off Talent

When Barbi Rose and Dodie Stillman conducted their “Products of the Hive“ presentation and workshop at the October WCABA club meeting we knew they had talent, but it extended further than that. Dodie’s slide program in the main meeting was enlightening and informative, but paired up with Barbie in the workshop, what followed in the classroom across the hall was just downright *fun*. (see pictures)

Two weeks later we see them showing their talents further at the Texas Beekeepers Convention in San Antonio when they both entered in the TBA Honey Show in the Beekeeping Arts & Craft Class division. Barbie won a first place Blue Ribbon with her “Stained Glass Honey Bee”, and Dodie was awarded a second place Red Ribbon for her Encaustic Art “Flight of the Bumblebee”.

Both ladies had multiple responsibilities at the Convention, but each took time out to pose with their winning art and the appropriate ribbon.

Congratulations ladies, job well done.



First & 2nd Place winners Beekeeping Arts & Crafts



Barbi Rose 1st Place Beekeeping Art & Craft



Dodie Stillman 2nd Place Beekeeping Arts & Craft

2020 Nucs & Queens for WCABA Members

The Williamson County Area Beekeepers Association will again offer bees and queens to club members through our Bee Procurement Program. The Executive Board voted to provide 5- frame nucs with queen (not marked), and additional individual order of queen bees (marked and clipped).

The 5-frame nucs will come from Merrimack Valley Apiary's winter location in Louisiana and are advertised to consist of a "laying" queen that has already been accepted by the hive, 3 inner frames containing brood in all stages, 2 outer frames containing honey, pollen and adhering bees, delivered in a sturdy wooden nuc box with full entrance and a top feeding port. The queen in the nucs will be an Italian/Carniola Mixed Hybrid (Aurea-Karnica) that should provide a hardy, productive colony that winters well.

The queen bees for individual purchase will come from B Weaver Apiaries in Navasota, Texas and are advertised as bred from a hybrid of bees chosen for their mite resistance, high honey production, and healthy population. These queens will be marked (blue) and clipped for ease of finding and help in swarm control.

Order forms with current pricing will appear in the next issue for the Newsletter and orders will be accepted after the first of the year (2020).



Five frame bee nuc delivered in wooden box



Queens in wooden cages

The Bee Procurement Program has been a benefit provided to the membership for over 20 years and has become a hallmark of service of our club. The program has drawn many new members to our ranks because of the attractive pricing and the assurance of obtaining bees in an ever tightening and competitive market. For this reason, the club has increased the limitation on orders to 10 nucs total per family, and a limit of 4 nucs total for new members to the club.

Orders will be taken by mail after January 1st, and at the club meetings through the end of February or as long as supplies last. Each order must be on the official order form, be filled out completely, and be accompanied by the appropriate remittance to be accepted. All orders will be acknowledged by a confirmation e-mail and added to the Order Matrix by the Program Coordinator.

Because of the need to track and match all orders with remittance and delivery of product, there will be no individual transfer of ownership of the nucs or queens. Cancelled orders will be handled by the coordinator with refunds and resale of the product to members on the wait list.

Thx. Jimmie Oakley – Bee Procurement Coordinator 512/507-3009 jimmie.oakley@gmail.com

Fun Workshop at WCABA Meeting

Pictures from Products of the Hive Workshop WCABA meeting on October 22, 2019.



Who says playing in Hot Wax can't be Fun?

Adding the finishing touches to the Wax Bowl...



Robin Young, Texas Beekeepers Honey Show Chair, presents Best of Art award to Barbie Rose at TBA Convention

Austin 9th Annual Beekeeping Seminar

Register at: <https://aabaseminar2020.eventbrite.com>

When: January 4th, 2020

Who: Austin Area Beekeepers Association

Where: The Marriott, La Frontera, 2600 La Frontera Blvd, Round Rock, TX 78681

Cost: \$75

Questions: Lance Wilson lance@beekeepinghelp.com

Why: The mission of this daylong seminar is to educate people of all experience levels in sustainable science-based bee husbandry and to provide support to worthy bee charities. Most of the proceeds are donated to the Texas A&M Honey Bee Lab, the Texas Beekeepers Association Queen's Program, the Texas Master Beekeeping Program and other bee health causes.

Description: This is a daylong seminar offering seven different educational presentations running concurrently every hour throughout the day. This will provide many beginning and advanced subjects to choose from. A separate beginner track has been formatted covering a variety of startup topics for soon-to-be or very-new beekeepers. A beginner beekeeper will learn the fundamentals of honey bee biology and behavior, how to select the equipment you will need, where to buy bees, how to set up your apiary, how to light a smoker, feeding, the fundamentals of honey extraction, queen finding, requeening and annual management.

Other Sessions will include:

- Honey Bee Management Advanced -Nutrition Management
- Honey Bee Biology and Behavior
- Top Bar Management 1 and 2
- Effective Varroa Management for Robust Populations
- Brood Disease and Pest Control
- Swarm Capture Techniques
- Raising Queens
- How to Grow Your Apiary Business
- Successful Sales and Marketing
- Bees as an Ag. Exemption
- Honey Bee Reproductive Biology
- Making Splits
- Cut-Outs
- Smoker Lighting Demo
- Varroa Monitoring Workshop
- Queen Management
- Reproductive Biology

- Africanized Bees
- Honey Bee Pheromones
- Harvest Economics
- Wax Working Workshop
- Annual Management

- Ryan Giesecke - Trinity Valley Beekeepers President
- James & Chari Elam - Owners of Bluebonnet Beekeeping
- Dodie Stillman - Certified Texas Master Beekeeper
- Terry Spencer- Vice President of the Austin Beekeepers Assoc.
- Karl Acuri - Austin Area Beekeepers Assoc. (Co-Organizer)
- Brandon Fehrenkamp - Owner of Austin Bees
- Pamela Yeamans – Certified Master Beekeeper (TMBP)
- Ashley Ralph – Vice President of the Texas Beekeepers Assoc.
- John Swan - Owner of Wicked Bee Apiary
- Dennis Herbert - Past Pres. of the Bell-Coryell Beekeeping Assoc.
- Tara Chapman- Owner of Two Hives Honey
- Lance Wilson - Certified Master Craftsman Beekeeper (GMBP)

Presenters:

- Professor Juliana Rangel – Entomology at Texas A&M
- Blake Shook- President of the Texas Beekeepers Association
- Mary Reed - Texas Apiary Inspector
- Mark Hedley - Owner of Spiral Horn Apiary
- Pierre Lau- Ph.D. Student of Entomology Texas A&M
- Robin Sliva- President of the Hill County Beekeepers Association

MEMBERSHIP APPLICATION

WILLIAMSON COUNTY AREA BEEKEEPERS ASSOCIATION

\$20 per year – single member ship

\$25 per year – family membership

New Member/Renewing Member

(circle one)

Date: _____

Name: _____ Amount\$ _____

Cash/Check # _____

Address: _____

City / State / Zip: _____

Phone: () _____ Email: _____

To Save postage cost, may we send your newsletter via email? Yes [] No []

Membership Secretary: Shirley Doggett
 400 County Road 440
 Thrall, TX 76578 (512) 924-5051

New Members

Zaky Family
Hayden LaRochelle
Mike & Rhonda Staton
Karen Miller
Ron Herald

Taylor
Georgetown
Georgetown
Georgetown
Burnet

Renewing Members

Jim Ray
Vicky Kennedy
Chris Huck

Georgetown
Burnet
Georgetown

Visit Our Website:
www.wcaba.org

Email Us At:
info@wcaba.org

Renewal of WCABA Memberships

Shirley Doggett will be taking renewal of memberships for 2020

\$20 for individual membership, \$25 for family membership

Use Form on previous page to save time

Texas Beekeepers Association

**Summer Clinic
6/13/20 in Denton**

**Annual Convention
12th - 14th November in Allen**