

# THE BEELINE



Official Newsletter of the Central Iowa Beekeepers Association

## ISSUE

Summer 2020

Editor: Laura Miller

### UPCOMING MEMBER MEETING INFO

The May membership meeting scheduled for Saturday May 16 has been postponed due to the COVID-19 pandemic. The CIBA Board and officers may try to reschedule the meeting at a future date. We will keep everyone informed. Thank you, Phil Ebert, for agreeing to speak; we will try to reschedule his talk.

We hope to be able to have a potluck and field day in July with our State Apiarist, Andy Joseph, taking us through two or three member apiaries as he would on a routine inspection. Stay tuned for more details!

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### NEWSLETTER ARTICLE SUBMISSION

**DEADLINE: August 15, 2020**

#### Email Submissions

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#### Mail Submissions

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We encourage you to receive the newsletter via email; however, we understand if electronic delivery is not for you! You may make updates to your subscription, or add a subscription by sending a notification to:

Valerie Just  
[justiowahoney@gmail.com](mailto:justiowahoney@gmail.com)

## FROM THE PRESIDENT, JAMIE BEYER

Beekeeping is a natural way to social distance. When I am with my bees I am in heaven, simply by just watching them. They are so focused on making sure the hive gets what it needs to multiply and survive. This is the time of the year that is sooooo enjoyable to be around the bees. Nectar and pollen flow is on and very few of the bee hives fight with each other over resources.

Bees also have their viruses, and as beekeepers we must do our best to keep these viruses to a minimum. Controlling Varroa mites is one way, of course, but so does proper bee management. That is giving them plenty of space and good quality hive components.

During this time of virtually no meetings or gatherings of any kind, which includes us beekeepers, it is a good time to work on improving your beekeeping skills. Catch up on your reading of those bee books and magazines that have been piling up. Please do as I say and not as I have done. I have a huge pile of good references that desperately need my attention.

There are three things I want to mention. One, make sure that you renew your membership for 2020. We normally get a lot of members renewing at the March meeting, but since we cancelled our meeting in March, some of you have not renewed yet. Please send in the membership renewal form (see the end of this newsletter).

Another reminder is that as part of your membership, you can place free ads in the BEELINE. Look for more later in this issue.

The third project is that we are working on a possible webinar/online meeting. We'll be in touch by email about this way of staying connected. Judy Wu Smart from the University of Nebraska and the Nebraska Beekeepers Association have been hosting fantastic webinars. They hosted Maria Spivak from the University of Minnesota on April 14. At the last minute they opened it to everyone and it was wonderful.

Stay safe and healthy!

# THE BEELINE

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## Editor's Document Navigation Tips

1. **Table of Contents:** Hover over any section of the Table of Contents, then hold the CTRL button down on your keyboard. This action will create a pointing finger image - press the left button on your mouse on any section of the Table of Contents to go directly to that section.
2. **Document navigation:** No matter where you are in this document, if you press the CTRL + Home buttons on your keyboard concurrently, the action will take you to the top of the Beeline. You can then scroll to page 2 to gain access to the Table of Contents to navigate the entire document using guidance in bullet number 1.



### Hap-BEE Hour

Join us! Get the details, page 6.



## CIBA Business

### Annual Auction May Move to Summer or Fall

*Submitted by CIBA President Jamie Beyer*

Most large gatherings in Iowa were prohibited in March and April to avoid spreading the infectious COVID-19 virus, and that included CIBA's annual auction scheduled for April 18.

The CIBA Board and officers hope to re-schedule the auction, which is our primary fundraiser during the year, to possibly late summer or fall. We cannot proceed with any planned events until Iowa relaxes its guidelines as to how many people will be allowed to gather at events. Even at that time, will we still be willing to still risk gathering to buy and sell stuff?

We wish we could be more informative and positive, but that's the situation right now. In the meantime, consider what you can sell or want to buy in the future. A lot of quality bee equipment will be exchanged when we do reschedule this event. The CIBA Auction will happen again!!



## Call to Action

### Do Not Forget Your Membership Dues!

Membership in CIBA runs on a calendar year, January 1 to December 31, and many of our members renew their membership at the March meeting. With the coronavirus outbreak, we cancelled our March 21 meeting as well as our membership meeting scheduled for May. We would appreciate, however, if you could renew your membership as soon as possible.

To help, you'll find a membership form in this BEELINE. Dues are as follows:

- \$10 for a Single Membership
- \$15 for a Family Membership whereby members are residing at the same address
- Waived for a new beekeeper taking a Central Iowa beekeeping class this year

If you do not remember if you have paid your dues, contact Valerie Just at: [JustIowaHoney@gmail.com](mailto:JustIowaHoney@gmail.com). Otherwise, please send your checks (payable to CIBA) with a completed membership application form to: Valerie Just, 4609 Crestmoor Drive, Des Moines, IA 50310.



## Legislative Update

*Submitted by CIBA President Jamie Beyer*

Here's an update on my activities as Iowa Honey Producers Association liaison to the Iowa Legislature. It's important that you also are "in the know" on these vital issues.

Leaders of the Iowa House and Senate suspended all activities due to the coronavirus outbreak. They announced a "pause" in the action until at least the end of April, and we expect it will continue. Senate Majority Leader Jack Whitver issued the following statement: "The Iowa Legislature continues to follow the guidance of

the CDC and the Iowa Department of Public Health. It is important for us to continue to lead by example and limit the possible spread of this disease,”

All bills discussed in last month's Legislative Report are still active but paused for the time being. I will keep you updated on plans to return to the Statehouse for the conclusion of the 2020 Legislative Session.

On a brighter note, IHPA member Doyle Kincy was able to place two hives at Terrace Hill on April 1. These are established hives and should produce a boatload of honey. At right, is a photo of the hives that Kincy provided; the Iowa Governor's mansion is in the background.



Despite not being at the Statehouse, lawmakers are using portions of the coronavirus hiatus to decide what bills will be considered then the legislature returns to action.

Please contact members of the House State Government Committee and urge them to approve Senate Joint Resolution 2004, which makes the Honey Bee the state insect. Here are some points to mention:

- Iowa is one of only two states without a state insect.
- Honey production is an important part of Iowa's agricultural economy.
- In trying times like these, positive legislation like SJR 2004 is needed.

To find membership of the House State Government Committee, go to the link below. If you click on the name of the lawmaker, you will see their email, and in many cases, their address and telephone number.

<https://www.legis.iowa.gov/committees/committee?qa=88&groupID=681>

## Another Place to Advertise

You've heard of Craigslist, the website that provides classified advertisements with sections devoted to items for sale and items wanted. The CIBA Board reminds members that we have CIBAlist to provide the same service for our member beekeepers!

If you have something beekeeping-related to sell, or are looking to purchase a specific beekeeping-related item, you can email the BEELINE editor Laura Miller at: [Beeline-editor@yahoo.com](mailto:Beeline-editor@yahoo.com).

Here are the guidelines:

- CIBA members can place 2 free ads per calendar year for beekeeping-related items.
- Ads are accepted on a first-come, first-served basis.
- Ads MUST be submitted by the BEELINE submission deadline. The deadline is found on the first page of the BEELINE.
- Ads are limited to 4 lines including the title.
- CIBA is not responsible for errors or misprints. All ads are subject to board acceptability; the Board reserves the right to decline ads based on content and/or space availability.

At this time, we are not accepting non-member ads or paid ads, but may consider those in the future.



## Iowa Department of Agriculture and Land Stewardship News

### News from our State Apiarist, Andy Joseph

Hello from my dining room table “office.”

I bet that sounds familiar to at least a few of you. For all that has been thrown into change recently, spring is coming along in perfectly standard fashion. As I’m writing this, we’ve had a couple pretty frosty nights but the days are warming and the forecast looks really good.

Plants are waking up. I am seeing more dandelions each day, and even a very occasional early little white Dutch clover flower. Tons of pollen are being hauled in from trees. The bees are building as much as the cool temperatures are allowing their cluster to expand. It won't be long now!

Winter was mild, overall, and shorter than average, thankfully. The bees, I believe, survived well across the state! It’s been a few years since I’ve been able to say that. A majority of losses seem directly related to .... Surprise! .... Varroa and related viruses. Last spring found quite a lot of Nosema-infected bees but so far this season I sure haven’t seen it. It’s amazing the difference a year can make.

I’ve been burned several times by making splits in say, the third week of April. Two or three frames of brood and pollen, plenty of nurse bees, and a frame of honey pulled from the parent hive into a single of their own. New queens or cells are added a day later. Then snap! – snow and freezing temperatures, or a solid week of cold rain.

Spring can be tough, so be on guard. When brood is chilled and the bees are under stress, whether it’s nutrition or temperature or queenless while emerging cells, things can start looking ugly quickly. Chalkbrood and EFB (European foulbrood) are two examples of brood diseases that pop up related to stressors. Brood cannibalism can occur when the bees feel the need to reclaim nutrients and resources invested in developing brood. Most of this trouble clears itself over time as temperatures climb, the weather dries out, and the flow of pollen and nectar into the colony returns.

Sometimes though, the poor conditions can spiral and bees fail to thrive through spring and even into summer. So be prepared to intervene when necessary! This is the “keeping” part of being a “beekeeper.”

- Supplement their nutrition.
- Try to prevent having them overextended when hit by a few cold nights.
- Be very careful when equalizing or making splits to avoid transferring any sick brood.
- Be tidy in dealing with dinks and deadouts in the apiary.
- And be certain you’ve killed those mites!

Essentially, nip as many of these common springtime troubles in the bud before they have a chance to develop into bigger problems.

Regarding any IDALS bee inspection work, as I’m writing this, we’re in a holding pattern until the coronavirus starts to clear up. “Essential” inspections still can be done (and are welcomed by me as I’m way past ready to be getting out there). This includes any inspections of equipment or bees prior to sale or transfer, such as inspections of nucs to be sold.

We’re also able to inspect any bees being moved across state lines for any necessary health certificates. For example, I’ve looked at some nicely-building colonies being moved into orchards across the Illinois state line. Right now, however, most other IDALS inspection work is prohibited until we get the green light from the higher ups. We get weekly updates as to when we’ll be set free to hit the roads and really start getting back out there with beekeepers across the state. I’m hopeful that we’ll be back at it soon, and I’m thankful that so many of you share that sentiment about our state government inspection program.

Thanks for reading. I hope both you and your bees are well!





## Committee Updates

### Looking for Queen/Ambassador Candidates

*Submitted by Susan Kelly, Queen/Ambassador Committee Chair*

We are already in May. In just a couple short months we will be accepting applications for the Central Iowa Honey Queen/Ambassador. If you know of a young lady or a gentleman who is 16 to 20 years old and who has a passion for beekeeping, honey, honeybees or the products of the hive, encourage her (or him) to apply for 2021 Central Iowa Honey Queen or Ambassador. The requirements and application and be found on the CIBA website.

### ISU Extension News

#### Join Us for Hap-BEE Hour!

IOWA STATE UNIVERSITY  
Extension and Outreach

Want to connect with other beekeepers? Extension entomologists are taking to cyberspace to bring you a weekly Hap-BEE Hour. Judy Wu-Smart with the University of Nebraska-Lincoln Bee Lab and Randall Cass from ISU's Pollinator Working Group will host a one-hour chat via the Zoom meeting platform. Hap-Bee Hour will be offered every Friday from 5-6 p.m.

Simply watch from the comfort of your own home or listen over the phone if you have no computer. Here are two ways to connect:

1. Go to: <https://unl.zoom.us/j/92576391887> or
2. Dial 1-(301) 715-8592 (meeting ID: 925 7639 1887).

For questions, contact the UNL Bee Lab, (402) 472-8378 or email: [unlbeelab@unl.edu](mailto:unlbeelab@unl.edu)

#### Other Online Opportunities

Iowa beekeepers are invited to join these free seminars hosted by universities in the Southeastern Conference using the Zoom online platform. The seminars are designed for beekeeping clubs that are unable to meet during the COVID-19 pandemic. The presentations will be followed by a Question & Answer session from participants.

You can log in for each event at: <https://auburn.zoom.us/j/904522838>. Recorded sessions are available on the Lawrence County Alabama Extension Office Facebook page for 2 weeks after the event:

Here is the schedule. All run from 6:30-8 p.m. CST:

- **April 30:** Queen Management Essentials, Dr. J. Rangel (Texas A&M)
- **May 14:** Bee and Parasite Biogeography, Dr. K. Delaplane (U. of Georgia)
- **May 28:** What's Killing Honeybees, Dr. J. Ellis (U. of Florida)

#### Your Participation Wanted

You are invited to participate in the 2020 North American Mite-A-Thon by checking your hives for mites between May 2-17 and August 15-30 then report results at: [www.mitecheck.com](http://www.mitecheck.com). This is a tri-national effort to collect mite infestation data and to visualize Varroa infestations in honey bee colonies across North America within a two-week window. All beekeepers can participate, creating a rich distribution of sampling sites in Canada, the United States and Mexico. Resources are available at: <https://www.pollinator.org/miteathon>

## CIBA Member Contributions

### Making Up a Honey Bee Nuc

Submitted by John Johnson, CIBA and IHPA past president (from an ongoing series of teaching articles used by John over the years)

**DEFINITION:** The word "Nuc" as used here means a newly assembled colony of honey bees with queen, bees, brood, combs and woodenware which together make up a single story colony of bees. When weather conditions are favorable a nuc will usually produce a honey crop in the year it is started.

In Iowa nucs are usually established during April or early May in a single hive body or nuc box. They are usually "made up" from combs, bees and brood which were over wintered or available from some source. If nucs are "made up," queens which will be introduced to the nucs must be obtained from some source, usually a southern queen breeder. The queens to be used in April or May should be ordered in January or February.

#### Equipment needed for a nuc:

- bottom board
- entrance reducer
- hive body or nuc box
- ten frames of drawn comb or foundation for hive body or five frames for a nuc box
- inner cover
- outer cove
- an overhead or division board feeder
- sugar syrup or liquid honey for feed.

One of the challenges in "making up" a successful nuc is getting the bees to accept a new queen. Experience has shown that a relatively weak nuc with no more than 2 or 3 frames of brood will accept a new queen more readily than one with 4 or more.

#### Proceed as follows to make the nuc:

- Select a day when the temperature is 55 degrees F or warmer and preferably when it is sunny,
- Remove 4 frames from the hive body or nuc box that is to receive the combs of sealed brood and bees and the new queen.
- Gently smoke the over wintered colony or colonies from which combs of sealed brood with adhering bees will be taken.
- Find the comb on which the hive queen from the over wintered colony is located. Remove the comb with the queen from the colony and put it in a safe place. Do not be concerned about the queen flying away. She will not leave her bees and brood unless something physically removes her. But, do be careful not to damage her.
- The colony from which the queen has been removed is now queenless.
- Count the number of combs with capped brood in the queenless colony. Leave two or three frames of capped brood and bees in the queenless colony. Any additional capped brood and bees may be removed and used for making nucs. (**NOTE:** Combs which are part capped brood and part newly laid eggs or uncapped brood must be left in the parent colony. If one uses these kinds of combs in the nuc the bees will usually destroy the new queen when she is released from her cage.)



Top: John Johnson (in hat) with several mentees.  
Bottom: A nuc box contains only half as many frames as a regular deep box.

- Remove 2 or 3 frames of capped brood with adhering bees and place them in the hive body or nuc box which will house the nuc. Combs of brood and bees which make up the nuc may come from several different overwintered colonies if you have them.
- After combs of capped brood have been removed from the overwintered colony, place the comb with the queen back into the hive from which she was removed.

### Introducing the queen

The queen is shipped from her place of origin in a small rectangular cage with screen wire over one side and a hole in each end of the cage. Both holes are plugged with a cork which fits snugly into the holes. Inside the cage and in contact with the cork at one end of the cage is a white appearing material which is called candy. It is made mostly of sugar and is food for the queen while she is confined inside the cage.



*This queen cage has a candy tube on the right.*

Make the nuc and install the new queen as soon as possible after she arrives. If you must keep the queen for a day or two before installing her in a nuc, place a few drops of clean drinking water on the cage screen a couple times each day. Store the queen in a safe place with good air circulation and a temperature of 65 to 75 degrees F. And, shade her from bright light.

To install the queen, use a nail or the tip of a knife blade and carefully remove the cork from candy end of the cage which houses the queen. With a nail or stiff piece of wire, carefully poke a hole in the candy. (**NOTE:** If you receive a queen cage that does not have candy under the cork, insert a piece of marshmallow in place of the candy. Do not poke a hole in the marshmallow.)

Now, tightly wedge the queen cage between two frames which contain sealed brood and adhering bees. Make certain the screen on the queen cage is situated so the screen on the queen cage faces either the front or back of the hive. This ensures the loose bees in the nuc will have contact with the queen and will feed her. If the screen is placed flat against a comb and bees do not have access to it, the queen might die before she is released.

Provide supplemental feed (sugar water or honey) to the nuc and close it up. Ensure the entrance reducer is in place. Leave the nuc undisturbed for 5 days. After that check to see if the new queen has been accepted.

Several days after one observes acceptance of the new queen you may give the nuc an additional frame of sealed brood from an overwintered colony, if that is available. Do that by shaking most of the bees off the comb back into their original hive and placing it alongside the combs of brood within the nuc.

Continue giving supplemental feed to the nuc until it has two or three combs of stored feed in the hive.

### Spread the Word: Let Those Dandelions Grow

*By Andy Corbley for the Good News Network*

If you ever wanted to help dwindling honeybee populations, ecologists are encouraging that you “learn to love weeds” and leave the dandelions alone this coming spring. At the start of her tenure as the new president of the oldest ecological society in the world, Jane Memmott reminded everyone that working to live in harmony with nature can be as simple as keeping your lawn pollinator-friendly.

The Bristol University professor admitted she mows around the dandelions and buttercups when she cuts her grass because “you can’t personally help tigers, whales and elephants, but you really can do something for the insects, birds, and plants that are local to you.”

The new leader of the British Ecological Society dismissed as silly the origins of lawn fussiness—and most people in America can relate with what she sees in England: “This whole business of keeping your lawn clipped and pulling the weeds out is part of some British obsession with tidiness.”

<https://www.goodnewsnetwork.org/leave-dandelions-alone-to-help-bees-this-spring/>



## What to Do with All That Beeswax? Part 1

Submitted by Abigail Kelly, 2019 Central Iowa Honey Queen and 2020 Iowa Honey Queen

Have you ever wondered what to do with all the beeswax you get out of your hive? I have been crafting with beeswax since 2018. I created a 4-H project for the Polk County Fair about the products I learned to make, and it was selected to compete at the Iowa State Fair where it won a blue ribbon. As the Central Iowa Honey Queen and this year's Iowa Honey Queen, I have talked about beeswax at many of my programs.

If you are interested in learning how to make products from beeswax, here are two excellent books – I found both at my local library:

- *Honey Crafting: From Delicious Honey Butter to Healing Salves, Projects for Your Home Straight from the Hive* by Leeann Coleman, and
- *Beeswax Alchemy: How to Make Your Own Soap, Candles, Balms, Creams, and Salves from the Hive* by Petra Ahnert.

Before I share about how to make products, let me share a couple tips.

**First, set aside containers just for making beeswax products.** It is incredibly hard to clean up after working with beeswax. I suggest having a 4-cup glass measuring cup or two. I would also dedicate a saucepan for working with beeswax. Always remember to monitor beeswax while it melts. Beeswax is highly flammable, so please exercise caution.

**Next, render your beeswax.** Rendering is the process by which beeswax is purified. I render my beeswax using the crockpot method. This method uses a crockpot with a crockpot liner half filled with water. Then lay an old t-shirt over the crockpot and place beeswax on top of the t-shirt fabric. The beeswax melts through the t-shirt and into the water. As the beeswax cools, it floats.

Be sure to render cappings separate from burr comb. Cappings are food-grade quality and can be used to make cosmetics. Burr comb is not food-grade and should be used to make candles and other non-cosmetic products.

### Making a candle

An easy starter project is a molded beeswax candle. You will need a candle mold with a small hole in the bottom, the proper size and type of wick, and beeswax, plus the container in which you melt the wax.

First, I melted the beeswax in a glass measuring cup in a pot of water on the stove. Next, choose the mold, which I spray with candle release. (I have not noticed any differences between using or not using candle release, so if you do not have it, don't worry about it.)

Next, thread the wick through the small hole in the bottom of the candle mold (if your mold does not have a hole, you can use a needle to make a small hole). Tie the wick to a chopstick and place the chopstick over two cups. This holds the wick tight, which prevents the wick from bending in the candle. I use what I have around as a candle mold; do not be afraid to get creative.

Once the mold is prepared, I pour the hot wax into the mold. After the wax cools enough for the bottom to be set, I cut the wick and press it into the bottom of the candle. After the candle is completely cool, I remove it from the mold and trim the top wick down to ½-inch. A candle wick should be trimmed to an 1/8-inch before it is burned, but I keep my wicks long so that my customers do not think I made a mistake.

I smooth the bottom of the candle by slightly melting it on aluminum foil in a cast iron pan. Finally, I put the candle in a bag to keep it clean. If your candles develop a white bloom, simply rub the candle with a clean cloth.

### Plantain salve

Another great beginner project is plantain salve. Plantain is great for bee stings so this salve is an incredibly useful product for a beekeeper! I combined two recipes for my plantain salve:

- <https://www.naturallivingideas.com/healing-plantain-salve/>

- <https://mommypotamus.com/plantain-salve-recipe/>

I found plantain in my yard to use for the salve. The plantain cannot have been sprayed with any chemicals and it must be completely dry before it can be used. Once dry, I put the freshest-looking plantain leaves into liquid coconut oil, which is a moisturizer that also helps with wound healing.

After the plantain has steeped in the coconut oil for a few months, I strain the leaves out of the coconut oil. Then I add beeswax to the strained oil to thicken it. The mixture needs to be warmed for the beeswax and steeped oil to combine properly. Pour the mixture into a 4-ounce jar and allow to cool. Once cooled, the jars can be covered and labels.

If you have questions, check out a blog post I wrote about both products. Look for the blog, Dassel Aces at: <https://dasselacres.com/>.

Let me know how your candle-making and salve-making goes. I am excited to hear about your adventures and good luck! In future BEELINE issues, I will share how to make more products.



*Above: Here is how the wick is attached to a chopstick and extended over the candle mold. Right: Abigail's finished candle.*

*Plantain leaves steeping in coconut oil.*

**DID YOU KNOW?**

**IG: CONNECTING CONSCIOUSNESS**

Bee watching is a secretly miraculous meditation. As bees dance from flower to flower, absorbing the sun and distributing pollen along the way, they emit a healing frequency that reverses disease and promotes soul and emotional restoration. Our brain may not comprehend this, but our cells do. This is believed to be the reason why beekeepers have one of the longest life expectancy out of all professions.

## Building a Wax Melter as a 4-H Project

Submitted by Bethany Kelly, CIBA Member

A year ago I decided to make a solar wax melter that I could use to strain wax for making candles and creams. I had been interested in solar wax melters for a while, so I chose to build one for a 4-H project.

I started by asking my beekeeping mentor, Mike Sander, about his solar wax melters. He showed me his favorite wax melter and gave me suggestions on how to make mine better. My wax melter would be roughly 24 by 30 inches in size.

I picked up wood and plexiglass from Menard's with my father and brother. After we got home, I started cutting it under my father's ever watchful eye. It was my first time to use a chop saw to cut the wood. I put glue in between the wood then held it tightly together. The glue helps strengthen the integrity of the wax melter.

Then I drilled a hole in the wood for the screws and twisted each screw slightly into the hole. I made sure the screws were long enough to hold both pieces of wood solidly in place.

After I finished the sides of the box, I put it on top of a piece of plywood and traced around it to make the bottom of the box. Then I cut the plywood to size. Next, I added glue to the top of the sides so the form could be attached to the box bottom. I drilled holes for screws to attach the bottom, starting in the corners, then filling in between.

After the wax melter box was assembled (except for the Plexiglass top), I painted it, starting in the corners. I used dark gray mistint that I got at Sherman Williams. It took three coats of paint to cover the outside of the wax melter. I let it sit overnight, then painted the inside of the box. I also painted another piece of wood that I would use when attaching the plexiglass top.

For straining the wax, I have two disposable pans: one to strain and one to hold the melted wax. To make the holes for straining the wax, I used a nail hammered into the center of one of the pans. Then I widened the holes with a screw. The other pan was left as it was. When I strain the wax I will use an old t-shirt placed on top of the disposable pan, and put the wax on top of the t-shirt material.

I used screws to attach the plexiglass. I put a slim piece of wood on top of the plexiglass, then drilled through the wood and plexiglass into the box. Be careful with the plexiglass because it can be incredibly brittle, especially during cold weather. The first time I tried to place my metal tins loaded with wax into the melter, the plexiglass lid broke. I used duct tape as a temporary fix until I could replace the cover. On a nice, sunny summer day, my solar wax melter can melt almost a full pan of comb.

I plan to get a glass window of some kind to replace the plexiglass. I will have to change my design slightly so that I can open my wax melter since glass is not as flexible as plexiglass. I am proud to say that the wax melter was considered for competition at the Iowa State Fair and won a Polk County project award!

I hope this has encouraged you to make a wax melter or some other beekeeping equipment in your spare time.



Left: Bethany builds the outside of the box. Middle: Bethany puts holes in the top disposable pan for straining wax. Right: Solar wax melter setup on a sunny day.



## Researchers Find How Bee Virus Spreads

Source: ISU College of Agriculture and Land Stewardship, April 27, 2020

A new study conducted by researchers at Iowa State University and the University of Illinois suggests a deadly virus attacking honey bees alters their behavior and physiology in ways that boost the virus' ability to spread to new hives.

The research, reported in the current issue of the "Proceedings of the National Academy of Sciences," found the Israeli Acute Paralysis Virus, known as IAPV, seems to change bee behavior in ways that overcome some of bees' natural defenses against disease pathogens.

"This research expands our understanding of how a disease can evolve rapidly to take advantage of changing conditions. In this case, the high-density placement of hives used in many areas to pollinate agricultural crops appears to make bees more susceptible to infection," said Amy Toth, professor of ecology, evolution and organismal biology at Iowa State.

Toth was part of the study's collaborative research team that included Adam Dolezal, University of Illinois entomology professor and one of the lead authors, who performed the work while a postdoctoral researcher at Iowa State.

"Our research shows the IAPV infection increases the likelihood that infected bees are accepted by foreign colonies," Dolezal said. "Somehow, it makes the infected bees better able to circumvent the guards of foreign, uninfected colonies."

To capture the behavior of individual bees, researchers tagged each one with the equivalent of a tiny QR code and continuously monitored their interactions. The scientists were able to simultaneously track the behaviors of as many as 900 bees, using this automated system to study how IAPV infection might affect the bees' social behavior, including trophallaxis, a process by which honey bees exchange regurgitated food and other liquids.

"Honey bees 'trophallax,' or share food with each other by mouth. In the process, they are transferring social signaling molecules that give their trophallaxis partner information about their home colony, social status and health, among other things," said Amy Geffre, the other leading co-author of the study, who conducted much of the direct observation of the bees while a master's student in ecology, evolution and organismal biology at Iowa State. "Trophallaxis is an important behavior to consider in these studies, as current research indicates that many diseases can be transmitted through saliva, particularly during food sharing."

Geffre studied the bees in a lab environment and apiary settings. "In both cases, we found the infected bees changed their behavior and social signals dramatically," she said.

In their own hives, IAPV-infected bees – and bees that had had their immune systems stimulated to mimic infection – engaged in less trophallaxis than their healthy counterparts. This type of "social distancing" response is well-known in bees and is thought to protect hive mates from getting infected with the disease.

Conversely, when the scientists placed honey bee workers in cages with guard bees from foreign colonies, the infected bees engaged in more trophallaxis with the guard bees. Also, when infected bees were placed at the entrance of foreign hives, the guards were twice as likely to admit them than to let in healthy bees or bees whose immune systems had been stimulated. The changed behavior seemed to be specific to the IAPV infection, which meant something about the infected bees must be different.

"The virus seems to change how the bees smell. The infected bees also may be behaving in a way meant to appease the guards from noninfected hives by trophallaxing more," Dolezal said.

Another change in the bees' behavior that contributes to the spread of infection was found in a previous study, which showed pathogen-infected honey bees lose their way more often than healthy ones when returning home from foraging trips. This may make the diseased bees more likely to spread the virus to uninfected hives, especially where commercial beekeeping operations stack hives much closer together than what is common in the wild.



*Worker bees (in center) trophallaxing (photo by Amy Toth).*

# Central Iowa Beekeepers Association (CIBA) 2020 Membership

## Membership Dues Information

- ✓ Membership dues run on a yearly calendar schedule of January 1<sup>st</sup> through December 31<sup>st</sup>.
- ✓ Dues are payable at the beginning of each new calendar year.
- ✓ **Make checks payable to CIBA.**

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### SELECT ONE

- New membership
- Renewal of membership from 2019
- Yes  No  N/A: For a renewal, has any of your personal information changed?

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### SELECT ONE

- \$10 for a **Single** Membership
- \$15 for a **Family** Membership whereby members are residing at the same address
- Waived** for a **New Student Beekeeper** taking a beekeeping class this year. **You must provide an email address, as you will receive the newsletter and notifications only via email.**

Where are you taking your class? \_\_\_\_\_

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### PLEASE PRINT FOR LEGIBILITY

Name \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip code \_\_\_\_\_

Home phone (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_ Cell phone (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

Email \_\_\_\_\_

**Additional name** \_\_\_\_\_

Cell phone (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_ Email \_\_\_\_\_

**Additional name** \_\_\_\_\_

Cell phone (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_ Email \_\_\_\_\_

**Additional name** \_\_\_\_\_

Cell phone (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_ Email \_\_\_\_\_

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## Newsletter/Communication Delivery: Electronic or Mailed

Choose between receiving the quarterly newsletter and club communications via electronic delivery (email) or United States Postal Service (USPS) mail delivery. We encourage electronic delivery for the following reasons:

- ✓ Selecting electronic delivery saves CIBA the cost of postage.
- ✓ We can provide more information to you electronically. Review the table below.

While we encourage electronic delivery, you need to make a delivery option that serves your needs.



## Central Iowa Beekeepers Association (CIBA) 2020 Membership – Page 2

Communication Type	What you will receive with:		Details
	Electronic Delivery	Mailed Delivery	
BEELINE quarterly newsletter	Yes	Yes	Quarterly club newsletter
Meeting reminders	Yes	No	Mailed reminder postcards have been discontinued
Special information	Yes	No	CIBA organizational updates
Forwarded electronic information	Yes	No	IHPA news, upcoming events, etc.
By-Law changes	Yes	Yes	Infrequent club By-Law updates
Annual Membership Directory	Yes	No	Published in June. Provides a list of all members, and contact information.

**Family Membership:** With **Mailed** delivery, Family memberships receive **ONE** mailed newsletter. With **Electronic** delivery, all members providing an email address will receive emailed newsletters, notices, membership directories/meeting reminders, etc.

**New Student Beekeeper:** **Ensure you provide an email address.** You will receive all communications via electronic mail (email) only.

### SELECT ONE

- Mail via USPS
- Email electronic delivery
- Both

## Membership Directory

We publish an annual membership directory in June each year, which is shared only with club members.

### SELECT ONE

- Yes, the club can publish my/all family member's information in the Membership Directory
- No, the club may NOT publish my/all family member's information in the Membership Directory

### Additional information (optional):

- How many hives and where are your hives located (# of hives/location)? EXAMPLE: 9 urban; 2 rural  
 \_\_\_\_\_ Urban                      \_\_\_\_\_ Rural
- How many apiaries (bee yards) do you have? \_\_\_\_\_
- How long have you been beekeeping? \_\_\_\_\_

## Ideas for Meeting Presenters or Newsletter Topics

\_\_\_\_\_

\_\_\_\_\_

What is your profession? \_\_\_\_\_

Would you consider assisting CIBA with your skills, if requested? \_\_\_\_\_

## Mail completed form with payment to:

Valerie Just  
 CIBA Treasurer  
 4609 Crestmoor Drive  
 Des Moines, IA 50310

## From the Editor, Laura Miller

### Taking Care of Each Other

I had been trying to find connections between my bees and two events that have caused major disruptions in my life lately. Those events being the pandemic spread of coronavirus, which is turning the world upside-down for millions amid fears and uncertainty, and a total hip replacement, which has paused my normally active routines but without the fear and uncertainty created by a pandemic.



The connection was made in a get-well card from my granddaughter. She said she loved me (grandmas love to hear that!) and then she drew a picture of my bees taking care of a sick bee. One was pouring her a cup of honey tea (hot water + honey, a grandkid favorite) and another was licking a red lollipop.

Honey bees do self-isolate when one of them is ill. Rather than infecting the whole hive, sick bees often will leave the hive. This minimizes the spread of any infectious disease and secures the future of a healthy hive. Of course, such quarantines do not bode well for those sick bees – they eventually die.

I have heard about research that examines behavioral changes in bees that may be caused by certain viruses. A particular virus appears to actually reverse a sick bee's self-isolation response. The virus may even create a smell that attracts other bees to the sick bee, thus assuring the continuation (and spread) of the virus.

This is scary, not unlike the fear and uncertainty being generated by the novel coronavirus. We do not know what to expect; this is all new ground we are navigating.

In scary times, we are called to have more compassion, something else that I have observed in my bee hives. Each spring, one of the first jobs of worker bees is to clear out all the bees that have died over the past winter. It usually take several bees to drag out a dead bee. And you'll find the dead bees piled neatly in front of the hive.

We also need to have compassion for the more vulnerable folks during this pandemic. No matter my fears, there are many others who have an underlying health condition or fewer resources, and thus more reason to fear future what-ifs. Yes, we need to self-isolate (or social distance), but we also need to create ways to offer help and resources to others during these uncertain times.

I've also read that the bees share everything they have with the rest of the hive. In winter temperatures they come together in a cluster, shaking their bodies to keep a minimum temperature for the queen in the middle of the cluster. They also take turns being on the outside of the cluster where it's the coldest.

I really liked my granddaughter's drawing of the bees caring for each other. It reminded me that after my hip surgery I am not alone, that there's a hive full of people who care for me, and will help me navigate the next few confusing weeks as I heal and get used to my new hip.

Food stores are readily shared, too. The bees closest to the capped honey pass it along to their sisters. Starvation strikes the entire hive and not just the ones farthest from the food.

I am thankful that thousands and thousands of people have had the same surgery as I have. My doctor has a good protocol for me to follow. Although I have never experienced this surgery, I can trust that the outcome will be good, minimizing my fear.

I hope you can practice compassion as we plod through the pandemic. And as always, **love those bees!**

*This first appeared on my blog, [BeeLadyHoney.com](http://BeeLadyHoney.com), near the beginning of the coronavirus outbreak. The good news is that my hip has healed nicely!*

# CIBA Leadership and State Organizations

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