KEARSARGE BEEKEEPERS

www.kbanh.org **Nov. 2017 – Jan. 2018**

NEXT MEETING

SAT., JANUARY ~~13~~ 20, 2018
9:00 A.M.
PILLSBURY LIBRARY
WARNER

Agenda: Reports of Officers, election of new officers, 2018 Bee School, Farm & Forest Expo., discuss meeting dates, begin planning 2018 activities, other business. Bee talk.

President's Message:

Hello All,

This is my last message to you as president of this wonderful club. One part of me is happy because I won't have to spend time on the computer writing these messages any longer. Most parts of me will be sad though to leave this position. Being Vice President and then President has been a very rewarding time for me. It has kept me involved with club members, beekeepers old and new, and I have made many friends here. Thank you for the honor and trust you have given me these past few years. Having said all that, I'm not out of your hair yet. I don't plan on going anywhere, and I wish to help if I am needed.

I have had a peek at the new officers for the next year, and I am sure that they will give their positions the effort and dedication required. You are fortunate to have them come aboard and serve the club.

This last cold snap will probably take its toll on some of our hives, but that is winter in New Hampshire for you. Even though we lose hives in the winter there is a bright side. When we restock them with bees in the spring, the bees have the benefit of all the stores and drawn comb from the last colony.

I hope that I will be getting some time to clean and repair some of my equipment. My oldest equipment was built in 2011 so it is showing signs of use now. I also may get a chance to build a couple more top bar hives. They have been fun and interesting to work with. How do the bees know how to build those combs so uniformly?

We had a committee meeting on 1/6/18 for the bee school, and it was great to have so many eager members present. I really think that by having the school annually we can streamline the process and have a more consistent curriculum for the attendees. I have already had inquires as to whether we will be having a school this year. At this meeting one of the members was already talking about packages coming in early April. It was nice to think that it wasn't that far away. I can't wait!

I will close this message with one last thing.

Q. Where do past bee club presidents go when their term is up?

A. You will have to come to the next meeting on 1/13 at the Pillsbury Library to find out! 9:00 sharp!

Until then, bee well,

John Chadwick

IN THIS ISSUE

Kearsarge Beekeepers Association Meeting
October 14, 2017
At the club apiary in Sunapee, NH

President John Chadwick began the meeting at the KBA Apiary. In attendance were about 20 members and guests.

- Reminder about NH State Bee Keeper Association meeting on October 21 hosted by Pemi-Baker club in Bridgewater.
- **November 10th KBA Harvest Dinner** – KBA will host the annual Harvest Dinner at the Sutton Church. Volunteers needed at 5:00 pm and dinner is at 6:00 pm. Volunteers needed for set up, food and clean up.
    - Food - Last name A-M – please bring a side dish. Last name N-Z – please bring a dessert.
    - Potatoes – Rob and Deb - potatoes for all
    - Turkey – Barbara and ?
    - Setup- Barbara, Deb, Hartmans, John and others at 5:00pm
  - Raffle - Please bring an item for the annual raffle.
  - Honey Tasting- Please bring 8 oz. of honey for the event
    - Eric volunteers to transfer and number.
    - John may have spoons and bags from last year.
- **Liability Forms** were passed around and signed by those who had not done so.
- **Liability Insurance** for Club for bee keeping activity discussed. John C. working on this.
- **Apiary Activities** -Porta-potty is needed at apiary and Dana R will get a quote.
- **Bee School** is scheduled for winter/spring 2018. North Sutton church or Kearsarge Middle School discussed as venues. Need space for about 50. This takes place 4 Saturdays in late February to March from 1:00-4:00 pm. Bee School Committee will work on getting speakers.
  - Help was offered by Eric, Robyn, Dana, Lori, Pete and Amy.
  - Dana would inquire about location at Sunapee Safety Services building.
- **Pollinator Bill**. Dave Hartman reported on the Pollinator Bill being discussed and designation of a pollinator highway as done in other states. He has discussions with Barbara Rollins at NHDOT. Shared concern that plantings should be free of pesticides in treated seed or plants. Need to discuss location and research potential highway bee collisions. The deadline for a new bill was September so this can be discussed and considered for Fall 2018.
- **President's Report** - John reports that at the state board meeting there was discussion with Olivia Saunder at UNH Extension about having county wide nosema training. This may be supported by UNH grant which would provide county based training so that there is easy access to microscope and someone who could check local bees. There were volunteers for Sullivan and Merrimack County. John shared that the group was investigating the use of technology to host the NH board meetings.
- ***Club shirts** – Please see Barbara who has shirts and bags for sale.
- **Bee Vac**- John shared his creation of a bee vac container made from a bucket.
- **Apiary** – Members and guest then went into the apiary for various activities. Thank-you to all that maintain this amazing resource!

Deb Dunlop, Recording Secretary

*The following t-shirts and tote bags embroidered with the KBA logo are available at this time. The cost for each is $14.

- Size Large Dry Blend T-shirt Royal Blue
- Size Large Dry Blend T-shirt Forest Green
- Size XL Dry Blend T-shirt Black
- Size XL Dry Blend T-shirt Royal Blue
- 5 Tote Bags: 2 Navy, 1 Royal, 1 Red, 1 Black

NH Beekeepers Assn. Annual Meeting Notes
October 21, 2017
Hosted by Pemi – Baker Beekeeper Association

Morning Presentation - Bee Diseases by Chris Cripps, BetterBee, Greenwich, NY.
Chris shared his background and how his interest in beekeeping started at an early age. He eventually went to Cornell and since he has AP bio credits he was able to take an elective in bee biology. After that he went to Ohio State for a DMV program and continued his interest. As a vet in Greenwich, NY, the opportunity opened to buy BetterBee so he and colleagues purchased this. Currently, there are 5 vets now invested in BetterBee. Chris is also active in the Southern Adirondack Beekeepers Association and many other organizations supporting beekeeping.

Antibiotics
Antibiotic rules changed in January 2017. Previously most treatments for bee diseases were over the counter drugs. There is a Honey Bee Veterinarian Consortium now and vets need to be trained on bees. Prescriptions are now needed. Since bees are food producing animals, antibiotics now require a veterinarian's prescription. There is concern for the over and improper use of antibiotics that could lead to antibiotic resistant strains of bacteria in bees. He describes antibiotic resistance and how resistance and effectiveness are measured using a zone of inhibition in cultures on petri plates.

American Foul Brood
Chris spent much of the morning discussing American Foul Brood. The bottom line is that bee keepers need to know the symptoms of this disease and should regularly go into the brood chambers to check for this disease.
Chris shared that AFB is most feared disease and spreads easily.

- Don't use old or used equipment. Spores can stay in environment for decades.
- Honey - don't borrow from others to feed your bees
- Humans - some cases in humans due to drug use
- Avoid moving frames
- Spread by bees as the strong rob the weak
- The process of making nucs can spread AFB
- Antibiotic use in hives could mask the presence of AFB
- Bees can spread this up to 3 miles away from hive
- The disease:
    - has declined from higher prevalence in the past
    - requires burning of hives if found in some states, NY burns
    - can be inactive for decades so don't use old bee keeping equipment
    - characterized by brown pupa- should be pearly white
    - detected by Rope test - toothpick draws out an inch or so of snotty type material
    - leaves dark scales in the bottom of the cell. Look into bottom of the cell!
    - would benefit from a state registration system for hives
    - has a foul order and Chris shared irradiated sample of AFB - need to know the smell!
    - can be detected by trained dogs

Pay attention to the physical signs for the disease and deliberately go into the brood chamber to check this. Beekeepers can buy kits to test for AFB but make sure they have not expired. There is also a HOLT milk test used for AFB. Samples from the brood chambers are added to some amount of skim milk. The AFB bacterial enzymes break down the milk which turns clear in 20 minutes. The USDA Bee lab can also test for AFB for free. If found, they will call state inspector. There was lots of discussion on service from lab from the audience as it was closed for a while.

Varroa Mites
Chris shared much background on mites and that everyone should be doing sugar rolls to detect level of mites in hives. He demonstrated the basic equipment for the sugar roll. If you have more than the accepted amount for a 1/2 cup = 300 bees, then treat. He briefly discussed the various treatments. He also showed a video of how mites can crawl onto bees visiting flowers. Most interesting was his comments about MAQS. When using MiteAwayQuickStrips (MAQS) one should pay attention to the temperature. The package says not to do it above 85 degrees but he recommends doing it on days below 80 degrees. This prevents a sudden burst of formic acid fumes into the hive. He also cautioned about using expired MAQS. He noted that the material around the gel can deteriorate and when placed into the hive, the prescribed

release of vapor can be increased causing too much to be released at once. Some of the detrimental symptoms we see can be related to temperature and expiration date.

Nosema

Chris described much about the bee digestive system and how this protozoan can damage the bee's ability to use protein and energy. He describes how beekeepers often misunderstand spring signs of the cleaning flight with nosema concerns. It is normal to have yellow spotted snow after the first 60-degree day in January and February. Always make sure your bees can get out as they do not defecate inside the hive. There seems to be a decline in this disease and he recommends not treating prophylactically with the antibiotic Fumagilin.

He describes how there are two different species.

Nosema apis

- winter diarrhea in spring (not cleansing flight)
- hive has much bee poop at the base of the hive not out away like from flight
- bees can't fly, are sluggish and weak

Nosema ceranae - may be replacing *Nosema apis*

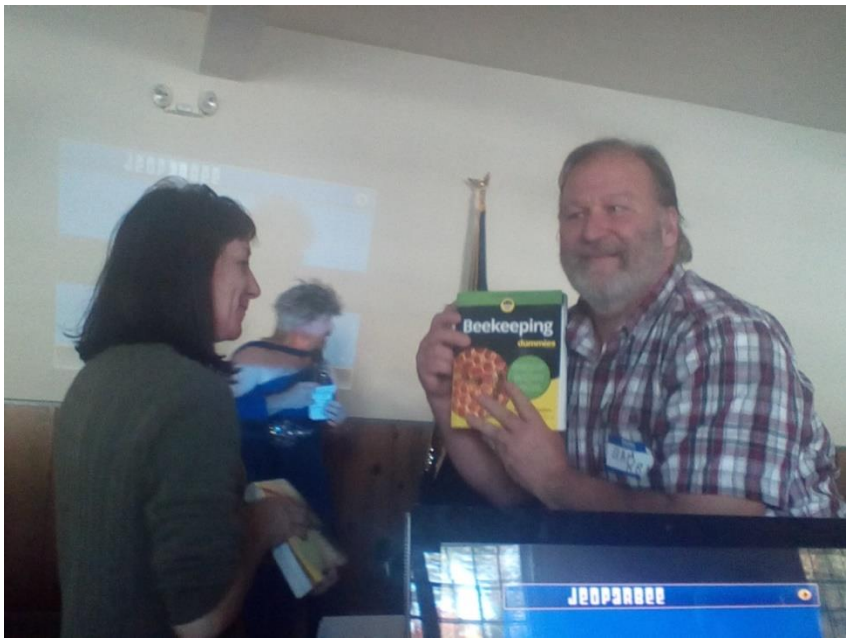
- might be another thing associated with colony collapse disorder
- life span of worker's decrease, unable to navigate, immunity decreases
- diarrhea may not be a symptom
- Diagnosis is with the use of a microscope. See Randy Oliver webpage: scientificbeekeeping.com. This requires a magnification of 400X to look at the digestive track of bees. The counts vary widely by season but one looks for 3 bees that have a lot. Fumagilin is used to treat nosema when it is diagnosed.
- To control nosema: keep bees healthy, keep mites down, cull out old comb, requeen regularly, monitor hives, don't squish bees

Irradiation was mentioned as a way to kill spores associated with bee disease. The audience mentioned that the Mass Beekeepers irradiate old equipment annually with the association. This is a way to clean up drawn comb and rid equipment of disease. However, it does not rid the wax of pesticides.

Afternoon Session – Howland Blackiston, author of Beekeeping for Dummies, hosted "JEOPARBEE."

This was an entertaining event with lots of bee facts and two wonderful contestants!

Thanks to Pemi-Baker Club for a great meeting!



Our own Randy "Bam" Fleury, a KBA Mentor, was the winning contestant! Congratulations!

The KBA Annual Harvest Dinner was held at the North Sutton Baptist Church on Friday night, November 10, 2018. Here are a few snapshots and the results of our Second Annual KBA Honey Tasting Contest. Photos by John Chadwick.

Shown are Pattie, Rebecca (baby) and Troy Hall and ?; Troy and Rebecca, Bam Fleury; Lesvia DeKing with skep (won in the raffle) for a hat; the Halls, Rob O'Neil, Doug MacDonald, and ?

2018 Honey Tasting Contestants: Barbara Burns (lst place), Troy Hall(3rd place), Gayle Bates & Rob O'Neil(2nd place tie), Lydia Hawkes(4th place), Shane Howard(2nd place tie), Bill MacDonald(2nd place tie).

Our 35th Anniversary Year!

See Us February 2 & 3, 2018!
New Hampshire's Farms & Forests:
A Solid Past and Expanding Future

Radisson Hotel * 700 Elm Street * Manchester, NH
Friday, February 2, 2018 9 a.m. to 8 p.m.
Saturday, February 3, 2018 9 a.m. to 4 p.m.

At "New Hampshire's Greatest Winter Fair", there is always something for everyone!

Industry Trade Show with 100 Exhibitors, Free Educational Workshops For All, Unique NH Made Products, Kidzone for the Kids, Demonstrations, Fuzzy and Furry Animals, Lots of Networking & Much More!

Here's a link that a friend sent me; I think you might like to take a look. It is called "Bees in the floorboards"

https://www.facebook.com/lilthingsdiy/videos/1018975638311808/

NH Bee & Equipment Dealers

- Hillside Apiaries, Merrimack 429-0808
- B-Line Apiaries, Alden Marshall, Hudson 883-6764
- Spring Fever Farm, Ben Chadwick, Alton 875-3544
- NH Honey Bee, Gilsum 354-8019
- Troy Hall, Plainfield 298-7209
- Kevin Sargent, Newport 843-5927

HUMMINGBIRDS AND BEES

”To even the casual observer, the similarities between bees and hummingbirds are clear. The small animals, held aloft by buzzing wings, methodically zip from flower to flower, visiting any number to collect their bounty: sweet, sweet nectar and, for some bees, pollen. It's harder than it looks, though. These animals must navigate a sea of color to get their daily fill of sugar water. They need to locate good flowers, with lots of high-calorie nectar, and waste little time with bad flowers, with little or sugar-poor nectar.

As it turns out, both bees and hummingbirds have developed similar cognitive solutions for this challenge. But it’s taken a change in perspective for scientists to see these commonalities. To do so, they’ve had to go against their instincts and treat hummingbirds as “feathered bees” despite the animals’ far-flung locations on the tree of life. (Insects and vertebrates took separate evolutionary paths at least 600 million years ago.)

That doesn’t mean the two aren’t comparable. But the historical misconception that hummingbird cognition must be “more complex” than that of lowly insects, based on an ill-conceived idea that evolution is hierarchical, has created a scientific blind spot, says David Pritchard, a postdoctoral researcher at the University of St. Andrews in Scotland. “There is no such thing as a ‘more complex animal,’” he says. Yet “people had assumed the way that bees did things and hummingbirds did things were very different.”

Pritchard is one of a new generation of hummingbird researchers turning that misconception on its head by applying methods used to study bees to hummingbirds. In some ways, these scientists are reviving work started in the 1970s, when the animals were studied together to investigate how they make decisions. In those studies, researchers aimed to identify a set of rules, like an algorithm, the buzzing animals followed to decide which flowers to visit. For example, if a flower is good, turn to the right and continue to the next flower, and if it’s bad, fly on to the next patch. “As these studies went on, the rules got more and more and more complicated to explain the behavior,” Pritchard says. Finally, the scientists conceded defeat: No simple, mechanical rules existed.

This is where the comparative work ended; from then on, hummingbirds were studied separately from bees because birds, it was presumed, were “more complex.” Scientists took hummingbirds into the lab to test their learning and memory using psychological methods, like those used to study raven and crow intelligence.

This typically involves hundreds of hours spent training birds to do odd tasks, such as peck objects in a particular order. Maria Tello-Ramos, one of Pritchard’s colleagues and co-author on a paper published this week, tried to train hummingbirds this way to study the repeated routes they travel through a familiar flower patch—what’s known as “trap-lining”—as they go from flower to flower to check the nectar in each. But no matter how many new routes she tried to drill into their heads, the hummingbirds insisted on doing things their way. "The hummingbirds weren’t having any of that," Pritchard says. "They would keep going in the order they wanted. They didn’t seem to pick up on this sequence she had trained them on."

You Can Help Hummingbirds! Use Audubon’s free Hummingbirds at Home app or website to submit your observations on when hummingbirds feed on your DIY nectar or the nectar-bearing native plants in your yard or community. By doing so, you'll be helping protect these flying gems.

Tello-Ramos needed a new approach, so she decided to treat the hummingbirds more like bumblebees, adapting recent experiments that also asked how bees use trap-lines. She installed a string of artificial flowers in a valley in the Canadian Rockies, then tracked and observed individual Rufous Hummingbirds as they fed. Hundreds of potential routes through the flowers were available to the hummers, but each stuck to its favorite one or two paths.

Then she filled one of the artificial flowers with weak sugar water. Within a day, the hummingbirds tweaked their routes to avoid this bad flower—behavior that suggests hummingbirds keep track of flowers individually, and manage to remember thousands of them.

In his research, Pritchard wants to discover how they pull this off. An obvious first comparison is with a food-caching bird, like the Clark’s Nutcracker, that also must remember thousands of locations. Studies suggest that these denizens of western pine forests keep track of cached pine seeds by using prominent landmarks to wayfind, and from there calculate the distance to their various hiding spots.

So far, though, Pritchard has seen no evidence of this in hummingbirds. “When finding a location, hummingbirds seem to care more about what the world looks like at that location than distances from different landmarks,” he says. Likewise, bees are thought to keep track of good flowers by taking visual snapshots of viewed scenes. Like tiny flatbed scanners, they move their heads slowly to capture information about a given scene as they fly by. Then, when they're flying around later, they can match their view to a library of captured snapshots. Pritchard's seen hummingbirds pause to make inexplicable head movements when a food source changes, and he suspects they might capture and assess scenes in a similarly visual way.

“The eyes and brains of hummingbirds and bees are really different,” he says. “But it suggests that this kind of visual information is very useful for solving the problems these kinds of hummingbirds are solving.”

To take a hummingbird eye’s view, Pritchard is taking a page from the bee-science book, building detailed 3D models of their environments and using high-speed cameras to track head and eye movements as the birds forage. And the more he learns, the more he suspects the bee-inspired approach might be useful for understanding bird navigation beyond hummingbirds. “We know more about how an Arctic Tern makes its way between the Arctic and Antarctic than how a bird in your garden finds its way back to its nest,” he says. “Those who work with birds were too quick to dismiss the insect strategies. And new technology now means it’s a good time to revisit them.”

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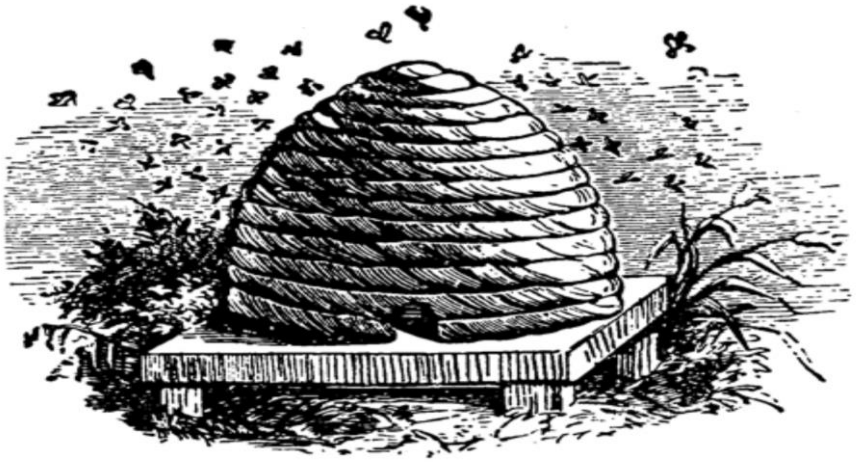
Kearsarge Beekeepers Association

2018 Bee School



COME LEARN ABOUT THE FASCINATING WORLD OF BEES & BEEKEEPING

Sunapee Middle High School
10 N Rd, Sunapee NH
February 10th, 17th, 24th & March 3rd
9AM – 12PM
50.00 Includes Text Book
SPACE IS LIMITED SO REGISTER EARLY!

REGISTRATION INFO:
kbanh.wordpress.com
603 927 4127
603 398 7801

Kearsarge Beekeepers Association
Registration form for
2018 Bee School

Dates: February 10th, 17th, 24th, & March 3rd

Time: 9AM- 12PM

Location: Sunapee Middle High School, 10 N Rd, Sunapee NH

Cost Per Family: 50.00. Includes the book "Beekeeping Basics" by Penn State, 1yr KBA club membership and KBA bee school t-shirt.

Name / Names:

Address:

Phone Number:

Email:

Number of family members that will be attending with the registrant:

How did you hear about bee school?

Fees: 50.00

Make checks payable to: **Kearsarge Beekeepers Association**

Send To: Robin Gray
P.O. Box 275
Warner, NH 03278

Ph: 603 927 4127

KEARSARGE BEEKEEPERS ASSOCIATION

2018 MEMBERSHIP FORM

Name(s)_____

Street or PO Box_____Town_____

State_____ZIP_____Phone_____

E-Mail_____

Check: ____New or ____Renewal

Check one:

I would like to receive my newsletter by downloading it from the club website_____
(Saves $ for the club) www.kbanh.org

OR

Please send a printed newsletter to my mailing address above_____

2018 DUES ARE $20.00

Please make checks payable to: **KBA**

MAIL TO: Robin Gray
PO Box 275
Warner, NH 03278