



# The Skep



## President's Corner

Hello Beekeepers!

Last month we learned how to make creamed honey. I showed you that it's pretty simple so give it a try! Add creamed honey to the items that you sell to the public and get a jar ready to enter in the fair. We also talked more about checking for Varroa mites. Lee Miller had talked about different ways to check for mites including: uncapping drones in the brood chamber, powdered sugar roll as well as ether and alcohol shakes. Knocking the mite count down now is an important part of sending strong, healthy colonies into winter.

The July Beekeeper's To Do List includes monitoring for Varroa mites, extracting some Spring honey and making fair entry plans. Be sure to reserve three pounds for each liquid honey entry and a nice looking frame of capped honey to enter. The Columbiana County Fair is July 22-16 and the

Canfield Fair is September 2-7.

Thank you to everyone that is preparing for and participating in the Fourth of July parade in Canfield! We all look forward to seeing the completed float!

This month we will finish taking orders for polo shirts and t-shirts. Please see Andrea to place your order. The deadline for orders and payment is at the July meeting on July 19.

I hope to see you at the July 19 meeting. Bruce Zimmer will be speaking. It will be a great day!

Bruce Deafenbaugh

### 2015 Tentative Meeting Dates & Locations

August 16	Don Kovach's Parents' Home
September 20	Nick Deemer
October 11	Fellows Riverside Gardens

Please bring your own plates, cups and silverware for the potluck lunch and folding lawn chairs just in case.

## July Meeting Details

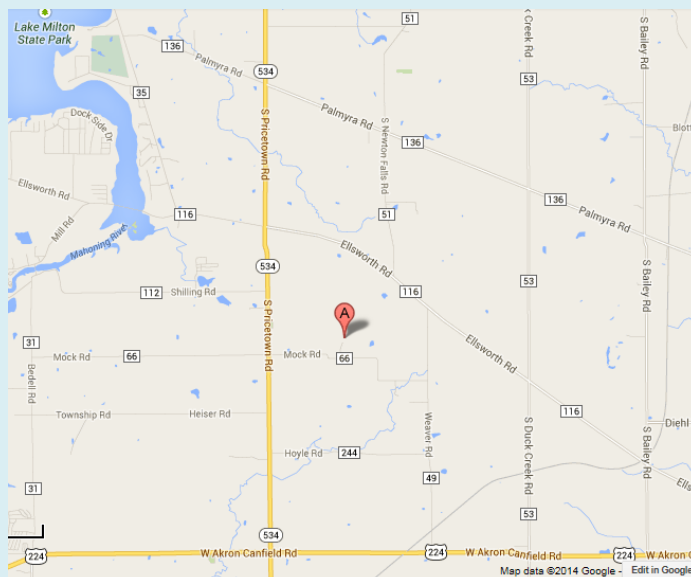
Sunday, July 19  
Potluck Lunch 1:00 p.m.  
Meeting 2:00 p.m.

Bruce & Michele Zimmer's Home  
15090 Mock Rd.  
Berlin Center, Oh 44401

From I 76 or Mahoning Avenue, turn South on to SR 534. Proceed 3 1/2 miles to Mock Road. Turn left (East) and proceed 1/2 mile passing through an "S" bend and turning left at the second drive.

From US 224, turn North on SR 534 and proceed 1 1/2 miles to Mock Road. Turn right (East) and proceed 1/2 mile passing through an "S" bend and turning left at the second drive.

\*Directions courtesy of www.carefreekennels.com Thank you Bruce & Michele!



## June Meeting Recap



After our business meeting Bruce Deafenbaugh explained what creamed honey is and how to make various size batches. He and Andrea encouraged us to make some, add it to our

list of items to sell along with liquid honey and enter a jar in the fair honey show this year.

Bruce began his discussion by explaining what creamed honey is. Creamed honey is honey that is crystallized under controlled conditions to create small uniform crystals in the honey. Unlike crystallized honey that naturally occurs, creamed honey contains a starter of fine honey crystals resulting in a smooth, creamy consistency. The starter can be creamed honey that you are happy with or a powdered form of honey. During Bruce's demonstration he used [Better Bee's Creamed Honey](#) as his starter.

To start, gather your materials. Bruce suggested using a 10 to 1 ratio of honey to starter. In other words, for every ten pounds of honey you need one pound of starter. This ratio can be adjusted to make any amount of creamed honey. For a small batch you will also need a mixer and for larger batches you will need a drill along with a paint stir or creamed honey attachment and a food grade bucket. You will also need a pan to heat the honey in, a large spatula, a thermometer, and an ice-bath to cool the honey.

Begin by gently heating the honey to 150°F. This removes any yeast and melts larger crystals. Then cool the honey as quickly as possible. Bruce said he puts his

small batches in the freezer being very careful to not leave it there too long. He also demonstrated how he creates an ice bath for larger quantities. He fills a large container with ice and cold water and sits the pan of honey into it. Bruce said he carefully stirs the honey often to help it cool quickly. Once the honey is at room temperature (about 75°F) it is time to continue.

Bruce then adds the starter to the cooled honey. Bruce used their KitchenAid mixer for a small batch and showed how he uses the drill and attachment for larger quantities. He and Andrea said that it needs to be mixed for 45 minutes to ensure that the starter is mixed in well.

While the honey was mixing, Bruce explained that he ordered a case of the starter from [Betterbee](#) and has jars available for \$6.67 each. That includes shipping so it saves money. He also has glass jars for the fair available for 68¢ each. If you would like either item please see him at the next meeting.



Once the honey is mixed thoroughly it can be poured into containers and refrigerated for ten days to set. Bruce shared that creamed honey needs to be stored in a cool, dark place or it can separate. Before Bruce moved on to demonstrating how to do a Powdered Sugar Roll to detect Varroa Mites (see page 5), he offered samples of the creamed honey for everyone to try! It was quite a treat! Thank you Bruce and Andrea for a fun filled, educational afternoon! Also Bruce thank you for making screen circles of all of us. Hopefully everyone went home and put them to use counting mites.

# Varroa Mite



Varroa Mites, *Varroa destructor*, are the **most serious** threat to honey bee health today. They are large ectoparasites that feed on the hemolymph of developing and mature honey bees. In other words these external parasites puncture the

body of the bee and suck the circulatory fluid often referred to as insect blood. In doing so the mite transmits viruses and makes the honey bees more susceptible to other parasites, viruses and diseases. Varroa is now found in all 50 U.S. states. It is safe to assume that all colonies have some varroa mites so it is crucial for beekeepers to understand this enemy, be able to monitor the levels of varroa mites in a hive and know how to suppress the population of varroa throughout the beekeeping season.



Adult female Varroa mites are shiny, red-brown, oval shaped insects about the size of a pin head. They are approximately 1.5 mm wide and 1 mm long and have

eight legs at the front of their bodies. Varroa can be seen crawling on adult and immature honey bees as well as on hive parts. The thin, curved shape of the mite allows them to squeeze between the segments of a bee's abdomen to feed and avoid being removed by grooming. It also helps them move into the cells of developing brood. Male mites are half the size of a female, light tan and are not found outside the brood cells.

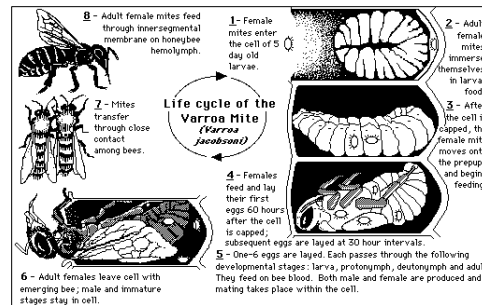


Although foundress mites, adult female Varroa mites, are found on adult honey bees, they must reproduce in sealed cells

with developing larvae and pupae so when they are ready to lay eggs, they move into brood cells that contain 5 day old larva. Once there, the mite immerses herself in the liquid brood food at the bottom of the cell and waits for the cell to be capped. As the honey bee larva feeds, it frees the mite. After approximately 70 hours the mite lays the first egg and continues to lay one egg about every 30 hours. The first egg usually is unfertilized and is a male mite while

the rest are fertilized and become females. The adult mite and her immature offspring will feed on a hole pierced in the developing honey bee. The Varroa mite life cycle consists of four developmental stages, the egg, two eight-legged nymphal stages and the adult. The period of time from egg to adult takes about six to seven days for female mites and five to six days for males. The foundress and her newly fertilized female offspring remain in the cell until the young bee emerges. Then the young bee acts as host and mode of transport for the mites for approximately a week before they enter other brood cells to lay eggs and start the process all over again. Female mites produced in the summer live two to three months while those produced in the fall live five to eight months. Without bees and brood the mites cannot survive more than five days.

When capped brood cells are present in a hive, about 80% of the mites are in the capped cells, especially drone cells. Varroa mites will invade and feed from worker, drone and queen cells but they prefer drone brood over worker brood. Studies show that Varroa mites invade drone cells 11.6 times more frequently than worker cells. At the same time, about eight times more mites are generally found per cell in drone cells that in worker cells.



Now that the information is readily available about the life cycle of Varroa mites beekeepers

can use the knowledge to monitor the mite load levels and keep them to a minimum. Knowing how many mites are in a colony and how quickly their population is increasing will enable the beekeeper to make decisions about what actions need to be taken. Infested colonies can die in six months to two years. Monitoring the mite population can keep the unpleasant surprises (like a dead or absconded hive) at bay.

There are three basic ways to monitor mites in honey bee hives. The first method is to determine the percentage of brood that is infested. To do this, remove capped drone pupae with a capping scratcher



and count the number of cells infested. In this case the beekeeper is counting the number of brood infested not the total mite count. The second method is to count the natural mite drop. This method uses a sticky

board and screened bottom boards. The sticky board is inserted and left for three days. The beekeeper then counts the mites and determines the average mite drop per day. The third method to monitor mite counts is by counting the mites on the adult bees. There are three versions of this method; the Sugar Roll, Ether Roll and Alcohol Wash. In the Sugar Roll Method, the beekeeper uses powdered sugar to dislodge the mites from the honey bees after collecting a sample of about 300 bees, preferably nurse bees, from a frame of open brood. Using powdered sugar is accurate and the bees can be returned to the hive angry but otherwise unharmed. The second and third versions follow similar steps but require the use of Ether or 70% alcohol. The alcohol wash is slightly higher in accuracy but the 300 bees are sacrificed. Ether offers a lower rate of accuracy and again, the bees are sacrificed.

Once the beekeeper has completed the mite count sample the following table can be used to determine the action needed.

Spring/Summer (April to Mid-June)	
Sticky Boards	Over 5 mites
Brood Sample	Over 5% infestation
Sugar Roll	2-3 mites per sample
Exceeding threshold means addition control (non-chemical IPM treatment) is needed.	
Pre-Fall (mid August)	
Sticky Boards	Over 50 mites
Brood Sample	Over 5-10% infestation
Sugar Roll	Over 10 mites per sample
Exceeding threshold means addition control (chemical treatment) is needed.	

The reduced efficiency of chemical treatments for Varroa mites and the build-up of chemicals in beeswax comb have lead beekeepers to add non-

chemical controls to the battle with this enemy. Various IPM (Integrated Pest Management) practices are being used to lower mite populations. The use of screened bottom boards can reduce Varroa populations as much as 14%. This makes sense given that mites fall 20% of the time they make the transition from their host bee to a cell or another bee. Selective removal of capped drone brood from the colony can eliminate a large number of the mites from the hive also. In this case the beekeeper is using the mites' preference for drone brood against them. Splitting hives or introducing a new queen at the end of July both provide the honey bees an opportunity to outbreed the varroa mites because they create a pause in the honey bee brood cycle and interrupt the Varroa mites' stimulus and opportunity for reproduction.



"Soft chemicals", also known as natural treatments, are employed as a means to reduce the mite population when the threshold has been exceeded without a great deal of concern for chemical contamination of honey or beeswax. Natural treatments are poisons developed by plants to kill, repel or deter other organisms and for beekeeping purposes consist of essential oils and organic acids. The miticides that are considered natural treatments are found in a beehive in low levels anyway. They are found in food that we eat and the honey bees can detoxify them in their own bodies already. Natural treatments include Thymol, sold as [Apiguard](#) and [Apilife VAR](#), Formic Acid, sold as [MAQS](#) (Mite Away Quick Strips), and [Oxalic Acid](#), commonly purchased as wood bleach. Most natural treatment products require that the honey supers be removed during use. It is important to follow all label instructions to ensure the safety of the beekeeper, consumers and honey bee colonies. When a treatment becomes necessary it is unwise to use any single natural treatment repeatedly because the mites can become resistant to it.



Understanding the life cycle and behaviors of Varroa mites is important. This information can be used to improve control methods and in turn the

overall health of the apiary. With vigilance and diligence beekeepers can protect their hives from this parasite and the viruses and diseases they carry.

Resources:

Bloetscher, Barbara. (September 2014) *Preparing Apiaries for Winter Survival*. Ohio State University Website. Retrieved on June 20, 2015 from <http://u.osu.edu/beelab/files/2014/09/Preparing-Apiary-for-Winter-survival-10g8e6o.pdf>

Caron, Dewey M., Burdick, Elizabeth & Danek, Kristin. *Powdered Sugar Sampling to Monitor Varroa Mite Populations in Honey Bee Colonies*. Mann Lake Publications Website. Retrieved on Jun 22, 2015 from <http://www.mannlakeitd.com/publications/PSsampling.pdf>

Disselkoen, Mel. (Jan. 2008). *Outbreeding Mites and Overwintering Honey Bee Nuc*. MDA Splitter Website. Retrieved June 23, 2015 from [http://www.mdasplitter.com/docs/Outbreeding%20Mites%20and%20Overwintering%20Honeybee%20Nucs%20\(I\).pdf](http://www.mdasplitter.com/docs/Outbreeding%20Mites%20and%20Overwintering%20Honeybee%20Nucs%20(I).pdf)

Ellis, James D & Zettel Nalen, C.M. (June 2013). *Featured Creatures: Varroa Mite*. University of Florida. Retrieved June 20, 2015 from [http://entnemdept.ufl.edu/creatures/misc/bees/varroa\\_mite.htm](http://entnemdept.ufl.edu/creatures/misc/bees/varroa_mite.htm)

Oliver, Randy. (Updated May 2015). *Topics, Treatments for Varroa*. Scientific Beekeeping Website. Retrieved June 20, 2015 from <http://scientificbeekeeping.com/varroa-management/treatments-for-varroa/>

The Pennsylvania State University. (2011). *A Field Guide to Honey Bees and Their Maladies*. University Park, PA.

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## Bee-worthy Blooms

*A sampling of July blooming trees and plants that honey bees use as nectar (N) and/or pollen (P) sources.*



Basil (*Ocimum basilicum*): N & P  
Flowers are white or purple.



Bee-Bee Tree (*Evodia daniellii*): N & P  
A major source of both pollen and nectar. Pollen pellets are yellow.



Milkweed, Butterfly & Common (*Asclepias spp.*): N Flowers are orange-red and purple respectively.

Sweet Corn (*Zea mays*): P Plants are wind pollinated but bees gather pollen.

Resources:

Lindtner, Peter. (2014). *Garden Plants for Honey Bees*. Kalamazoo, MI: [Wicwas Press](http://www.wicwaspress.com).

Tew, James E. *Some Ohio Nectar and Pollen Producing Plants*, Fact Sheet HYG-2168-98. Wooster, OH: Ohio State University Extension.

## Association T-Shirt Orders

This year's shirts are ash (grey) with black emblems on the back. If you are interested in ordering shirts please see Andrea Deafenbaugh or call her at (330) 457-0326 . The deadline for orders and payment is Sunday, July 19. Prices are as follows:

Polo Shirts (up to XL)	\$10.75
T-Shirt (up to XL)	\$7.25
Each additional X in size adds an additional \$1.	
Embroidered name and skep on front of either style of shirt	Additional \$4

## Powdered Sugar Roll to Detect Varroa Mites (In case you missed Bruce's demonstration)

Supplies:

Wide Mouth Canning Jar with two piece lid  
#8 Hardware Cloth Circle  
Powdered Sugar  
White Container to shake the mites into

1. Gather all materials. Cut the hardware cloth into a circle that will fit in the canning jar ring so it replaces the inside cover. Mark your jar to show 1/4 cup. This is the approximate amount for 200 bees.
2. Carefully scoop 200-300 bees into the jar from the frames. Quickly put the screen lid on the jar and firmly tap the bottom to knock the bees down so you can measure the amount. Once there is enough bees move to step three.
3. Put about 2 tablespoons of powdered sugar into the jar. Roll the bees until they are well coated. Let the jar sit in the shade for 1 to 2 minutes.
4. Turn the jar of bees over and shake the powdered sugar and mites through the screen and into the white container. Continue to shake for at least one minute.
5. Count the number of mites in the powdered sugar. Adding a small amount of water will dissolve the sugar so the mites are easy to see.
6. Return the sugar covered bees to the hive. They will clean up and return to their tasks. Use the chart in the previous article to determine further action.

Resources:

Rudloff, Gordon (copyright 2014). *Sugar Roll to Detect Varroa Fact Sheet*. Ohio State Beekeepers Association Website. Retrieved July 6, 2014 from <http://www.ohiostatebeekeepers.org/resources/ohio-fact-sheets/sugar-roll-to-detect-varroa/>.

Reuter, Gary S and Spivak, Marla. *Powder Sugar Roll For Varroa Mites on Honey Bees*. University of Minnesota Bee Lab Website. Retrieved July 6, 2014 from [http://www.ent.uga.edu/bees/disorders/documents/VarroaMites\\_155.pdf](http://www.ent.uga.edu/bees/disorders/documents/VarroaMites_155.pdf).



## Quinoa Fruit Salad with Honey Lime Dressing

### Ingredients:

1 cup quinoa  
2 cups water  
Pinch of salt

### For the Honey Lime Dressing:

Juice of 1 large lime  
3 tablespoons honey  
2 tablespoons finely chopped fresh mint

### For the fruit:

1 1/2 cups blueberries  
1 1/2 cups sliced strawberries  
1 1/2 cups chopped mango (I used kiwi)  
Extra chopped mint, for garnish-optional

### Directions:

1. Using a strainer, rinse the quinoa under cold water. Add quinoa, water, and salt to a medium saucepan and bring to a boil over medium heat. Boil for 5 minutes. Turn the heat to low and simmer for about 15 minutes, or until water is absorbed. Remove from heat and fluff with a fork. Let quinoa cool to room temperature.

2. To make the Honey Lime Dressing: In a medium bowl, whisk the lime juice, honey, and mint together until combined.

3. In a large bowl, combine quinoa, blueberries, strawberries, and mango. Pour honey lime dressing over the fruit salad and mix until well combined. Garnish with additional mint, if desired. Serve at room temperature or chilled.

Note-Use your favorite fruit in this salad. Blackberries, peaches, kiwi, raspberries, pineapple, grapes, etc. are great options!

Recipe from [Two Peas and Their Pod](#)

### 2015 Officers

President	Bruce Deafenbaugh	330-457-0326
V.President	Chuck Hatch	330-807-0848
Secretary	Heidi Schmidbauer	330-386-7763
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Board:	Don Hays (2015)	330-921-1012
	George Stacy (2016)	330-360-8717
	Joe Schmidbauer (2017)	330-386-7763

### 2015 Ohio Queen Producers

The following Queen and Honey Bee Producers have generously supplied our association with queen certificates for door prizes. Please show your appreciation when doing business with them.

#### Williams Honey Bees

Frankfort, Ohio

740-998-4380

[Check out the Williams' Etsy Shop Also!](#)

#### Mike's Bees and Honey

Forest, Ohio

419-365-9902



*Special thanks to our generous suppliers who have provided us with catalogs, donations and door prizes. It means a lot to these folks to hear back from you, so be sure to mention our association when doing business with them:*

### 2015 Supporters

A.I. Root- Bee Culture	Gardner's Apiaries
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Carbolineuam Wood Preserving	Miller Bee Supply
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Draper's Super Bee Apiaries	Western Bee Supplies
Ernst Seeds	Wicwas Press

**Click on the company name to visit their web site.**

*Article or recipe suggestions and submissions are accepted and appreciated. Please provide them by the second of each month.*

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