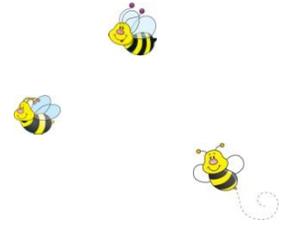


The Skep



President's Corner

Hello Beekeepers!

We had a very special event at the March Meeting. One of our newest members, Erica Shafer, was selected by OSBA as 1 of the 5 winners state wide in their 4H partnership program. Erica was presented with enough equipment to house and manage 2 hives by Joe Kovaleski, our OSBA rep.

Joe Kovaleski also gave a talk on the work being done by the Ohio Queen Producers. He also had a video of the Purdue "ankle biters" attacking a varroa mite. Very scary if you're a mite.

For those of you that missed the Tri County Beekeepers' Seminar in Wooster I wanted to pass on a tip from the keynote speaker Dan O'Hanlon on how to be a millionaire keeping bees. Start with 2 million dollars and do the best you can 😊.

Some members will have received their packages before the April meeting, some will be waiting for their bees to

arrive. Either way, make sure your boxes are set up and ready to go for the new bees.

April's Beekeeper To-Do List includes rotating boxes on surviving hives to put the queen on the bottom and culling out old dark comb and replacing with fresh foundation. Be sure to checker board the new foundation with drawn out comb in the hive. Now is the time to clean out bottom boards and put the debris into a bucket to avoid drawing raccoons and skunks to the apiary.

Don't forget to register your hives and sign up for Ohio Sensitive Crop Registry. The deadline is June 1, 2016.

Keep feeding the bees. I hope to see you at the next meeting on April 17.

Bruce Zimmer

Please join us at the April meeting when [Dave Duncan](#) discusses swarm management, his harvest time product [BeeDun](#) and other beekeeping topics.

April Meeting Details

Speaker [Dave Duncan](#)

Sunday, April 17, 2016

Potluck Lunch 1:00 p.m.

(Bring your own plates, cups and silverware please.)

Meeting 2:00 p.m.

Mahoning County Experimental Farm
7574 Columbiana-Canfield Rd
Canfield, Oh 44406

From Rt 11 North take the Ohio 46 exit toward OH-14. Turn left onto OH-46 North for approximately 6.2 miles. The Farm is on the left across the street from the Canfield Fairgrounds.

From Rt 11 South take exit 34 for US-224 toward Poland/Canfield. Continue on Fairground Blvd. for about 1.7 miles until you reach OH-46 South. Turn left onto OH-46 South. The Farm will be on the right across the street from the Canfield Fairgrounds.



March Meeting Recap

The March meeting was quite eventful! We had two speakers and the presentation of an award along with the usual business meeting and beekeeping discussions.



To start the afternoon Joe Kovaleski from [The Ohio](#)

[State Beekeepers' Association](#)

presented Erica Shafer with her award for the O.S.B.A. 4-H Partnership Program. Erica is one of five students in the state to receive the program scholarship. After explaining the program, Joe granted Erica with enough equipment for two complete hives, a smoker, hive tool and other necessities of beekeeping, along with a one free year membership to O.S.B.A., free attendance to the Fall Convention and the O.S.B.A. Beekeeper Training DVD. Erica and her family have recently joined the Columbiana and Mahoning County Beekeepers' Association and she will be mentored by Bruce Deafenbaugh.

Congratulations and Welcome Erica!

Following the regular business meeting, Joe spoke about O.S.B.A. and the benefits of membership along with providing additional information about the "Save the Honey Bee" license plate that is now offered in Ohio. He went on to talk about having insurance for your beekeeping activities and suggested [Farm Family Insurance](#).



During the discussion Joe shared his experiences and explained why it is so important to be registered and insured.

Continuing from there he encouraged all of us to monitor for mites and stay vigilant throughout the year. Joe is also President of the [Buckeye Queen Producers](#) so we had the opportunity to hear about the benefits of northern queens and he also provided video of his Purdue ankle biter queens. It is amazing to watch the worker bees biting and removing mites in the hive! Joe, thank you for joining us, for sharing your knowledge and for donating the queen for a door prize!



Our second speaker, Dave Coakley, graciously volunteered to demonstrate

his new hives this month before they are placed in his apiary. Dave brought his polystyrene [BeeBox](#) system that he recently purchased from Blue Sky Bee Supply. As Dave explained, the BeeBox system is made of polystyrene and provides a more constant temperature within the hive during the winter and summer months. The temperature stability should reduce the stress on the colony and allow for less

honey consumption. The lightweight construction of the polystyrene makes lifting boxes of brood and honey supers easier and it does not warp or rot. Dave and Marsha have their two new hives assembled, painted and ready for action. Thank you Dave for providing us with an opportunity to see and hear about this cool product! We can't wait to hear what you think of using these components so please keep us informed.

Bee-worthy Blooms

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



Alder Trees (*Alnus incana*): P
Pollen pellets are yellowish green.

Cherry Trees (*Prunus cerasus*): N & P
A major source of nectar but a minor source of pollen.



Dandelion (*Taraxicum officinale*): N & P
Pollen pellets are orange.

Maple Trees (*Acer* spp.): N & P
A major source of both pollen and nectar.

Resources:

Lindtner, Peter. (2014). *Garden Plants for Honey Bees*. Kalamazoo, MI: Wicwas Press.

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



Bob the Bee Man Chmelik was busy removing a honey bee colony from a Campbell home in March. He said swarm season is coming so get ready!

Submission of Samples for Diagnosis

~Samples are accepted from U.S. states and Canada.

~ Include a short description of the problem along with your name, address and phone number or email address.

How to Send Adult Honey Bees:

~ Send at least 100 bees and if possible select bees that are dying or have died recently. Decaying bees are not satisfactory for examination.

~ Bees should be placed in and soaked with 70% ethyl, methyl or isopropyl alcohol as soon as possible after collection and packed in a leak proof container.

~ Just prior to mailing samples, pour off excess alcohol to meet shipping requirements. USPS, UPS and FedEx do not accept shipments containing alcohol.

Do NOT send dry bees.

How to Send Brood Samples:

~A comb sample should be at least 2x2 inches and contain as much of the dead or discolored brood as possible. No honey should be present in the sample.

~ The comb should be sent in a paper bag or loosely wrapped in a paper towel, newspaper, etc. in a heavy cardboard box. Avoid wrappings such as plastic, aluminum foil or waxed paper because they promote decomposition and growth of mold.

Send samples to:

Bee Disease Diagnosis
Bee Research Laboratory
Bldg. 306 Room 316
Beltsville Agricultural Research Center-East
Beltsville, MD 20705

For additional information contact Bart Smith at (310)504-8821 or email bart.smith@ars.usda.gov.

Visit the USDA web page at <http://www.ars.usda.gov/Services/docs.htm?docid=7472>

Honey Bee Pheromones



Honey bee pheromones play an important role in the behavior of honey bees. Being aware of and understanding this chemical

communication is important to beekeepers when making informed management decisions.

A pheromone is a chemical secreted to the outside of an individual that once received by another individual of the same species will result in a specific behavioral response. Unlike hormones, pheromones pass outside the body from one individual to another. They are secreted by exocrine glands, generally as a liquid, and can function in smell and taste form. Pheromones that cause rapid changes in the behavior of a recipient are referred to as releaser pheromones while primer pheromones have slower, long-term effects on the physiology and behavior of a recipient.

Each of the three castes of honey bees have their own pheromones that are recognized by all the honey bees but the most active and vital of these is the queen pheromones that are secreted by the mandibular gland of queen bees, Queen Mandibular Pheromone (QMP). The production of this pheromone is as important to hive function as the queen's egg laying. Scientists and beekeepers refer to this secretion as queen substance. Queen honey bees emerge with a small amount of the pheromone blend but by the sixth day her mandibular gland produces enough of the chemicals to attract drones for mating. Mature, mated queens secrete double that amount each day with a daily peak from 11 a.m. to 5 p.m. Interestingly worker bees attending to the queen pick up the pheromone by antennal and proboscis contact with the queen and each other. They then

pass the substance to other worker bees using the behavior of food transmission.

Queen substance plays many roles in the hive. First it provides inhibition of queen rearing. While queen substance is present in a hive the queen rearing of the worker bees is inhibited. When the supply of the chemical stops or diminishes the workers begin to raise a new queen within four hours of her absence. Next, QMP provides swarm stabilization by keeping the workers together during the swarm's flight and stimulating them to orient to and cluster around the queen when she lands. Queen substance also impacts mating behaviors because it acts as the main attractant for drones to a virgin queen. A mixture of queen substance and Queen Retinue Pheromone (QRP) attracts workers to the queen and forms her court or retinue. The QRP only brings this response from workers when the queen substance is present also. QMP along with other pheromones also influence colony activities such as comb building, foraging and food storage. It increases worker longevity and in smaller colonies where there is more queen substance per bee, it increases the activity of the workers. Knowing this helps beekeepers understand that smaller colonies such as swarms or small splits grow at a more rapid rate than larger colonies.

Another queen pheromone is the queen tergite pheromone. This is the pheromone responsible for worker ovary suppression. In the past this was attributed to queen substance but a group of scientists in British Columbia showed this to be inaccurate.

Worker bees also emit pheromones that are crucial to colony survival and communication. Worker honey bees have two alarm pheromones. The first is secreted by the mandibular glands. Although some scientists disagree that this secretion is an alarm pheromone, they agree that this pheromone is used to mark intruders and warn potential robbers from entering the hive. When guard bees are in their alert posture, this compound has a repellent effect. The

second alarm pheromone, the sting pheromone, is the major alarm chemical. It is secreted from the sting gland and Koschevnikov gland which are located in the sting apparatus. This pheromone is highly volatile, is made up of over 40 different chemical compounds and is released by extending the stinger. Actual stinging also releases the pheromone and marks the enemy for other worker bees. Remarkably this odor remains for up to five minutes. This alarm pheromone scent is said to be that of strong, sweet bananas. Beekeepers often recognize this smell and proceed with caution as they perform maintenance tasks. Using smoke masks this pheromone and aids in this endeavor. Generally worker bees only respond to alarm pheromones in or around their colony while queen bees and drones do not produce or respond to these pheromones at all.



Honey bee workers also have Nasonov scent glands. The pheromone

produced by the gland is released when bees stand high on their hind legs, pointing their abdomen up and tilting the last segment of their bodies down while fanning their wings. This posture is known as scenting. The lemony odor of these chemicals is produced by a group of honey bees marking water, artificial feeding stations, swarm clusters or new home locations after swarming. Recognizing this smell and understanding this behavior is helpful when hiving a swarm. Lemongrass oil elicits a similar response in honey bees making it a useful beekeeping tool to attract bees to water sources and swarm traps. Queen bees and drones detect the Nasonov gland pheromone but they cannot produce it.

Trail pheromone is distributed by honey bees as they walk. This chemical material is deposited by the terminal arolium between the

tarsal claws and by the tip of the abdomen. Worker bees use this footprint substance to mark foraging sites and home entrances. In queen bees, footprint substance inhibits queen cell building within the hive and acts with the activity of QMP and QRP to inhibit queen rearing practices of worker bees. As a queen ages she produces less of this pheromone.

Drones produce their own pheromones as well. Drone pheromone is used to attract other drones to a specific area for mating.

In addition to the pheromones produced by the three castes of honey bees, brood produces pheromones for a variety of purposes. The brood produces brood recognition pheromone chemical (BP) that spurs worker bees to forage for pollen. When brood is not present, pollen foraging behavior diminishes drastically. In contrast, nectar foraging does not seem to be impacted by the brood pheromones. The pheromone is made up of several chemicals and by emitting each chemical in varying amounts the brood communicates to the nurse bees what caste it belongs to and what age it is. This is critical for hive success because the nurse bees then know what type of attention the larvae needs and the feeding requirements. Varroa mites use the brood pheromones also. Mites use the chemical signal that larvae emit telling nurse bees when to cap them. This is how mites know when to enter the cell. Of course this is a subject for another article in another edition.

Chemical communication of honey bees is critical for colony success. Understanding the roles that pheromones play in honey bee behavior will aid beekeepers in making informed management decisions.

Resource:

Caron, Dewy and Connor, Lawrence. (2013). *Honey Bee Biology and Beekeeping*. Kalamazoo, MI: [Wicwas Press](#).



Honey Mustard Dressing

INGREDIENTS:

- 1/2 cup mayonnaise
- 3 tablespoons yellow mustard
- 2 tablespoons honey (plus more, as desired)
- 1 tablespoon vinegar
- 1/4 teaspoon ground black pepper

DIRECTIONS:

1. Add all of the ingredients to a small bowl and stir well to combine.
2. Taste and add more honey, if you prefer a sweeter dressing.
3. Store in the fridge in a covered container for up to 1 week.

Makes 3/4 cup of sauce.

Recipe & Photo courtesy of www.bunsinmyoven.com

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President	Bruce Zimmer	330-547-2273
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Blue Sky Bee Supply	Pigeon Mountain Trading
Brushy Mountain	Queen Right Colonies
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Dadant - American Bee Journal	Valley Bee Supply
Draper's Super Bee Apiaries	Western Bee Supplies
Ernst Seeds	

Click on the company name to visit their web site.



Check out our website for additional resources and information.

www.columbianamahoningbeekeepers.org

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

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