

## **AABA MEETING – MARCH 16, 2015 AT ARLINGTON ECHO**

Lindsay welcomed everyone to our first meeting of 2015 (which has been delayed twice due to snow). 15 people were attending for the first time. Attendance was 53.

### **Announcements:**

Loyd and Doris Luna are enjoying their new home in Alabama. They are currently without bees but have joined a local bee club and hope to find land to have bees next season.

If you have assisted in the past with any aspect of AABA – speaking to groups, educational outreach, etc., please contact Lindsay. We can use assistance in certain areas in the future -- with events, the AABA newsletter, and planning of the AABA Social (September).

### **Presentation: Stressor Effects on Honey Bee Metabolic Physiology**

Dr. Steven Cook gave an engrossing presentation on his research on the metabolic and nutritional physiology of honey bees, including how environmental stressors, like exposure to pesticide residues and overwintering, can affect metabolic processes that occur within the honey bee. Dr. Cook is a research entomologist at the Bee Research Laboratory in Beltsville, MD.

Dr. Cook has found that low levels of exposure to the two most common neonicotinoid pesticides (imidacloprid and clothianidin) cause changes in behavior and weight gain in bee larvae (even more than high levels of exposure, but we do not understand why at this time). The pesticides increase the levels of proteins but decrease the levels of lipids (fats) and carbohydrates stored in the maturing bees. Lipids are important for vitellogenin formation which is important for overwintering. The changes in bee metabolism of these substances due to neonic exposure could be linked to increased colony death over winter.

Bees are able to detoxify some pesticides, but it is energetically costly. Many pesticides that target the neurotransmission system are irreversibly bound so the signal keeps going. The effects depend on the compound, dose, and age of the bee.

Dr. Cook also told us of research by Di Prisco et al (2013) that showed that immune control of viruses is shut down by neonicotinoids.

In ongoing research, Dr. Cook and his team are studying thermoregulation and overwintering physiology of bees. Dietary fatty acids are incorporated into cell membranes, and Dr. Cook is comparing the level of saturated versus polyunsaturated fatty acids in cell membranes to see how well they resist oxidative stress. Fall bees regulate their intake of saturated fatty acids and will forage longer to reach the correct level. The results so far show that the saturated oil fed bees had lower levels of cell damage versus the polyunsaturated oil fed group or a control. Interestingly, queen bees have highly saturated cell membranes. Dr. Cook will find out in the next few weeks how the study bees and controls have overwintered. The AABA will need to follow-up with him.

Another concern is that studies have shown that the half-life of neonicotinoid pesticides in wax is 2.5 years, and the toxins migrate easily from old wax to new wax. This means that larvae are constantly exposed to some level of pesticide.

### **Sense of Results**

It is important to limit bee exposure to neonicotinoid pesticides. Even low doses affect developing larvae and bee metabolism. Beekeepers now are advised to rotate older frames out at least every 3 years to decrease the exposure to pesticides (including miticides) in wax.

The membership thanked Dr. Cook for his relevant presentation.

**Smart on Pesticides Coalition (SOPC):** AABA is one of 5 beekeeping associations in Maryland who are part of the Maryland Pesticide Network . There have been many studies implicating neonics in honey bee deaths over the years. The Pollinator Protection Act (Senate Bill 163/House Bill 605) has had hearings in both houses in the last months. The Pollinator Protection Act has two parts. One would require labeling on plants to identify those treated with neonics for consumers (many treated plants are mistakenly advertized as 'Bee Friendly' plants) The second part would limit use of neonics for household use (this will not affect agriculture, certified pesticide applicators, or veterinarians).

Three nurseries in our area do not use neonicotinoids, Willow Oak Herb Farm, Behnke's and Cavano's Perennials. Beekeepers need to contact their local nurseries to request plants that have not been pretreated or labeling on those that have.

**Winter Losses:** Bart Smith is estimating approximately 20% losses at the Beltsville Bee lab, except for one yard, which they do not treat for varroa, was a 100% loss (this yard was used to obtain mites for studies). This emphasizes the importance of keeping varroa at low levels. Normally he treats two times per year, but this year plans to treat three times, rotating between products. He will be using Thymol (Apiguard or Api-life Var), MAQS (Mite Away Quick Strips), and will be testing Hop Guard II from Mann Lake this spring. Oxalic acid has just been approved for treating varroa, and Brushy Mountain will carry it later this season.

**Business Meeting:**

The minutes from our last meeting in August, 2014, are posted on our web site. The motion passed to accept them as written. Please take a look at them and past minutes in addition to our other website features.

Election of officers: Held in August 2014.

The following people agreed to serve as officers for 2015:

President – Lindsay Barranco

Vice President – Michael Doyle

Treasurer – Pat Beers-Block

Secretary – Debbie Hewitt

Chairlady, Publicity – Amy Jameson

Chairman, Programs – Bart Smith

Chairperson, Competition – Amy Jameson/Michael Doyle

Chairman, Awards – Dwight Fielder

Chairman, Refreshments – Heather Hatfield/Jessica Seabright

Extractor Operations – Chrissy Perry

Librarian – Carl Guerci, Jr.

Web Master – Ollie Snyder

Jar Orders--Linda Elliot

**Treasurer's Report:** Pat Beers-Block reported \$5506 in the bank, but we will have course expenses of \$765. The board voted in February to increase member dues of \$3 to \$5 to help cover costs of courses, equipment for Arlington Echo, library books, speakers' honorariums, etc.

**The CDR Mumford award:** The 2014 Award was presented to Pat Beers Block for her creative game, *Bee Smart*. Congratulations Pat!

**Arlington Echo changes:** Jessica Seabright will be our AABA contact.

**Anne Arundel County Fair:** Michael Doyle will speak at the next meeting regarding trying to increase AAC entries this year, including wax entries.

**Mentoring:** Begins with beekeepers meeting beekeepers in their areas. Please get to know one another - We could use mentors – please let Lindsay know if you are interested in helping out by phone or in person.

We have a mentoring request from an AABA member in Annapolis (near Annapolis HS) looking for someone who can help with 2 top bar hives – if you can help, please let Lindsay know.

The Jessup Correctional Facility for women would like our club to help them set up a beekeeping program. We will need to get more details.

**Hive examinations and Hive Hops:** We discussed having additional hive visits this year on off-meeting months at Arlington Echo (May, July, September...). Lindsay will send out emails about this as dates are known. Jim Larson suggested we have Hive Hops, where club members will host a group from AABA so we can see what is happening in other beehives (and learn from one another). A sign-up sheet was passed and a number of members signed up to host as well as to attend.

**Beekeeping Short Course:** The course began on February 24th with 63 students. Additional sessions are scheduled for March 17, March 24, April 7 and April 11. AABA has had over 200 inquiries about the short course. Other education opportunities – UMD class March 28/29 weekend and possibly a UMD extension course on Saturday April 25<sup>th</sup> (overview of beekeeping). If you know anyone who might be interested in the April class, please contact Lindsay.

An interesting note: The grandson and great-grandson of CDR Mumford (a founder of AABA in 1964) are taking the Short Course this year.

**River Fest:** We have a request from Jeff Holland the river keeper for the West and Rhode Rivers, to have a beekeeping display for River Fest in

Shady Side on Saturday June 6<sup>th</sup>. Dave Clark volunteered to create a display.

**Sentinel Hive Project:** We discussed being part of the University of MD Honey Bee Diagnostic Lab Sentinel Hive Project. It will run from mid-May through fall and collect data on hive weights (nectar/honey flows), pollen sources, and parasite monitoring. A full description of the project is in the Arundel newsletter (January 2015). The Board met and talked about Arlington Echo as one location, but a second location in AAC is possible. Any member, who has 4 colonies and has an interest in it, please let Lindsay know.

A show of hands supported being part of the Sentinel Hive Project and using club funds for the purchase of a hive scale for the second Sentinel Hive location, for mailing samples to the UMD Bee lab and other related Sentinel Hive funds if needed or decided by the board.

**REGISTER YOUR BEES WITH THE MARYLAND DEPARTMENT OF AGRICULTURE!!** Applications are available (online). Cybil Preston Maryland State Apiarist. Maryland law dictates that you must register your bees. Please do it now! Apiary inspectors inspect for pests and diseases (contagious honeybee diseases like AFB, etc.)

**News about Apiary Inspection Program : Maryland experienced a funding loss of 5 inspectors recently, but funding was restored and inspectors are expected to begin working in April 2015.**

**2014 End of year numbers:**

	<b>2014</b>
MD Beekeepers Registered	1,836
MD Colonies	14,412
# of registered apiary locations	2,376

**Email system:** AABA is in the process of switching from its old cumbersome system to mailchimp. Thanks to Ollie Snyder for his expertise. We will try to limit emails to 1 time per month or less.

**Flow Hive:** Matt Zinder shared with the club an interesting Youtube video of the Flow Hive. He and another member will be testing this hive's honey super with its novel method of removing honey without disturbing the bees.

**Future Meetings:** Set your calendar for future meetings on April 21, June 17, August 18 and the MSBA Honey show on November 14, 2015.

The door prize drawing, a hive top feeder, was won by Jen Geratz .

The meeting was adjourned at 9:00 pm.