April 2016
Volume No. 4

The Pennsylvania Beekeeper

The Official Organ of the Pennsylvania State Beekeeper's Association

News 'n Views...

The Apiary Advisory Board met in mid-March. A portion of the meeting dealt with reviewing rule #13 of the Best Management Practices for keeping honeybees.

> 13) If all hives are situated at least 200 feet in any direction from all property lines of the lot on which the apiary is situated, **or** as long as all adjoining property that falls within a 200 foot radius of any hive is undeveloped property, **or** in areas zoned agricultural, or if the hives are being used for crop pollination, **or** locations otherwise compliant with the applicable Commonwealth, Federal, and local laws, there will be no limit on the number of hives on the property.

The rule is intended to not place restrictions on commercial beekeepers and pollination practices. It was being interpreted for urban/suburban type locations. Pennsylvania Department of Agriculture will have the discussed changes/clarifications reviewed by the legal office before it is released.

The remainder of the meeting was devoted to discussion and organizing guidelines for the Pa Pollinator Protection Plan. Within that plan will be consideration for seeking good hive locations. Not all the places we put bees are good. Some forage is better than others. Some areas have very little to offer. So, part of our plan for protecting our bees should be by locating them in locations where the potential for success is better.

Writing the plan has been divided between various stakeholder groups. Each group will write a portion relevant to their interest. The various pieces will come together for review from the entire board before it is final.

A very exciting study is in development regarding colony placement and landscapes. Penn State's Center for Pollinator Research is teaming with Franklin and Marshall College to do this study. To be truly successful, the study will need the help of Pennsylvania beekeepers. The study will be looking for stationary locations with 5-10 hives. Beekeepers will record monthly hive weights, honey production and include protocols for varroa mite monitoring and control. The landscape surrounding the apiary will be mapped and the type of forage identified. With enough data collected, there should be a pattern to identify what type landscapes yield better honey crops and perhaps have better survivability. Some limited studies have been done that suggest colony health is better in agricultural lands compared to forested land. However, to base conclusions on one study, in one geographic area may not be truly valuable. The hope of this study is to gather data from all regions of Pennsylvania, from forest, agriculture land, urban, suburban, marshy, mountainous and flat lands. Environmental conditions and seasons within Pennsylvania can range dramatically from corner to corner and north to south.

Every beekeeper, from the novice to experienced, needs to be able to make a reasonable assessment of an area before placing hives there. The future of beekeeping tools may likely include Google Maps and a hive scale. In any other animal husbandry, things like adequate food and nutrition are considered. These are directly related to things like how many eggs are produced, milk production and weight of the livestock. Perhaps if could see 'skinny-ribs' showing on our hives or they constantly scratched themselves, we could be better beekeepers.

The study will soon be looking for people like you to be a 'citizen scientist'.
This project has been just an idea for a few years. It has gathered the attention of some very talented and enthusiastic researchers. Momentum has moved quickly in the past couple months and the study would like to begin THIS season.

Until a few more things are in place, anyone interested may contact any of the PSBA board or leave your contact info with the Beehelp email on the website.

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In This Issue

News 'n Views (Continued from Page 1)

PSBA will once again attend the Pennsylvania State Association of Township Supervisor (PSATS) convention at Hershey Lodge in April. PSBA will attend with an information booth and have information to assist townships or municipalities in guiding regulation. Regulations are not the first option. Philadelphia is a shining example of no regulation and how well it can work. The Philadelphia Beekeepers Guild and surrounding associations do a tremendous job of self-regulation to assure it's done in a safe and responsible manner. PSBA offers model ordinances from townships that felt it necessary to adopt some type of law. These ordinances are modeled closely to the Best Management Practices and are not overly restrictive. We discourage added fees or permits, as beekeepers are already offering a benefit to the local environment and all costs associated with keeping bees.

PSBA attendance at the previous PSATS Convention was a positive benefit that allowed us to get ahead of some potential problems and give guidance that otherwise could have had negative consequences. The benefits of an offensive posture are much more successful than trying to reverse poor or emotional decisions later.

All counties and associations: Please forward updated 2016 information, such as officers, contact information, beginner classes and meeting schedules to Yvonne Crimbring, PSBA Secretary-Treasurer pastatebeekeepers.org webmaster@ and Ken Hoover for the PSBA website

Charlie Vorisek,
President PSBA
president@pastatebeekeepers.org

Nature Notes

A tip of the hat to **weather forecasters** who not only tell us when rain or snow is on the horizon but also **how much** and **when** the weather will start. We have progressed from watching **clouds** and the **barometer** to the **telegraph** alerting cities to the weather from other nearby cities, to **wireless** which allowed ships to warn of approaching storms from sea, to **satellite imagery** which shows the movements of whole weather systems.

April is **wildflower** month. Among many different April wildflowers are dime-size, white **spring beauties** already blooming in the woods. The fifty-cent size, rayed, single white flowers of **bloodroot** will show on woodsy road cuts. **Redbud** tree branches will be sheathed in tiny magenta blooms. In the woods, **bluebells** or **Brandywine cowslips** open bell-shaped flowers. Last to bloom will be the delicate yellow flower with three names: **trout lily**, **adder's tongue**, and **dog-tooth violet**

Bloodroot Flower
(Creative Commons:
Janet Powell, 2007)

In Chester County honeybee colonies, the **queen** should already be laying more than a **thousand eggs a day** producing the worker bees that will gather nectar from locust and tulip poplar trees in May. **Bumblebees** reappear in the garden and male **carpenter bees** hover, patrolling the area in front of a nest tunnel in an unpainted bit of our wood homes. The male carpenter bee has a white or yellow patch on his forehead and cannot sting. Only female insects sting.

Pickerel frogs call from the edges of lakes and ponds in early spring: a short, sharp snore sound sometimes from under the surface. Yes, **toads** can sing and we hear their single-note, drawn out trill in the evening. **Phoebes** are nesting below an overhang in a nest made mostly of moss. Phoebes dip their tails every few seconds to help us identify them.

Two early wood warblers are migrating through Pennsylvania in April: **Yellow-rumped warblers** show their bright butter-butts as they hawk insects in oak trees. **Palm warblers** may be foraging for insects on the ground; they dip their tails like phoebes. **Ruby-throated hummingbirds** appear at the end of the month. One tablespoon of white sugar to four tablespoons (1/4 of a cup) of water. Red dye is not needed. Hang the feeder where rainwater will not dilute the hummer food.

Why does **Orion** look so much smaller now that we see him farther up in the sky? Orion's bulk near the horizon is an **optical illusion**. Bend over and look at the rising full Moon between your knees. This contortion breaks the illusion of the huge Moon. Orion has two shoulders and two knees, each marked by a bright star. Starting from the shoulder directly above his belt and moving clockwise: Orion drank some beetlejuice (**Betelgeuse**), which gave him belly tricks (**Bellatrix**), so he had to drink some Di-Gel (**Rigel**) to be safe (**Saife**). Thanks, Shane Hadden, for this mnemonic.

Jupiter is nearly opposite the Sun and rises soon after sunset, dominating the eastern sky. High in the northeast, the **Big Dipper** stands on its handle. A line left from the top two stars, the front edge of the dipper, leads to Polaris, the North Star. A line to the right leads to **Regulus**, the dot at the bottom of a backwards question mark. Regulus is above Jupiter this month. The question mark is the fluffy head of **Leo, the Lion**.

Tim Sterrett

Why Did My Honey Bees Die?

Learning To Identify a Common Cause of Winter Death in Northern Climates

Meghan Milbrath, Michigan State University Extension, March 3, 2016

Beekeepers in northern climates have already lost a lot of colonies this winter. While official counts won't be recorded for a few months, some trends are starting to emerge. One of these trends is a specific type of colony death. In Michigan, I've received so many calls describing the scenario below, that I can describe the deadout before opening the hive, or before the beekeeper describes it over the phone. While I may impress some with these predictive powers, the frequency of these types of losses indicates a real epidemic that is affecting honey bee colonies in northern states.

Characteristics of the common early winter death in northern states:

1. The colony was big and looked healthy in the fall
2. A lot of honey is left in the top supers
3. The cluster is now small, maybe the size of a softball
4. There are hardly any bees on the bottom board
5. Near or just below the cluster is a patch of spotty brood – some fully capped, and some with bees dying on emergence (heads facing out, tongues sticking out).
6. If you look closely in the cells around the brood, you will see white crystals stuck to the cell walls, looking like someone sprinkled coarse salt in the brood nest.

AND

7. You don't have records showing that varroa was under control.

Sound familiar?

We see this classic set of symptoms over and over in the states with a proper winter. A big colony that seems to just shrink down and disappear. Many people want to use the term colony collapse for this type of death, and while collapse is a good descriptor of what happens, this is not true colony collapse disorder. This is death by varroa associated viruses.

How does it happen?

1. **The big colonies** –While beekeepers are often surprised that their big colonies are the ones that are gone first, it makes perfect sense in terms of varroa growth. Since varroa mites reproduce in capped brood, the colonies that made the most brood (i.e. got the biggest) are the ones most at risk of having a high population of varroa. Colonies that swarmed, or didn't take off, or even fought a disease like chalk brood are less at risk from high varroa populations, because they didn't consistently have large amounts You should have good notes indicating cluster size going into winter, but even if you don't, you can see the large circle of food eaten by a large cluster.

This colony had a large brood nest (indicated by the dark comb in this frame from the top deep box), and a large cluster going into winter (indicated by the large amount of honey that is eaten away where the winter cluster started). Varroa were never monitored or managed in this colony, and it was dead by February, if not sooner. (Photo by Meghan Milbrath)

2. **Lots of Honey** – Lots of honey means that the colony died fairly early. Colonies with high levels of varroa, they tend to die fairly early in the season (before February), leaving lots of honey behind. Once the bees are stressed and in cluster, the viruses take their toll very quickly. In some cases the colony will even abscond in fall, or be dead before winter really hits.

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Why Did My Honey Bees Die? (Continued from Page 5)

The colony shown on Page 5 had a third deep box that was filled with capped honey, indicating that the bees died early, and starvation was not the culprit.

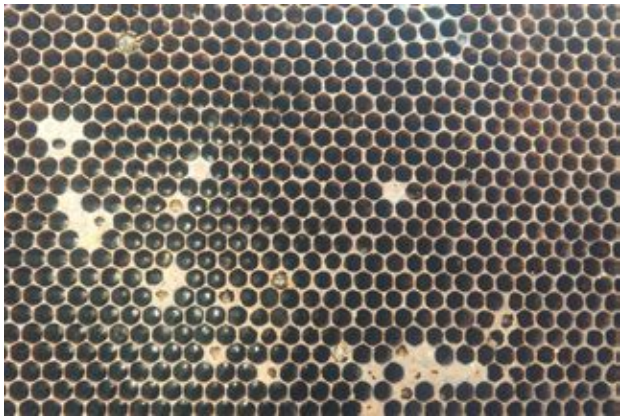
3. **Small cluster** – Varroa levels peak right when the winter bees are getting formed. The bees that emerge from varroa infested cells are weakened, and more importantly, are riddled with viruses. Varroa mites are notorious for carrying deformed wing viruses (DWV), but are known to transmit many more. When bees are close tight in a winter cluster, the viruses can spread very quickly.

   In our colony, the cluster was only the size of our hand – some bees had their heads stuck in the cells, trying to stay warm, others had fallen between the frames.

4. **No bees on the bottom board** – When a colony starves, the bees just drop to the bottom board, and you end up with a pile of dead bees in the hive. When bees get sick with viruses and other pathogens, however, they often will fly away. Sick bees by nature leave the colony to die in the field, an act designed to prevent pathogen transmission in the colony. When most bees are sick, they either fly away, or are too weak to return after cleansing flights. An early fall illness means that a lot of the bodies probably got removed by workers too.

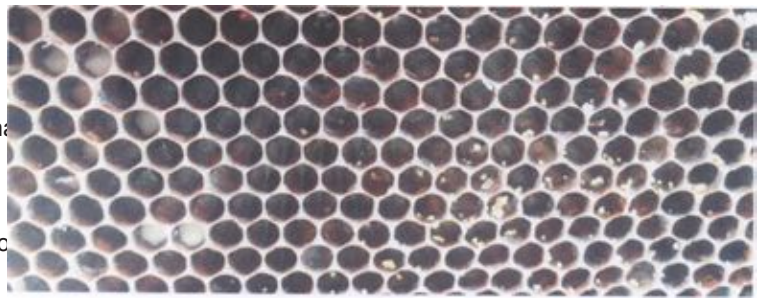
   The colony we examined had only a few bees left on the bottom board (1-2 cups). We didn't see a lot of varroa, but there had been some robbing, so wax cappings covered a lot of the board.

5. **Patch of spotty brood/ Bees dying on emergence**– When a colony succumbs to varroa associated viruses or parasitic mite syndrome (PMS), we see a lot of effects in the brood. Unlike American Foulbrood (AFB), which attacks the larvae at one particular stage, PMS will affect developing bees at many stages of development. It is one of the only diseases where you see bees dying right as they emerge.



Note the bee in the upper left is fully formed, and died on emergence. You can often see frozen/melted larvae along with dead pupae. Many beekeepers instantly suspect AFB, but AFB infected colonies usually will not be large and have produced a lot of honey going into the winter. (Photo by Meghan Milbrath)

6. **White crystals in the brood** – Around the cells where the brood died (the last place of the brood nest), you will often see white crystals stuck to the walls of the cells. These are dry (not suspended in liquid like crystalized honey), and are the crystalized pee of varroa. Varroa mites defecate in the cells, and the resulting guanine crystals are left behind, and visible to the naked eye.



Cells on the right hand side of this photo contain small crystals of guanine acid, indicating varroa defecation. Notice the dry, irregular shape, and tha they appear stuck to the walls on the cells. Some cells on the left hand side of this photo contain crystalized sugar. Note the wet/liquid appearance, and that it is largely in the bottom of the cell. (Photo by Meghan Milbrath)

7. **No records that varroa was under control.**Notice that this says 'varroa was under control', and not that 'the colony was treated'. You may have applied a treatment, but it may have been too little, or (more likely) too late. This year

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Subscription Rates

(These are for PSBA members ONLY!)

American Bee Journal		Bee Culture	
1 year	$21.00	1 year	$25.00
2 years	39.75	2 years	48.00
3 years	56.25	3 years	69.00

(Regular Rates)

The Small Beekeeper's Journal
$18.00
(Regular Rate)

Please send 6 weeks before subscription runs out as we send them in once a month.

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Address Changed?

If you have changed your address (mail, email or temporarily away) please notify secretary Yvonne Crimbring. We have been receiving newsletters returned by the post office due to "temporarily away" or "incorrect address". This costs the association .57 per returned newsletter. Also please update your email address if you have made a change. These returns prevent you from receiving information pertaining to beekeeping and our association.

In order to reflect the interests of all facets of Pennsylvania beekeeping, articles submitted for publication may on occasion express ideas contrary to the philosophy of the P.S.B.A. or a majority of its members.

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Application for New and Renewal Membership
Pennsylvania State Beekeepers' Association

❑ $1.00 Junior Membership (under 17) annual dues
❑ $20.00 annual dues ❑ $25.00 family dues ❑ $200.00 Lifetime Membership
I understand the dues entitle me to the Newsletter and all other benefits of membership.

Name _____

Address _____

City _____ State____ Zip _____ Telephone _____

Email _____ County _____

❑ New ❑ Renew

Make checks payable to: PA State Beekeepers Association
Send to: Yvonne Crimbring, 2565 Southside Road, Canton, PA 17724

Why Did My Honey Bees Die? (Continued from Page 7)

was a particularly difficult year for this, because in Michigan we had a really late summer – it stayed warm enough for beekeepers to go into their hives well into October. Many beekeepers took the extra time to put on a varroa treatment, thinking that they were lucky to get one in. While that treatment could help the bees for next season, it was too late for this winter. September and October treatments would have been applied after varroa had gotten to their winter bees. Winter bees are born in the fall, and with their special fat deposits that allow them to live through the winter months, they are the one who carry the colony to the next season. If the winter bees have already been infected with viruses, the damage is done. No amount of treatment or varroa drop would bring the colony back.

The only way to know that you have varroa under control is to monitor using a sugar roll or an alcohol wash. Just looking at the bees does not work; varroa mites are so sneaky, that you rarely ever see them, unless the infestation is out of control, and it is too late. Many beekeepers say that they never see varroa in their hives, so they don't think that they have a problem. In fact, a varroa infested hive can actually look like it is thriving. Underneath the lovely brood cappings, and away from our view, the mites are reproducing and biting the developing bees. The colony can look fairly healthy until the mites reach a threshold, and the colony succumbs to disease. By the time you see parasitic mite syndrome, or see varroa crawling on bees, it is often too late for that colony (especially if winter is just around the corner). Getting on a schedule of monitoring and managing mites will give you peace of mind that your healthy looking colony is indeed healthy.

The silver lining

If the above scenario is familiar, don't despair. First, you are not alone. Many beekeepers got caught off guard with varroa this year. They didn't realize how bad it was, or got thrown off by odd weather patterns. Second, when the bees die, the varroa mites die too. We don't yet have evidence that the viruses would stay in the equipment, so you can reuse your old frames. The honey that is left can be extracted to enjoy (if you didn't feed or medicate), and frames of drawn comb can be given to new colonies. Most importantly, if you recognize the above scenario in your colonies, you now have more knowledge as to what is harming your bees, and you can take positive action. You have time for this season to develop a strategy. Monitor your varroa mite levels using a sugar roll kit (available at pollinators.msu.edu/mite-check/ or at Mann Lake), read about integrated pest management for varroa, and make a commitment to prevent high mite levels this year before your winter bees are developing. This is going to be the year!

Meghan Milbrath, Ph.D.
mpi@msu.edu /517-884-9518

March Honey Queen Report

March was a very exiting month for my travels as the Honey Queen. I had my first school visits during my spring break. During this week, I visited four elementary schools: Robeson Elementary, Willow Lane Elementary, Mount Nittany Elementary and Corl Street Elementary. Between these schools, I gave 12 presentations and spoke to more than 450 elementary students from first through third grade.

To start off these presentations, I visited my own elementary school, Robeson Elementary in Berks County. This was a great experience talking to all the first, second and third graders about honey bees and beekeepers. They all had great questions and were eager to learn more. It was also good to visit with the teachers I had when I went to school there.

Later that day, I visited Willow Lane Elementary School where I spoke to five classes of second graders. Like the previous school, they were all very enthusiastic to learn about honey bees. When I arrived at the second classroom at Willow Lane, I was about to start my presentation when a girl in the front raised her hand and proceeded to tell me that I had lost a jewel from my crown. So, she walked up to me to give me the jewel… but it was a chunk of road salt. A few weeks after visiting Willow Lane, I received a heartwarming video from the students of one the classes I visited telling me everything they had learned about honey bees that day. To see this video, check out the PA Honey Queen Program Facebook page.

To end my school presentations for the week, I visited Mount Nittany Elementary School and Corl Street Elementary School, both in State College. Many of these classes knew that I was coming for a few days and were all ready to ask questions when I arrived.

After four wonderful school visits, I ended the week at the Chester County Beekeepers Association Annual Beekeeping Conference. This was a great experience to network and speak with beekeepers. During the conference, I attended a few talks on urban beekeeping, resource hives, and local bees and queens.

I hope to attend many events in the future. If you would like to invite me to your event, please contact Rachel Bryson at honeyqueen@pastatebeekeepers.com or 717-300-0146.

Sarah McTish

Upcoming Dates To Remember

Deadline for the May issue of *The Pennsylvania Beekeeper* is April 26th.

Backyard Beekeeping Classes
Wednesdays, April 6, 13, 20 and 27, May 18 and 25 from 5:30 p.m. to 7:30 p.m., Seven Valleys, PA. Introductory classes for those with an interest in honey bees but with no prior knowledge. Pre-registration is required as class size is limited. For further information, see article on Page 7 or contact Jeremy Barnes at honeybeewhisperer@gmail.com

North East PA Beekeepers
Wednesday, April 6, 7:30 p.m. at 32 Comm St., Honesdale. Contact Charles Kinbar at 570-497-6402, email: purepa-honey@gmail.com for more information.

Susquehanna Beekeepers of NEPA
Friday, April 8, 7:00 p.m. at the Claverack Bldg., Montrose. Contact Jim Perkins at 570-967-2634 or visit www.susquehannabeekeeping.com for updates.

Beginner Beekeeping Field Day
Saturday, April 9 (weather permitting), at the Swamp Fox Apiary, Chambersburg. Demonstrations of hive products and uses, installing packages and nucs, along with how to do a hive inspection (hands on). If interested in attending, contact Richard Paine at 717-375-2352 for additional information and directions.

Lackawanna Backyard Beekeepers
Tuesday, April 12, 6:30 p.m. at the Abington Community Library, Clarks Summit. For additional information, contact Renee Czubowicz, 570-335-3091 or Dr. Maggie Miller, 570-877-3064 or visit the club's website: lackawanabackyardbeekeepers.blogspot.com

Lycoming County Beekeepers
Tuesday, April 12, 7:00 p.m. at the Borough Hall, Montoursville. For more information, contact Darryl Rebuck at 570-435-0445.

Lehigh Valley Beekeepers
Wednesday, April 13, 7:00 p.m., at the LCCC, Schnecksville. Rearing Queens presented by Brett Dyer. Visit LVBA website or contact Brett Dyer at 484-553-2967 for more information.

Monroe County Beekeepers
Wednesday, April 13, 7:00 p.m. at the Monroe County Conservation District, Stroudsburg. Visit the website: www.monroecountybeekeepers.org for more information.

CABA, Lancaster & York County Beekeepers
Tuesday, April 19, 7:00 p.m. at the York County School of Technology, York. Dr. Heather Matilla from Wellesley College will present two topics: How Well-Mated Queens Will Improve the Productivity of Foraging Workers, and The Effect of Early Nutritional Stress on Bees as Adults. Visit the website www.ycbk.org for more details or contact Jeremy Barnes at honeybeewhisperer@gmail.com

Northwest PA Beekeepers
Saturday, April 23, 1:00 p.m. at Our Lady of the Lake Church social hall, Edinboro. For more information, contact Deb Chilcott at 814-398-8520 or visit the website www.nwpa-beekeepers.com

Beaver Valley Area Beekeepers
Monday, April 25, 7:00 p.m. at the Beaver County Conservation District Wetlands, Speaker: TBA. Contact Pattie Zyroll at 412-848-3506, email pattie.zyroll@elkem.com or visit the website beavervalleybees.com

Montgomery County Beekeepers
Thursday, April 28, 7:00 p.m. at the 4-H Center, Skippack. Sara Hall of PECO will discuss mgt. of rights-of-way and their potential as honey bee forage. Contact Dan Boylan, dpboylan83@gmail.com or visit the website: www.montc-obeekeepers.org for more information.

North East PA Beekeepers
Wednesday, May 4, 7:30 p.m. at 32 Comm St., Honesdale. Contact Charles Kinbar at 570-497-6402, email: purepa-honey@gmail.com for more information.

Beginner Bee Out-Yard Demonstration
Saturday, May 7, 12:30 p.m. at the Railroad Supervisor's Club, Baden. This is a hands-on workshop for Prospective or Beginning Beekeepers. Contact Pattie Zyroll at 412-848-3506, email pattie.zyroll@elkem.com or visit the website beavervalleybees.com

29th Annual Short Course
Saturdays, May 7 and May 14 hosted by the Capital Area Beekeeper's Association. Part 1: Saturday, May 7, 8:00 a.m. at the Dauphin County Agriculture & Natural Resources Center, Dauphin. Part II: Saturday May 14, 12:00 noon at Strites Orchard, Harrisburg. Cost: $50 (includes a CABA membership and the Penn State Book, "Fundamentals of Beekeeping"). For additional information visit cabapa.org, or contact John Novinger, 717-365-3215, email jdnovinger@epix.net

Franklin County Beekeepers
Monday, May 9, 6:00 p.m. at the Swamp Fox Apiary, Chambersburg (weather permitting). Newbie Check and Summer Meeting. Topics to include: Feeding, dearths, supers, swarming, moving, splitting, combining, alternative equipment and robbing. If interested in attending, please contact Richard Paine at 717-375-2352 for additional information and directions.

Lycoming County Beekeepers
Tuesday, May 10, 7:00 p.m. at the Borough Hall, Montoursville. For more information, contact Darryl Rebuck at 570-435-0445.

Lehigh Valley Beekeepers
Wednesday, May 11, 7:00 p.m., at the Northampton Community College, Bethlehem. Part 1: How to keep a Nuc and their advantages. Part 2: Organic Beekeeping. Visit LVBA website or contact Brett Dyer at 484-553-2967 for more information.

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Upcoming Dates (Continued from Page11)

Lackawanna Backyard Beekeepers
Thursday, May 12, 6:30 p.m. at the Abington Community Library, Clarks Summit. For additional information, contact Renee Czubowicz, 570-335-3091 or Dr. Maggie Miller, 570-877-3064 or visit the club's website: lackawanabackyardbeekeepers.blogspot.com

Susquehanna Beekeepers of NEPA
Friday, May 13, 7:00 p.m. at the Claverack Bldg., Montrose. Contact Jim Perkins at 570-967-2634 or visit www.susquehannabeekeeping.com for updates.

Montgomery County Beekeepers
Thursday, May 26, 7:00 p.m. at the 4-H Center, Skippack. Master Gardener Rebecca Boylan will present pollinator gardens for honey bees. Contact Dan Boylan, dpboylan83@gmail.com or visit the website: www.montcobeekeepers.org for more information.

York County Beekeepers
Thursday, May 26, 7:00 p.m. at the York County School of Technology, York. Visit the website www.ycbk.org for more details or contact Jeremy Barnes at honeybeewhisperer@gmail.com

EAS 2016
July 27-29, at the Richard Stockton University, Galloway, NJ. Short course to be held July 25-27, 2016. For additional information, visit easternapiculture.org

PSBA Summer Picnic
Saturday, August 6 hosted by Fisher Bee Farm, McVeytown. They will be roasting a pig for the main course, guests are asked to bring a side dish, dessert or drinks to share. Also, please bring a lawn chair. The hosts will also be furnishing the plating, cutlery and napkins. The only organized activity is breaking bread with fellow beekeepers.

The Executive Board will be meeting in the morning, time to be announced and directions will be in May's newsletter.

2016 PSBA Annual Conference (Note new location)
Friday and Saturday, November 11 & 12, at the Days Inn, State College. The theme is Audacious Ideas for the Future of Beekeeping and the keynote speakers will be Mark Winston and Keith Delaplane.



IF THE READER WHOSE MEMBERSHIP expires 6/16 and receives the newsletter at 1949 Stoverstown Rd., Spring Grove, PA will send his/her name and an account of his/her beekeeping operation to the editor at 2565 Southside Road, Canton, PA 17724 by May 14th, he/she will receive a years free subscription to either *Gleaning in Bee Culture*, *American Bee Journal*, or *The Small Beekeepers Journal*. When you respond, please specify your choice of magazine.

Jeremy's Corner

In a recent interview on NPR, Shankar Vedanta explained that what we learn early in life is embedded in our brains, and cited as examples acquiring a language or learning to ski. He described new research by Laura van Berkel at the University of Kansas that applies this rationale to our attitudes toward fairness. Most of our early relationships are hierarchical, e.g. parent/child, or teacher/student, but as we grow older many of us learn to think of relationships in more egalitarian terms, eg. a marriage as a partnership between equals.

For most of us childhood was not a democracy; the traits of self-responsibility and self-reliance had to be learned with increasing maturity. And it is not an easy transition. As Shelley Berman observed, we teach reading, writing and math by having children do them; we teach democracy by lecture.

But if the things we learn first are entrenched in the brain, then hierarchical ways of thinking underlie most of our thought processes.

Shankar continued by applying this to public policy. For example, someone who wants a more egalitarian world will find income inequality bothersome, whereas others might be more satisfied with a stratified society divided into high-status and low-status people based on income.

Van Berkel's theory is that for many of us, hierarchical thinking comes more easily and automatically, whereas egalitarian thinking requires more effort, just as speaking one's first language comes more naturally than speaking a second language.

To test this hypothesis, and under the assumption that when people are drunk they are less inhibited and tend to reveal hidden attitudes, Laura stood outside bars in downtown Lawrence, Kansas, inviting people to answer survey questions designed that would reveal leanings toward hierarchy or equality, and then asked them to blow into a breathalyzer.

The findings we're twofold. The first, not surprisingly, was that the higher people's blood alcohol content, the more they gravitated towards hierarchy and power; the second was that ideology did not affect the outcome. Both liberals and conservatives endorsed hierarchies when they were drunk, and the drunker they got, the more they stepped away from egalitarianism.

A follow-up experiment involved a game in which people were asked to divide resources. The finding? - when people are distracted or under time pressure, they also tend to fall back on primary ways of thinking and support hierarchical systems. In the instance of this game, people given less time to think were more likely to divide the resources unfairly and to endorse existing hierarchies.

Most of the on-line comments on this report were

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Jeremy's Corner (Continued from Page 13)

acrimonious and hostile, in that despite the finding about ideology most respondents immediately saw the story in political terms, not least public radio's supposedly liberal bias.

For me, there were two different conclusions, one of which (surprise, surprise!) involved honey bees. The first is that we live in stressful times, so it is very tempting to forego equality in favor of hierarchy, not least in the belief that the powerful and the strong will provide leadership and protection. As a civilization we've experienced this kind of social Darwinism many times before. For example, in 1795 the French accepted Napoleon Bonaparte as a proven strong and ruthless man who would rescue them from the hardship and chaos of six years of revolution. And in the stressful times of the First World War and the depression that followed it, not least in Russia and Germany, the electorate was prepared to exchange liberty for security. The public voted for men (and they were all men) who promised to keep them safe even if it meant infringing on their freedoms. An intriguing question is how and why 19th century Germany, the country of Mozart and Beethoven and Goethe and Schubert and Mendelssohn and Brahms, became the twentieth century country of Hitler, Himmler, Goering and Goebbels.

Because of the prevailing cultural norms a colony of honey bees was initially seen as a hierarchy ruled by a king. Only in 1586 was it recognized that the head of the honey bee colony is a female. Shortly after Queen Elizabeth I died, her beekeeper, Charles Butler, published *The Feminine Monarchie* (1609) in which the bees are described as loyal to the queen, refusing any type of anarchy or oligarchy, and laboring incessantly for the good of the commonwealth. It was a description of the ideal Elizabethan society, assuming an all-powerful feminine ruler, and with hindsight was an interesting precursor to the turmoil of the English Civil War.

Perhaps the 19th and 20th century struggles for a more egalitarian society, as expressed in realms such as gender, civil and sexual rights, and democratic participation, were necessary before we could see the queen bee not as a matriarch but as a superb ovipositor without maternal or controlling instincts. We realize increasingly that a colony is a complex decision-making organism with much of the initiative coming from the workers, and the queen responding to the environment they create.

So the question becomes, do the bees revert to a more hierarchical behavior as stress in the colony increases? I'm not certain there is a definitive answer to this but surveillance of an observation hive suggests not. The workers seem to understand that the survival of the queen is critical for the continuation of the colony and, in my observation, right until the last minute the queen is protected, groomed and fed. No one bee, worker or queen, seems to be acting for her own particular survival, none seems to assume that she is superior to any other. The workers are not making decisions for their own self-benefit but for the long term survival of the colony.

Similarly the decision to swarm is high stress for a colony. Their future depends on it, they only have one chance at getting it right, and they have to do so within a definitive and restrictive timeline. There is no leader, no arbitrary decision maker; rather an egalitarian process that has been honed over millions of years is honored despite the immense pressure.

I have yet to hear a researcher say, "The more I study honey bees the more I realize how dumb they really are." On the contrary, we are invariably amazed at the intricacy of their lives, not least the sensitive relationship between the individual and the community, and as such they remain to me at least, a source of wonder and inspiration.

Jeremy Barnes

Editor's Note: *"The Pennsylvania Beekeeper"* will be publishing two issues before the summer picnic. The May issue deadline will be April 26th and the combined June-July issue deadline will be June 13th. Associations please send your meeting dates and/or club newsletter to Yvonne Crimbring, PSBA Secretary-Treasurer webmaster@pastatebeekeepers.org and Ken Hoover for the PSBA website _____ if you would like to have them published.