



PROPOLIS

OFFICIAL NEWSLETTER OF THE
MONROE COUNTY
BEEKEEPERS ASSOCIATION
www.monroecountybeekeepers.com

President's Message

I was so proud of all of you who attended the March meeting. Although our speaker was unable to make it due to vehicle problems (he got stuck in the mud at one of his northern apiary locations with no cell phone service and had to walk out to find help to pull him out – by the time he got back it was too late to make the meeting) it was wonderful to see our oldies step up to the plate to fill in and share their experiences and advice with our newbees.

I checked our club apiary and two of the three hives are doing great. I closed up quickly after putting on some of my special recipe pollen patties (still got one sting – I'm batting a thousand this year on apiary visits but my hip doesn't seem to hurt so much). The third hive, which was a swarm captured late in the season, didn't make it in March. The cluster was too small to get to the food during that big snowstorm. I cleaned up the hive and now it's ready for an April package. Bob Armstrong volunteered to take care of the observation hive this year and I'm sure he would welcome help in this task. You will learn much!

Inside this issue are primers on Electric Fences, Syrup Feeders, and Essential Oils. Please feel free to submit articles for this newsletter. The cut-off date for submissions is the 15th of each month. Enjoy! And mentor a new beekeeper! *Fr. Mike*

**DUES FOR 2010 NOW DUE
\$10 PER PERSON**

Submit them to Laurel or Richard!

**MONTHLY MEETING:
April 14, 7 PM**

April, 2010

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For Honey Recipes go to the National Honey Board website:
www.honey.com

Brushy Mountain offering a 4 session Beginner Beekeeping e-class starting March 9 – register at www.brushymountainbeefarm.com



"Bee"

From Canteach Website

BUZZ! goes the bee,
Hour after hour,
BUZZ! goes the bee
From flower to flower.

Sucking out the nectar
Flying it home.
Storing up the nectar
In the honeycomb

BUZZ! goes the bee,
Making honey so sweet.
Bee makes the honey
That I love to eat!

HIVE HELPERS *Hints and Tips For Our Members*

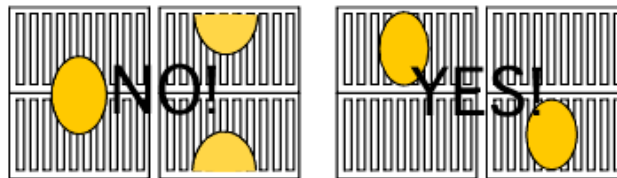
April Tasks For The Beekeeper

The earliest sources of pollen and nectar include skunk cabbage, pussywillows, maples, and crocuses. Dandelions will become a smorgasbord for the bees!

DO's

- DO start a journal NOW and record your observations of the daily temps, weather, the bees, and important events such as maple and pussy willow budding times as well as crocus and dandelion bloom. A simple calendar to record daily info is a great help. A photo journal is very nice too!
- DO check your bees this month on a mild day.
- DO clean your bottom board (it helps to have a spare to just switch out the first one and then clean and use the old bottom board for the next hive).
- DO feed at least one gallon of a 1:1 sugar syrup medicated with Fumagilin-D and Honey-B-Healthy.
- DO reverse hive bodies (if necessary) at dandelion bloom. Remember the reversing rules:

When Can I Reverse Hive Bodies?



DO NOT's

- DO NOT keep the hive open any longer than necessary or you may chill and kill the brood!
- DO NOT look for the queen but rather examine the brood pattern quickly to check her out!

MCBA APPAREL SOON AVAILABLE!

Thanks to our Vice-President Glenn Bachman we will soon have MCBA hats, t-shirts, aprons, mugs, and other items with our official club logo available for purchase. This was accomplished through an account with Café Press. Items are ordered through Café Press on an individual basis and part of the proceeds are donated back to our Association.

New Beekeeping Woodenware For Sale

Local beekeeper Larry Tuttle of Wayne County Beekeepers is now making and selling very good quality woodenware. Call him at 570-253-4124.

From Ron Papa

Fr. Mike,
Please extend my sincere apologies to everyone in your club that turned out Wednesday. I feel very badly that I wasn't able to come. I did not return home that evening until 8:00 p.m. I am very sorry and would be honored to reschedule.

Regards,

Ron

MCBA LIBRARY

Books/DVD's/Video's available for free loan to our members:

- Backyard Beekeeping by Kim Flottum
- The Honey Handbook by Kim Flottum
- Contemporary Queen Rearing by Harry Laidlaw
- Anthology of Beekeeping (CD)
- National Honey Board Culinary Library (CD)
- Introduction to Beekeeping by Ed Weis (DVD)
- The Bee Movie (DVD)
- Silence Of The Bees (DVD)
- Life Of The Honeybee (DVD)
- Making Splits and Divides (DVD)
- Producing Comb Honey (DVD)

Beekeeping For Dummies Fund Raiser

Our Treasurer Rich Sudnik has a supply of the book "Beekeeping For Dummies" available for purchase. Five dollars from each book is donated back to our Association. Last month he used the proceeds to purchase a foldable handcart for our Refreshments Team to lug their stuff into and out of our meeting and a recorder for our Secretary!

Electric Fence Primer

Anyone keeping honeybees here in the Pocono Mountain and Slate Belt areas must be prepared to deal with the possibility of black bears visiting the apiary for a nutritious, delicious meal. In addition to satisfying a sweet tooth with honey, an even more important reason is the high protein found in all that bee larvae. The old axiom, "An ounce of prevention is worth a pound of cure," is even more important here because once a bear makes that first raid, no electric fence will deter him from another meal. In fact, we will discuss in a minute one of the most important tasks for you to accomplish: you must train the bear to the fence.

The list of what you will need includes:

- Fence charger
- Source of power for the fence charger
- Ground rod(s)
- Fence posts
- Insulators
- Fence wire
- Hook-up wire and connectors
- Fence Tester
- Pack of bacon strips

Fence chargers come in three styles:

- 1) 120 volt AC powered units
- 2) 12 volt DC battery powered units
- 3) 6 volt DC battery powered solar units.

120 volt AC powered fencer units need a nearby Ground Fault (GFI) protected receptacle in a location that protects the receptacle and fencer unit from rain/weather.

12-volt DC fencer units work best with deep-cycle Marine/RV high-capacity batteries that must be charged every month or so with an AC powered battery charger. Two batteries switched out on a regular basis make this easier. Again, the battery and fence-charger should be protected by an enclosure such as an empty hive body, bottom board, and outer cover (migratory lids work well).

6-volt units typically contain a built-in solar-panel battery charger to keep the internal

battery charged and are popular among many beekeepers. You will have to replace the battery every few years. With these type fencer units it is recommended by some manufacturers that you use three ground rods spaced about 6 to 8 feet apart. In one of my apiary locations I was having problems getting a sufficient shock until I installed ground rods near each corner of the apiary.

Grounds rods are copper-coated steel rods pounded at least 4 feet into the ground. Many beekeepers substitute heavy steel rebar rods to save money. If you can't get the rod deep enough because of obstructions, then use several rods tied together with fencer wire. I cut the rods about 4 inches above ground, attach the wire, then pound the rod into the ground so I don't trip on it.

For fence wire I use heavy-duty electric fence wire. The PA Game Commission (and some of our beekeepers) recommends barbed wire. Others use fencing tape. The lowest strand should be about 8 inches above the ground, a second wire 12 inches above that, and an optional third wire 12 inches above that. Hives should be at least four feet from the fence.

Fence posts can be insulated fiberglass, metal, or wooden posts 8 feet apart. If using metal or wood, use insulators to make sure the posts don't short the wire to ground.

No matter what type fence you use, you have to train bears (and other animals) to the fence and that is the purpose of the bacon. Simply tie a bacon strip on the middle wire half-way between each fence post. My German Shepherd snuck behind me and tried to steal a piece of bacon from the fence – once - thus assuring me that the fence was working as planned. For some reason she won't eat bacon snacks anymore.

You must keep grass and weeds trimmed down so they don't touch the fence wire. If you pull weeds by hands, be sure not to touch the fence with your head as you are bending over (trust me on this). For more info check out this video by Draper's Super Bee on installing fences:

http://www.youtube.com/watch?v=udd1PQ_YVz8

NEWBEES CORNER

One More Time Now – How Do I Install My Bees?

Your first task as a beekeeper is help your bees build their new home, keep the bees healthy, encourage the queen to lay eggs, and support the colony in their brood-rearing tasks. You've already picked a nice sunny south-facing direction for your hives and provided protection against bears and other trespassers. You've installed the entrance reducer using the smallest opening and have placed some grass into or over the opening. It's time to install your bees. You have prepared at least one gallon of a 1:1 sugar syrup (5 lb of granulated sugar mixed with enough hot water to make 1 gallon) and added Honey-B-Healthy according to package directions. You've put about a cup of this in a clean, unused spray bottle. In a small jar you've put more syrup and added Fumigilin-B in the recommended amount. After shaking it well to dissolve the Fumigilin-B, you've poured it back into your gallon of syrup and filled your quart or gallon feeder. It is now ready to go along with a spare hive body to protect the feeder. You've also got a pollen substitute patty ready to place on top of the frames.

When you get your bees home and are ready to install them, you'll spray them lightly with the sugar syrup, gently rap the cage on the ground, and spray them again. Now you gently pry the cover off the top of the package, remove the feeder can, and remove the queen cage. Put the cover back over the hole in the package to keep the bees from flying out. Examine the queen to see what she looks like and to make sure she is alive. Going to the hive, remove four frames from one end.

Remove the cork from the candy end of the queen cage and gently pierce the candy with the end of a safety pin or paper clip. This will help the bees in freeing the queen. Be careful you don't skewer the queen. Suspend the queen cage between the two center frames with the screen on the cage facing the space between the frames. This will allow the bees to have contact with the queen while they work to release her. Do not place her directly under the inner cover opening but just slightly off to the side. If you place the screen side of the queen cage facing toward the inner cover opening then bees coming up to feed will have more contact with her. Be sure the frames are pushed tightly together – this will help prevent the cage from falling to the bottom if your suspension system fails.

Now for the exciting part: Going back to the package, spray the bees lightly, shake down, spray lightly again, shake down, and spray lightly once more. Remove the cover and pour part of the bees directly over the queen cage and then the rest of the bees into the empty space where the four frames were removed. Don't be concerned if some of the bees fly around you. Keep moving the cage around until most of the bees are in the hive. Now, gently place the four frames into the hive – the bees will move to allow the frames to gently settle into position. You may only be able to do this with three frames if the queen cage takes up too much room. Don't worry – you'll add the fourth frame a few days later when you remove the queen cage.

Once the frames are in position, gently push them together, put a pollen patty on top of the frames, install the inner cover, put your feeder pail or jar over the inner cover, put on an empty hive body to protect the pail or jar, put on the top cover, place the cage on the ground with the opening facing the front of the hive so stragglers can find their way home, and then take a deep breath and smile—you've just installed your first package.

1 Just Installed My Bees - Now What Do I Do?

Your bees are installed and the queen in her cage with the screen facing the bees is waiting to be released. Before closing up you installed the feeder with 1 gallon of a 1:1 sugar syrup solution with Honey-B-Healthy to which you've added Fumigilin-B. You will want to check your feeder daily to make sure it doesn't run out – bees need a constant nectar flow in order to make wax and with your feeder you are imitating a nectar flow. After the first gallon is fed you will continue to feed with the 1:1 sugar syrup with Honey-B-Healthy added. DO NOT add any more Fumigilin-B to the syrup.

Remember, nectar provides carbohydrates and is the main food source of adult bees. We are taught that it takes around 36 lbs. of nectar/syrup to make one pound of beeswax. To draw out two full size hive bodies or three medium hive bodies plan on feeding at least 25 lbs of sugar in the 1:1 concentration. On the other hand, nurse bees have a high protein requirement because they need protein to make a jelly-type food with their mandibular and hypopharyngeal glands to feed the queen and larvae. They also need protein to develop their wax glands to their full potential. This protein comes from pollen or pollen substitute that the bees use to make beebread.

About three days after the package is installed, gently open the hive and peek to see if the queen is released. If not, close up and wait for two more days. On the fifth day, check again and if she is not released, check to make sure she is still alive and, if so, remove the screen and release her into the hive. By this time the bees should have already drawn out about half a frame of comb to allow the queen to start her egg-laying task. Remove the empty queen cage and gently move the frames together so as to not crush the queen. Install the final frame on the end if necessary and make sure all frames are gently pushed together. Close up and allow the queen to do her job. Your first check of the brood will be about 10 days after installation. For now just feed, feed, feed!

One final note – only start with one hive body on the hive. After the first 8 frames (in 10 frame equipment) are fully drawn, you'll move the two end frames to the middle then add your second hive body of frames/foundation. Continue to feed until 8 of these frames are drawn out, then once again move the outer two frames to the middle, put on your first honey super, and remove the feeder. If using three medium hives, then repeat the directions for the second hive body as above.

Fumagilin-B is used to treat both types of nosema, which results in weak bees with a reduced life span. Fumagilin-B is fed both Spring and Fall. In the Spring use one gallon of medicated 1:1 syrup; in the Fall two gallons of medicated 2:1 syrup.

FEED! FEED! FEED! BUT HOW?

If you read the article above on installing bees, you will see the emphasis on feeding your package so that comb may be drawn out allowing the bees to store nectar, honey, and pollen, the queen will have cells to lay eggs in, and the bees have brood to raise. But open any beekeeping catalog or surf the net and you will see various types of syrup feeders. Which one is best? This beekeeper has used most of these and here are some thoughts and suggestions.

Glass Jars and Plastic Pails. Placed over the opening in the inner cover, I find these especially useful in springtime when the weather is unsettled and especially when starting packages or nucs. Most bees will congregate in the middle of the hive and around the queen cage, especially if the temperature drops. Located directly above the cluster, bees will have an easy time getting to the syrup and be able to continue with their comb building tasks starting from the center frame and moving outward as the temperature allows. I use glass quart canning jars or gallon pickle jars acquired from a local sub and pizza shop. I punch three to five tiny holes in the lid close to one side. This allows me to use two jars at one time with holes in each still over the inner cover. An added benefit is that it is easy to check on the syrup supply without disturbing the bees by just lifting the outer cover and peeking in. To clean I just run them through the dishwasher (I add a little bit of Clorox to the wash water to disinfect them). Eventually the lids will rust and have to be replaced. You may have to clean wax and propolis off the lids. If you are using feeder pails, make sure the lid is secure before you turn it over while placing it on the hive.

Entrance Feeders. These are not used by many beekeepers because the bees can't get to them in cold weather, they can promote robbing, and they don't hold a lot of syrup. But some of our beekeepers find them ideal for late fall feeding once the weather has turned colder and you don't want to disturb the hive. The bees will come down and feed on the occasional warmer day. They are also used in early fall as a free-standing feeder.

Hive Top Feeders. I've used these when hiving swarms, feeding during summer dearths, and fall feeding with medicated syrup. The positive side is that they hold large amounts of syrup and do not need to be filled that often. The negative side is that they hold large amounts of syrup and removing a filled feeder to make a hive inspection can become an interesting balancing act. (I always seem to pour some of the syrup over my beesuit). If the bees aren't taking the feed the syrup eventually needs to be dumped and the feeder thoroughly cleaned. If the weather turns cold feeders with side entrances will not be used by the bees and even those with a center entrance still force the bees to climb up and over the side, and then down to the syrup. My experience is that the bees won't do this in cold weather. You also have to be careful not to overfill them or your syrup will run down through the hive soaking the bees then pouring out on the ground. Talk about a robbing nightmare during a summer dearth!

Division Board Feeders. These take the place of one of the outer frames in the hive. I use these in my queen mating hives to prevent robbing. One advantage is that you only have to slide the top cover over a bit to fill it. The disadvantage is that more than a few bees drown even with the ladder sides or plastic floats. I also don't like the idea of dead bees floating in their food source.

Quail Feeders. Placed directly on top of the frames and protected by a hive body, bees take to these fairly well but propolize them to the frames. Great as free-standing fall feeders.

A Primer On Essential Oils

Introduction

What are essential oils? These are oils obtained/distilled from the sap of various leaves, flowers, and stems of select herbs and flowers. Essential oil use has been documented as early as 1919 when UK researcher Dr. Rennie recommended wintergreen oil as a treatment for Isle of Wight Disease (also known as acarine disease/tracheal mites). Their use by beekeepers probably goes back thousands of years and indeed the argument can be made that the bees themselves have inadvertently used essential oils in their act of collecting pollen and nectar from herbs such as mint and thyme since time immemorial. Today, menthol is commonly used to treat for tracheal mites and thyme-based thymol products are available to treat for Varroa.

The latest surge in essential oil research began in 1996 when Maryland beekeeper Bob Noel, in talking to his nurse sister, shared his frustration about the use of harsh chemicals to treat for varroa mites and his desire to find a natural treatment. She disappeared and returned a few moments later with a bottle of spearmint oil. When Bob asked how to use it, she merely replied, “You’ll figure it out.” When she died a few years later from cancer, she said she would like to be remembered for helping to save the honeybee.

Bob contacted various university and governmental researchers but only one took enough interest to actually travel to meet Bob. That was Dr. Jim Amrine from the University of West Virginia. Through the course of several years it was discovered that essential oils control mites through two modes of action:

- 1) Impaired reproduction by feeding syrups containing essential oils;
- 2) Toxicity by direct contact with oils/grease patties containing essential oils.

Impaired Reproduction By Feeding Syrups With Essential Oils

Many pathogens spread throughout a honeybee colony through infected food because of trophylaxis, the sharing of food from one honeybee to the next. This same mode of action is used to treat a honeybee colony by spreading essential oils through use of the food supply. Nurse bees ingest the essential oils where it passes into the milk glands. It is then passed into the brood food and ingested by the bee larvae. When varroa mites feed on honeybee larvae that contain essential oils received in their food through nurse bees (you are what you eat!), the varroa mite’s reproduction is interrupted. If the concentration of oil is strong enough, the varroa females are unable to lay eggs. If the concentration is lower, varroa eggs are laid but development of the immature mites is delayed and the young mites do not reach maturity before the bee emerges from the cell. These immature mites die.

In experimenting with spearmint oil as a feeding supplement, it was discovered that adding lemongrass oil to the spearmint made it much more palatable to the bees.

Lecithin was added as an emulsifier to keep the oil mixed in suspension in the sugar syrup (oil and water don't stay mixed well unless an emulsifier is used). The resulting product is now sold as the feeding stimulant 'Honey-Bee-Healthy'.

Toxicity By Direct Contact with Oils/Patties Containing Essential Oils

When varroa mites contact essential oils such as wintergreen, tea tree oil, patchouli, et al., mixed into vegetable oils (as a spray), gels (petroleum jelly) or shortening (as grease patties), they are killed on contact—usually within a few minutes. However, because it is not ingested to the same degree as essential oils fed in sugar syrup, the amount of essential oils ending up in larval food is negligible and thus impaired reproduction of varroa is not observed – there is no interruption of the development of mite eggs or immature mites. Some mites escape into cells of mature honeybee larvae about to be capped or they hitch a ride on displaced nurse bees that gather near the top of the colony and away from where the grease patties (usually above or between the brood chambers) or tracking strips (at the entrance) are placed. Putting paper towels soaked in canola + essential oils in the tops of colonies from July to September kills the varroa mites residing on the displaced nurse bees that congregate in the upper supers of large colonies.

- Essential Oil Grease Patties – These are reported especially useful January through March when brood rearing is limited or stopped completely. Recipes for these can be found at <http://www.wvu.edu/%7Eagexten/varroa/GresPates.pdf> <http://www.wvu.edu/%7Eagexten/varroa/varroa2.htm#Revised> or at http://en.wikibooks.org/wiki/Beekeeping/Recipes_for_the_Bees
- Essential Oil Suspensions in Vegetable Oil or Petroleum Jelly – the most popular product in this category is Parsons' Gold Solution which is found in either jelly form used directly or oil form which must first be mixed with a vegetable oil such as canola. This product uses tea tree oil as the essential oil. The product can be applied to the underside of the inner cover and on tracking strips placed in the entrance on the bottom board.

Summary

Should you decide to use Essential Oils in your arsenal of bee management techniques, the following guidelines are recommended. For complete information check out the West Virginia University website <http://www.wvu.edu/%7Eagexten/varroa.htm> and its associated links, from which much of this information is taken. You can also check out essential oils for beekeeping on Wikipedia and other websites.

- 1) Strong, healthy colonies--free of mites in early September, but later overwhelmed by an influx of lost bees and mites from dying feral colonies or from untreated neighboring colonies--can be protected and saved by using the grease patties infused with essential oils throughout the fall and winter. Since little or no brood

will be available as shelters, the contact of the grease and essential oils will kill virtually all of the mites--before they are able to transmit the viruses.

- 2) Colonies heavily infested with varroa mites in August, September and October probably cannot be saved. The treatments with grease patties and tracking strips will kill mites, but it is too late in the season to allow rearing of new un-infested brood that would enhance survival of the colony. But, more importantly, even if all varroa mites are killed after heavy infestation, the bees may still die from the acute bee paralysis virus, deformed wing virus, Kashmir virus or other viruses transmitted earlier by the varroa mites.
- 3) Grease Patties *infused with* Essential Oils should be kept on the hives throughout the winter
- 4) Grease Patties *not infused with* essential oils be kept on hives throughout the rest of the year
- 5) Essential Oil Treatments on hive entrance tracking strips and/or applied to the inner cover be used throughout the rest of the year. During honey flows, only use the tracking strips to administer the essential oils.
- 6) When temperatures are warm enough to allow flight, treat colonies with syrups containing essential oils delivered to the brood area (e.g., Boardman feeders with 1/2 gallon jars) but not during honey flows.
- 7) During research, colonies that were fed syrup with essential oils, in addition to using tracking strips and grease patties, were virtually free of varroa mites without using Apistan.

**WARNING – SOME ESSENTIAL OILS SUCH AS
WINTERGREEN ARE LETHAL TO HUMANS THROUGH
CONTACT OR INGESTION – USE PROPER SAFETY MEASURES
INCLUDING EYE AND SKIN PROTECTION.**

POSTSCRIPT

In the March 2010 issue of Bee Culture, Ross Conrad reports that some of the largest beekeepers in the country such as Richard Adee (80,000+ colonies) are using Honey-B-Healthy in a more concentrated drench form to treat for CCD and they claim tremendous success in reduction of mites, molds, fungi, and viral diseases. This includes nosema and chalkbrood. They have also reported reversal of deteriorating colony health from CCD-like symptoms. Researchers are presently conducting studies to establish empirical data to support or refute these claims. If supported, then recommended drenching concentrations will need to be established.

Schedule

Monroe County Beekeepers Association meets at the Monroe County Conservation District Education Center on Running Valley Road in Stroudsburg the second Wednesday of each month beginning at 7 PM from February through November. Guests and visitors are always welcome.

- April Meeting begins at 7 PM on Wednesday April 14th
- May Meeting begins at 7 PM on Wednesday May 12th

TENTATIVE FIELD DAYS

- April 23 5:30 PM – Installing Packages, Pick up Packages at Club Apiary
- May 15 (tentative) – Making Splits and Nucs

Contact List

<i>President</i>	Rev. Michael Salnicky	570-595-3265	pocbkpr@earthlink.net
<i>Vice-President</i>	Glenn Bachman	570-722-3671	bkeeper@ptd.net
<i>Secretary</i>	Laurel Bishow	570-223-1760	laurelbishow@yahoo.com
<i>Treasurer</i>	Richard Sudnik	570-223-1239	spanky@epix.net

*Coordinators and Volunteers Needed For 2010:
Fellowship/Refreshments, Club Apiary Maintenance,*



JOIN THE PA STATE BEEKEEPERS AND HELP ALL BEEKEEPERS IN PA!

PROPOLIS – A glue-like substance which honeybees use to structurally strengthen their home to keep it snug and safe. It also has certain properties that protect against some pathogens.



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