

Beekeepers Gazette

beekeepersgazette@bellsouth.net

July, 2014

VOLUME 2, ISSUE 7

Comments From The Editor

Last month we discussed some techniques for processing honey. Hopefully you tried them. If so, that leaves just one real question.

“How was that honey?”

As I have said, there is no honey as good as that from your yard. By now, you no doubt agree.

In this issue we will discuss Pests and Diseases. This is a subject that could go on and on. I am hoping this issue will be helpful to each of you in some way.

Keep this in mind; summer is upon us. Varroa and SHB can multiply during the hot months at an exponential level. Please be vigil in conducting your Varroa counts and monitoring the Small Hive Beetle population.

A hive can reach the tipping point remarkably quick. However, you have the ability to control the outcome.

Use the resources available to you (i.e. internet, books, research papers) to understand how you can help your bees to a more healthy environment.

Until next month,



Happy Beekeeping

The Editor,

Ray

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Understanding Pests and Diseases

The nectar flow is beginning to slow down. The temperature is beginning to rise. These are the perfect conditions to cause problems in your hive.

The various pests and diseases you find in a hive can, if left un-monitored, devastate a hive quicker than you think.

This month, we are going to begin looking at some of these diseases and pests and discussing what we can do to keep your hive healthy.

Chalkbrood; Chalkbrood has the appearance of mummified bodies of brood. It is often found in the cells, on bottom boards and at the entrance of the hive. It's rare in the south east. There is no real treatment. The best remedy is to  re-queen the hive, however, normally, as the



Photo of Chalkbrood Mummies

population of  the hive increases and with the presence of a strong nectar flow, this disease will not be an issue. Adult bees can remove the Chalkbrood mummies.

Tracheal Mites; This is a mite that lives in the tracheal tubes of your honeybees. Due to its extremely small size, it can only be verified with a microscope and dissection. It is rare to non-existent in Florida. Symptoms of Tracheal mites can be lethargic bees, k-wings and lost or disoriented bees on the ground in front of the hive. Treatment can be as simple as re-queening with a resistant queen or using grease patties or menthol.



Photo of Tracheal Mites

Continued

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Pests and Diseases Continued

Nosema; this is a disease of the gut. Dysentery if you will. The most notable clue your bees have Nosema is feces on the front of the hive or on the comb or bottom board. Other symptoms include disorientation, trembling or quivering and possibly an unnatural position of the wings. Nosema seems to be a disease more prevalent in the cooler, northern climate.

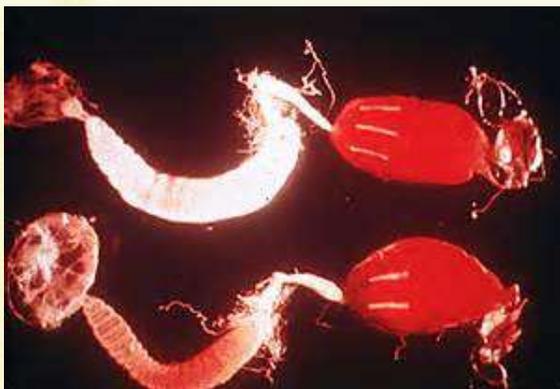


Photo of Honey Bee gut infected with Nosema



European Foulbrood; this is a disease of mostly uncapped brood. Instead of the larvae being pearly white as I have described in past issues, the larvae will develop a grayish brown or muddy look. It will die in an unnatural shape and position.

It will not display the ropy symptom often described in AFB. It is also possible it will have a foul, sour smell. EFB can be successfully treated with terramycin.

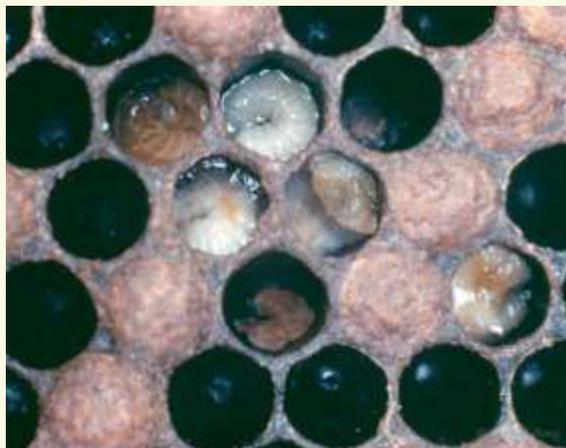


Photo of brood infected with EFB.

American Foulbrood; AFB is something that should not be taken lightly. It is a spore-forming bacterium that can spread at a remarkable rate. It is a disease of the capped brood. Young larvae will acquire the disease and whenever the cell is capped, the larvae will die. As the diseased larvae mature, it will get the grayish brown color as described in EFB.

Continued

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Pests and Diseases Continued

You will see punctures in the cappings and concave cappings appearing moist and wet rather than bright and dry. The larvae will likely develop a ropy consistence. Some of the dead pupae will have their tongs sticking out. There is no cure for AFB. Some sources say to treat it with terramycin, but this is a cover-up. Because this is a spore forming bacterium, the only thing to do is to destroy the hive by burning it. Learn to recognize this disease. Not only can it destroy your apiary, it can destroy the apiaries around you.

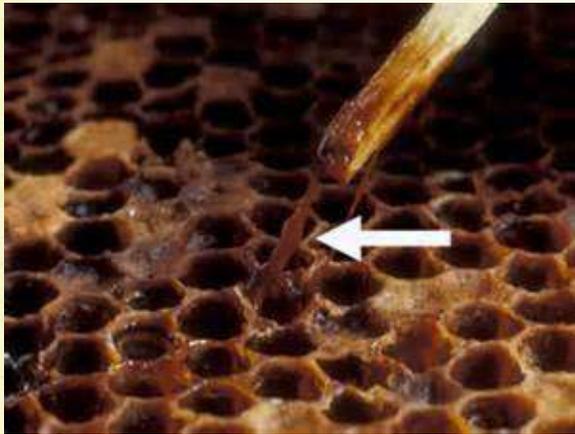


Photo of brood infected with AFB.

Wax Moths; there are two types of wax moths; the Greater Wax Moth and the Lesser Wax Moth. The wax moth will enter a weaker hive and lay eggs. Upon hatching the larvae will begin feeding on the protein in the cells and boring under the cells as they move about to feed. Another trait of the wax moth is the building of white "spider-web like" cocoons and attaching them to your wooden wear. There is no real treatment for Wax moths.

Preventive actions are your only hope. First, a strong healthy hive rarely has a problem with Wax moths. You should close up or screen over any openings in the middle or top of your hive.



Photo of Greater Wax Moth.

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Pests and Diseases Continued

You can store your empty boxes with moth crystals (ParadiChloroBenzene) but they will require airing out before use. Some beekeepers recommend storing your equipment stacked crisscrossed in a well-lit area with plenty of circulation. My experience says to keep your honey supers and brood boxes stored separately as the Wax moths are not as interested in honey frames as they are in the protein rich brood boxes.



Frame infested with Wax Moths.

Small Hive Beetles; The Small Hive Beetle (SHB) is quite a destructive creature in which once it infests your hive can do irreparable damage. Your honey bees will do a remarkable job of controlling this pest as long as you

have a healthy, nicely populated hive. However, once the SHB gains ground, it can  devastate a hive remarkably quick. The SHB will lay clusters of white eggs into the crevices around the hive. Upon hatching, the larvae will bore under the comb killing the honey bee pupae and destroying the frames. The larvae feed on honey and pollen. Their presence causes the honey to ferment and ultimately "weep" or run down the face of the frame. Some people may refer to this as "sliming". The SHB larvae will feed for 10 – 16 days before crawling of the front of the bottom board to bore into the ground to pupate. There are chemical controls available as well as traps and other mechanical methods. There are ground drenches available to control the pupation.



Photo of Small Hive Beetle

Continued

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Pests and Diseases Continued

Varroa Mite; Varroa Destructor is a very small parasitic mite that hatches and grows in the capped cell of the honey bee (usually the drone cell). The mite leaches larval and pupil stage of the honey bee feeding from its hemolymph. Whenever the bee hatches, the mite will transfer to another bee and ultimately enter another cell and the process is repeated. The mite causes various diseases in the honey bee colony called varroosis.

Research has shown the loss of proteins from Varroa during the brood stages results in shortened lives for worker bees, reduced size of brood food glands, reduced wax production, reduced flying activity, reduced resistance to common diseases and reduced winter survival. With drones, we must add the following; reduced number of spermatozoa, inability to fly and most probably, inability to mate.

We must also accept that the transfer of pathogens among adult bees can cause a plethora of problems.

There are upwards of 18 different viruses and diseases that can point to Varroa.

Some of these are Deformed Wing Virus (DWV), Parasitic Mite Syndrome (PMS), Israel Acute Paralysis Virus (IAPV) and Acute Bee Paralysis Virus (ABPV) to just name a few. It is widely thought that Varroa is the number one problem to honey bees.

But all is not gloom. There are numerous ways to control this problem, but it requires your diligence. Monitoring the mite levels in your hives cannot be stressed enough. Some of the ways to accomplish this are; ether roll, alcohol roll, sugar shake and a sticky board.



Photo of Varroa Destructor.

Continued

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Pests and Diseases Continued

Once you have your mite count, you can select the best method of treatment.

There are numerous Integrated Pest Management (IPM) methods; screened bottom boards, powdered sugar treatment as well as others. There are hygienic / mite resistant queens available, which some believe to be the best long term remedy. And if all else fails there are several acaricides available for treatment.



Photo of Varroa on Pupae. There are a couple of things I want you to consider.

Powdered sugar dusting is most effective whenever your mite count is low. I recommend treating every three days for a total of eight treatments (a complete brood cycle is 21 days).

If all else fails and you decide to use a chemical treatment, alternate the treatments to reduce the chance of resistance. And, by all means, the label is the law.

So there you have it. A brief description of the eight most common diseases and pests you will encounter. But, we deliberately kept the descriptions brief. There are countless ways to treat these problems; some holistically and some chemically.

As a beekeeper, you will have to learn to recognize problems that will find their way into your hives. Right now, this may seem confusing and over whelming, but all of us have crossed this bridge. You will decide how to treat and by what methods.

I personally believe Varroa is a "Silent Killer" in as much as you don't notice the actual pest and you begin to chase the symptoms. Before you realize what has happened, the hive reaches the tipping point and there is nothing you can do.

You have resources at your fingers to understand these problems, be vigilant.

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Questions and Answers

Q: I recently caught a swarm and was able to get all the bees into a box except for a small group that I couldn't shake off the limb I had cut off. After 2 weeks, I inspected the bees only to see them storing honey. There was no brood and I couldn't locate the queen, but the bees were calm and quiet while I inspected them. Do the frames with only honey stored mean no queen? Thomas.

A: More than likely you have a situation where you are queenless. The bees remain calm because there is a more than likely a good nectar flow, therefore they are happy. You can purchase a queen and she should arrive in just a couple of days. The hive will be up and running very quickly. If you have a nuc or a strong hive you could put a frame of brood with eggs, larvae and capped brood in the hive and the hive should re-queen itself. I hope this helps.

Q: I have a hive with a screened bottom board, a super on top and a feeder. With summer temperatures in the 90's should I provide more ventilation? Larry.

A: I personally believe the bees will maintain the temperature in the hive that best suits their needs. Venting above a super this time of year (lack of a summer nectar flow) can invite robbing. The best thing for the bees is a water source reasonably close to the hive so if they get overheated, they can cool the hive as they know best.

Q: Do you have suggestions for preventing or cutting burr comb built from one comb to another? Pulling the frames apart to cut the burr comb often leaves holes in the foundations and takes honey cells too. Thanks Greg

A: If you are referring to comb that is actually bridged, the simplest thing is to merely cut it. If you are referring to comb that is too thick on one frame and almost non-existent on the adjacent one, you will need to rotate the frames so they will be against an already built out frame and the bees will manipulate the wax to allow for "bee space" (normally around 5/16").

Continued

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Questions and Answers

Q: My deep brood boxes were full, so I thought it might be time to add a super. I am concerned that this is too late (not much nectar and pollen flow) to be adding one. So I opted for a different step. I added a medium super to each hive with 5 frames each. One reason was that I only have 10 medium foundations on-hand. The other reason was so that the bees would not be overworked building-out more foundation and also not have too many frames to defend against wax moths and other predators. But it also leaves a lot of empty space in the medium super and I'm not sure if that is ok. Can you comment on this? Greg.

A: If you are lacking a nectar flow, I might question the need for a super at all. However, if you decide to add one, I would recommend adding all ten frames. If you only add five frames, the bees will inadvertently build "burr" comb in the spaces left open. That in itself becomes a logistical nightmare to try to salvage natural comb with honey or brood.

Q: I started my hive in May with a Nuc. I cannot find the queen, I have no queen cells, I have very little brood, I cannot see any eggs and the bees are filling the cells with sugar water. I have ordered a queen but since most cells are filled with honey, how do I give her space to lay eggs? Am I on the right track? Help! Bob

A: It sounds as if you did the correct thing by ordering a queen. Whenever she arrives, if you have another built out frame, install it into the hive to allow room for her to lay eggs.

If you don't, simply pull one out of the hive and lean it against something a few yards away from the hive for a day. The bees will rob it out and you can re-install it.

Without seeing the hive, I can't say for sure, but if the hive is full of nectar to the point she is unable to lay, it may pay you to put a super on the hive. The bees should move the nectar to the super providing her the room she needs.

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And Finally

National Pollinator Day

This year's National Pollinator Day was Sat, June 21st at the **GTM Research Reserve (Guana Tolomato Matanzas National Estuarine Research Reserve)**. We didn't have the opportunity to attend this event, but it was reported as a great success. There were plenty of educational opportunities including a live honey extraction demonstration by members of the St Johns County Beekeepers Association. If you missed it this year, be sure to plan for next..

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If you have a subject you would like to see in a future issue

If you have something going on in your bee yard or club you would like us to consider



If you have questions that you would like answered, let us know.

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Online at
www.unklerays.com

Clay County / NEFLHBA Beekeepers

Short Course

Saturday, September 20th, the Clay County Extension Office and the Northeast Florida Honey Bee Association will host a Beekeepers Short Course. It will be at the Clay County Extension Office. For information contact David Nistler at dnistler@ufl.edu

Our web page, www.unklerays.com will have the current issue of the Gazette as well as back issues beginning with issue 2. (Issue 1 has been retired)

Remember, your participation is important to the success of this newsletter.

If you have questions, please submit them.

If you can contribute to the plant calendar, please do so. What is blooming in your area?

The Editor

Ray Claxton

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