

# The Buzzzz

The Monthly Newsletter of the Gilroy Beekeepers Association

Volume 5

May 2013

## Getting to Know Each Other!

by Vicki Basham

This month, we'll get to know Roark Diters and his wife, Alicia. Roark keeps his hives in his backyard, where the bees can forage on an abundance of fruit trees on Roark's property.



Roark and Alicia with a bottle of his father's 40-year-old honey. (It's delicious!)

Roark had only two surviving colonies out of ten from the past winter. But he has already added two nucs, two packages, and two captured swarms to his apiary. And he was lucky enough to have one swarm move right into one of his empty hives!

He remembers one colony that he found in an old, abandoned, rusty tractor transmission. He put a deep with a lid right on top of the

See **Getting to Know**, Page 6

## President's Message

### Nosema ceranae

Nosema ceranae is a microsporidian, a small, unicellular parasite that mainly affects Apis cerana, the Asiatic honey bee. It may cause nosemosis, also called nosema. The dormant stage of nosema is a long-lived spore which is resistant to temperature extremes and dehydration. Nosema ceranae was first described in 1996 and was identified as a disease of Apis mellifera in 2004 in Spain.

Researchers in Spain have analyzed samples of Apis mellifera, the European honey bee. In 2004, 90% of some 3,000 samples had positive results for N. ceranae. In 2005, of 800 samples 97% had positive results.

This pathogen has been tentatively linked to Colony Collapse Disorder, a phenomenon reported primarily from the United States, since fall of 2006. Tests of genetic material taken from a "collapsed colony" in Merced County point to a once-rare microbe that previously affected only Asian bees but might have evolved into a strain lethal to those in Europe and the United States." The researcher did not, however, believe this was conclusive evidence of a link to CCD; "We don't want to give anybody the impression that this thing has been solved." A USDA bee scientist has similarly stated, "while the parasite nosema ceranae may be a factor, it cannot be the sole cause. The fungus has been seen before, sometimes in colonies that were healthy." Likewise, a Washington State beekeeper familiar with N.

Roark and Alicia

See **President**, Page 6

## Guest Column

### "Choices"

by Dave Stocks

Ahh choices! Isn't beekeeping fun! Like so many things in life, we beekeepers are faced with choices. Do we want to run Langstroth hives and are we going to use deeps or mediums for our brood boxes? What size supers are we going to use? Are we still young enough to lift deeps or even mediums, or is our choice going to be shallows? And what about the bees? Are we going with the old standbys: Italians or Carniolan? Or do we think Russians are the answer? Ahh yes, choices!

At least we don't have to think about foundation. Or do we? Since about the end of World War II, plastic foundation has become the norm. It's relatively inexpensive, easy to use, and will last forever. What could be better? All we need to do is call up a supply house, order some Duragilt or Plasticell, pop it in the frame and put it in the hive. It's going to have a plastic inner-core (Duragilt) or a plastic foundation covered with beeswax (Plasticell). (Note: Different suppliers have different names.) What could be better? The bees are going to love it! Right? Well, maybe not. It all depends on your beekeeping philosophies. Once again, we're back to choices.

Over the last twenty years or so, beekeepers have continually been bombarded with new problems, and science has attempted to give us the solution. We have chemicals to treat Varroa. We have chemicals to treat disease. Our bees forage on plants that have been treated with chemicals to prevent disease and control pest. Other chemicals assure more uniform ripening and delay spoilage. But what happens to these chemicals once their intended use has passed? Does the Apistan go away the day the last mite dies? Does Fumagilin disappear when the Nosemas are gone? Are the systemic insecticides and fungicides left in the field when the bees come home at night? No to all of the above. If

See **Choices**, Page 4

## Drippings From the Extractor

(Notes from the Editor)

This month's newsletter features two articles about problems affecting our hives. They reflect a growing concern among beekeepers as to what is happening to our hives. In the April issue of *Bee Culture* magazine, there is an excellent article that speaks to these concerns. Editor Kim Flottum wrote an excellent column on what he believes to be the five factors affecting colony collapses. They are food, Varroa, viruses, Nosema and the indiscriminate use of pesticides. If you get the chance, you should read it. The article brings home the point, that when we can, we need to be advocates for our bees.

Member Jayne Perryman sent the following photos as part of an album. The pictures were taken March 30th as she and Ksenia Medvedeva installed packages into an Adams 4-H hive. Nice job ladies!



Ksenia and Jayne getting ready

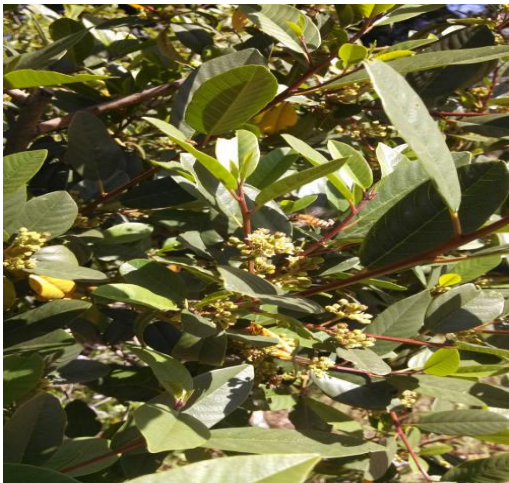
See **Drippings**, Page 3

## Drippings continued from page 2



Kesenia and Jayne installing the package

My wife and I spent last weekend in San Luis Obispo. As we are prone to do, we visited the San Luis Obispo Botanical Gardens on Sunday morning. I like to see what's blooming that the bees like. It gives me ideas of what to plant in my own yard for my own bees. We arrived to find poppies, lavender, sages and many other plants in full bloom, and not a single honey bee. Very disturbing I thought. Where have they all gone? And then we turned a corner in the path. The first thing I noticed was the buzz. But where, there were none of the aforementioned plants. And then I saw them, hundreds of bees working the minuscule flowers of a Coffee Berry bush.



Coffee Berry (*Rhamnus californica*)

Coffee Berry (*Rhamnus californica*) is a native shrub found in the coast range from Mendocino to San Gabriel. Check it out sometime. It might

be a good drought resistant plant for your home garden or a nectar source for the bees in the hills.

OK, Now I'm groveling! "The Buzzz" **NEEDS** contributors. Being the editor is a great opportunity to share knowledge about our favorite insect. However, myself and a very small handful of contributors cannot continue to sustain what I hope is a useful and entertaining newsletter. We need your help, if for no other reason than to offer diversity in our articles. **Please, please, please** contribute. All articles, questions or complaints can be sent to [dave.stocks@yahoo.com](mailto:dave.stocks@yahoo.com) Thanks, I look forward to hearing from you, Dave

**\*NEW\*NEW\*NEW\*NEW\*NEW\***

### "Stump Wayne"

*Dear Stump Wayne.*

*I seem to have trouble getting bees to go through the queen excluder into the super.*

*What should I do? DS*

Dear DS

We all have had that problem from time to time. Sometimes the problem is that there is not bee space between the top bars of the frame and the excluder, or the bottom bars of the upper super and the excluder. Verify a minimum of 3/8 inch clearance on both sides of the excluder. Punched metal or plastic excluders with 90 degree edges discourage bees from passing through. Be sure your excluders are wire or have rounded edges if plastic. Do you run 10 frame brood boxes and 9 frame supers? If so, it is possible that the bees think that they are hitting the roof and will not pass through since the bottom bars of frames in the super are covering the bee space between the frames in the brood box. Also try this: have an upper entrance. After establishing an upper entrance, close off the bottom entrance for a couple of days. After you have bees flying from the top, reopen the bottom. Jerry Hayes claims an upper entrance will increase honey production by as much as 10%.

*See Ask Wayne, Next page*

**Stump Wayne**, *continued from previous page*

**Dear Stump Wayne,**  
**I need to move a hive a 110 feet. What is the best way? Don**

Dear Don

Conventional wisdom says to move a hive 2 feet or 2 miles. I have found that if you move a hive about 6 feet right after sunset, the bees will reorient the next morning and be fine. You could also move it 2 feet a couple of times during the day, with 3-4 hours between moves.

Wayne

(Questions for **Stump Wayne** can be sent to Wayne Pitts at [kingbee@uvasgold.com](mailto:kingbee@uvasgold.com))

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### **Choices** *continued from page 2*

Fumagilin, Apistan, and other chemicals were safe, we could use them during the honey flow. If the systemic pesticides were safe we wouldn't be having the Neonicotinoid discussions we are having today. And where are we as beekeepers putting these chemicals? - Into plastic based foundation. Now, before you define me as a hippie nut case and quit reading this article, let me be clear that I completely agree that plastics are part of our daily lives. Heck, the computer I'm typing on contains a lot of plastic. But is it the best thing for our bees? They were living very well for thousands of years without it.

So, what are our choices? Remember, we as beekeepers have choices.

Two alternatives to plastic foundation come to mind. First, we can use wax foundation. The first recorded mention of wax foundation was in a German Bee Journal in 1857. It was invented by J. Mehring of Frankenthal Germany. In its initial form, it had very crude indentations with no cell walls. Up until about 1919 the bees had to modify the foundation to make comb. In 1861, Samuel Wagner, the founder of the *American Bee Journal*, improved on Mehrings foundation by adding shallow cell walls. This not only gave the bees wax to work with, but strengthened the foundation. Since then, we

have continued to see advancements in the making of wax foundation. Today, we have well defined cells reinforced with wire that provide strong foundation.

The thoughts that drove the development of wax foundation are still basic to today's beekeeping. Foundation allows the bees to draw straight comb. This, as we all know, makes working our hives so much easier. Foundation also reduces the number of drone comb. These together give us our main goal: increased honey production.

Recently, there has been a trend back to wax foundation. Many feel that wax, as opposed to plastic, is a more natural foundation. In fact, if you want to be considered an "organic" beekeeper and be registered by the folks that do that, you have to use wax foundation.

So, let's talk about the pros and cons of wax foundation to see if we want it to be our foundation choice. Earlier we mentioned Plasticell and Duragilt as examples of plastic foundation. A sheet of Plasticell for a 9½" frame, wax coated, sells for \$1.20. The same sheet of Duragilt sells for \$1.46. A sheet of wire enforced wax foundation sells for a \$1.24. As we can see, price is not a major consideration. How about ease of use? The rigid plastic foundation easily snaps into the frame giving a flat, straight place for the bees to draw comb. Wax is not as easy to work with. Because it lacks the rigidity of plastic, wax requires a wedge top frame with reinforcing wires running horizontally across the frame to keep it straight. The installation procedure is time consuming. But which one will last longer? It would seem that plastic would last forever while wax could be susceptible to many maladies. The answer is actually mute because it is recommended that both types of foundation be changed every three to five years anyway. As mentioned earlier in the article, chemicals, either put there by us or brought in by the bees, build up in wax. This can rapidly increase to the point of being toxic to the bees. Also, we have no idea where the wax on that purchase foundation came from. Might we be putting chemicals into the **Choices**, *Continued next page*

**Choices, continued from previous page**

hive before the bees even see it? Therefore, neither wax nor plastic foundation can be said to last longer than the other because it is recommended that both types of foundation be changed every three to five years, and many beekeepers choose to do it more frequently.

So, now we have a dilemma. Is there anything we can use for foundation that won't make our bees sick? Well yes, there is a second alternative to plastic foundation. The least expensive and most natural way for bees to thrive in a colony is for them to make their own comb. After all, they were doing it for thousands of years before beekeepers got involved. In fact, many alternative type hives used today, such as the Top Bar or Warre' hives, are based on the bees drawing their own comb. Unfortunately, switching to foundationless frames is not as simple as it might seem. It takes a little work. Hopefully the end result is worth the effort. We mentioned earlier that one of the advantages of foundation was that it gave the bees a straight, flat surface on which to draw comb. We've all had hives, even with foundation, where the bees have drawn comb in the most catawampus way imaginable. How are we ever going to get them to draw straight comb with no foundation at all? The answer is simple, we need to help.

Michael Bush, author of *The Practical Beekeeper* is a proponent of foundationless hives. He agrees that the bees need some kind of a guide to get them to draw straight comb. He offers several suggestions. First, bees like to maintain their bee space. As you transition from foundation to natural comb, the beekeeper should alternate frames with foundation with blank frames. The bees will use the foundation frames as a guide. Once the natural comb frames are completely drawn, they can be inserted in place of the foundation frames. For those wanting to transition a little faster, simple guides, located on the top bar of the frame, may help getting things started in the right direction. Aids like a small strip of wood, a strip of wax or a small piece of drawn

comb might be just the clue the bees need to get started right.

Another very important part of getting straight comb is to have the hive as near to level as possible. Bees always draw comb parallel to the force of gravity. Hives tilted one way or another will not have straight comb. The two pictures below clearly show the importance of having a level hive. The first is from a hive where care was given to levelling the hive prior to the bees drawing comb. This is what foundationless comb should look like.



Thanks to GBA member Vicki Basham for the photo.

The second photo is of a hive where no care was given to levelling the hive or giving the bees a guide for starting.



The owner of this hive will remain anonymous!

Well, there you go folks, another choice. Happy beekeeping

### **President, continued from Page 1**

ceranae in his own hives discounts it as being the cause of CCD.

N. ceranae and N. apis have similar life cycles, but they differ in spore morphology. Spores of N. ceranae seem to be slightly smaller under the light microscope and the number of polar filament coils is between 20 and 23, rather than the more than 30 often seen in N. apis.

The disease inflicts adult bees and depopulation occurs with consequent losses in honey production. One does not detect symptoms of diarrhea like in Nosema apis.

Without doubt, the most significant difference between the two types is just how quickly N. ceranae can cause a colony to die. Bees can die within eight days after exposure to N. ceranae, which is faster than bees exposed to N. apis. The foraging force seems to be affected the most. They leave the colony and are too weak to return, thus dying in the field. This leaves behind a small cluster and a weak colony, very similar to the symptoms of CCD. There is little advice on treatment. Fumagillin, Nosevit, and a new all in one bee supplement, Optima, are what we have in our toolbox at this time to use as treatment. How many spores are the threshold for treatment? About a million. Read Randy Oliver's articles on how to measure Nosema at [www.scientificbeekeeping.com](http://www.scientificbeekeeping.com)

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### **Getting to Know, continued from Page 1**

He remembers one colony that he found in an old, abandoned, rusty tractor transmission. He put a deep with a lid right on top of the transmission and within two weeks all the bees moved right in.

Roark's interest in beekeeping began when he was just a young boy in Connecticut; that's when he fondly remembers helping his father with his bees. Roark had a honey route, too, where he sold honey for fifty cents a jar. It wasn't until 2007 when Roark decided to get

colonies of his own. He started out with two starter kits from Dadant and two packages from Honey Bee Genetics and has been addicted to beekeeping ever since.

Roark's wife, Alicia, accompanies him on swarm calls and helps out with honey extraction. They enjoy selling the honey at a spot not far from their home. Roark dresses up in his protective bee clothes, packs an empty hive and all of his honey in the back of his '46 Chevy truck, and sets it all up as a display at a nearby street corner. He says that when folks drive by and see him in his bee suit, they not only stop to buy his honey, but they inevitably ask him about beekeeping, and Roark is pleased to tell folks all about it. He says that for him, it's one of the most rewarding aspects of beekeeping.

Roark has been fairly hands-off when it comes to treating for varroa mites. He acknowledges that he has probably lost many hives to varroa, but he also notes that people who treat their hives seem to lose just as many as those who don't. He's not sure what he'll do this year.

When asked if he has advice for people just starting out, he strongly suggests that a new beekeeper get at least two hives to start. And then, "Just observe. See what happens. Observe them and they will teach you. I'm constantly amazed when I watch the bees." He says that he himself learns from listening to others. "And I'm a timid experimenter. It also seems that the more I learn, the less I know!"

### **News from the Beeyard**

As May arrives, the second brood box should now be full of bees. Hives should be inspected to insure that the top box has not become honey bound but still has plenty of room for the queen to lay. If the hive is overcrowded and the queen has no room to lay, the bees will swarm. Supers should continue to be added as necessary. If you haven't done so

already, the time for the first extracting may be nearing.

If you're looking to expand your apiary, there's still time to split hives if you have sufficient brood to do so. Also, an underperforming hive should be requeened.

## Calendar of Events

### Meetings

May 1, 2013

Santa Cruz Beekeepers Guild - 6:30 pm

El Rio Mobile Home Park

N. Pacific Ave

Santa Cruz, Ca

<http://santacruzbees.com>

#### **Topic:**

1. Inside the Hive
2. Bee biology and development

May 2, 2013

Beekeepers Guild of San Mateo County- 7 pm

1106 Alameda de Pulgas

Belmont, Ca

<http://sanmateobeeguild/>

#### **Topic:**

Propagating healthy bees w/ Jeremy Rose

May 4, 2013

Monterey Bay Beekeepers - 8 am

2450 N. Fremont St.

Monterey, Ca

<http://www.montereybaybeekeepers.org/>

May 6, 2013

Santa Clara Valley Beekeepers Guild - 6:15 pm

1292 Minnesota Ave.

San Jose, Ca

<http://beeguild.org/>

May 14

Gilroy Beekeepers Association - 7 pm

8191 Swanston Ln.

Gilroy, Ca

<http://uvasgold.com/>

May 14, 2013

Alameda County Beekeepers Association - 7:30

600 Bellevue Ave.

Oakland, Ca

<http://site.alamedabees.org>

### Classes

#### **San Mateo County**

<http://sanmateobeeguild/>

#### **Low Intermediate Beekeeping Class**

May 4, 2013

Serge Labesque will lead a day long class

Check online to register

#### **Advanced Beekeeping**

June 22, 2013

Randy Oliver will lead a day long class

Check online to register

#### **Santa Clara Valley Bee Guild**

<http://beeguild.org/>

#### **Beekeeping Workshop**

July 6, 2013

All day workshop with Randy Oliver

Check on line to register

### Meetings

#### **Pacific Northwest Treatment-free**

#### **Beekeeping Conference**

Portland, Oregon

July 26-28, 2013

Information on-line at

<http://blisshoneybees.org>

#### **Western Apiculture Society (WAS)**

#### **WAS 2013 Annual Conference**

Santa Fe, New Mexico

October 16-19, 2013

#### **California State Beekeepers Association**

#### **2013 CSBA Annual Convention**

Harrah's, South Lake Tahoe, CA

November 18-22, 2013