



# The Buzzzzz

The Monthly Newsletter of the Gilroy Beekeepers Association

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California Bumble Bee (*Bombus californicus*) on Salvia (Photographer Unknown)

## Getting to Know Each Other!

by Vicki Basham

I think it's finally about time that we get to know the president of our bee guild! Wayne "Bubba" Pitts has served as the president for over 14 years. He and Dave Stocks, our newsletter editor, are the only two of the original founding members since the guild's creation in 1997.

Like many other beekeepers, Wayne has had serious problems with Varroa mites. About seven years ago, he had twenty hives that were reduced down to three because of mites. When asked how he deals with the problem, Wayne said that he has tried it all. He got a license to use HopGuard a couple years ago, and has tried formic acid, and is now also using Mite Away Quick Strips.

Wayne also believes nutrition is a major key to hive health. He feeds his bees pollen and sugar



Wayne's interest in beekeeping began in Virginia back in 1986 because his father-in-law was a long-time beekeeper. Just as Wayne began planning on getting his first hive, he got a job transfer to California. He finally got his first bees in 1997, and has had up to a hundred or so hives in recent years. Wayne's hives are spread out in backyards as far north as Palo Alto, as far south as Aromas and out east in Hollister. "Most of these people have asked if I would put these hives in their yards," he says, "and some of the people like to manage them themselves and others ask that I take care of them. I usually split the honey with them."

during dearths, but he's also thinking long term, planting a large variety of bee friendly plants at his home near Mount Madonna. One area of his property is covered with golden poppies, while another has plenty of young salvias.

Wayne likes to learn about bees through books; he strongly recommends three books: "The Buzz about Bees: Biology of a Superorganism" by Jurgen Tautz, "First Lessons in Beekeeping" by Keith Delaplane, and "Beekeeping in Coastal California" by Jeremy Rose. In fact, Wayne's name is mentioned in the first sentence of the Acknowledgements section of Jeremy Rose's book. He says, "My

first beehive was provided by Wayne Pitts of the Gilroy Bee Association. This generosity encouraged my early curiosity about beekeeping."

Wayne has indeed been very generous with his time and knowledge about bees. Quite a few beekeepers consider him as a mentor, a role that he very much enjoys. He also writes a column every month for our newsletter, and is more than happy to help new folks get started in beekeeping. He advises beginners to "watch out for HTS - hive tool syndrome! That's when folks get into the hive too often!"

When asked what his most memorable moment is in beekeeping, he said "I always love the look of amazement on children's faces when they are watching bees in an observation hive. The more I tell them about bees, the more amazed they seem to be."

### Monthly Column

This month's column is a re-print of an article written by Dr. Eric Mussen. Dr. Mussen is the California Extension Apiculturist at UC Davis. Please see "Drippings From The Extractor" for an update on his upcoming retirement.

#### Fumigillin Problematic?

A team of researchers at the University of Illinois and the Noyes Laboratory in Urbana, Ill, took an in-depth look at the implications of exposing honey bees and the two *Nosema* species to fumigillin. They concluded that for colonies with heavy infections, treatment might be advisable. But they also found that as the concentration of the chemical fell, both *Nosema apis*, a little, and *Nosema ceranae*, a lot, could rebound and produce even more spores than untreated honey bees. Digging more deeply than field observations, the team monitored the effects of fumigillin on the enzyme methionine aminopeptidase-2. We share that enzyme with the bees. The enzyme is important in protein maturation and post-translational processes. Exposure to fumigillin has reduced the life expectancies of honey bee workers and queens and has negatively affected wax moths. At the labeled dose, fumigillin suppresses midgut

spore production in both *Nosema* species. By twelve days post treatment at 0.01X field dosage, only *N. apis* was still suppressed. *N. ceranae* levels were back up to the controls. At 0.001X *N. ceranae* produce 40 percent more spores than *N. apis* and 24 percent more spores than the controls. Hindgut spores were even higher: 80 percent more spores than *N. apis* and 150 percent more than the controls.

Field studies in Spain demonstrated that fumigillin broke down to 0.001X in about three months. These authors suggested that the normal six month break between field treatments would allow a large increase in *Nosema* infection levels between treatments. Thus, they suggest that we develop a new treatment for *Nosema* that will not have these rebound effects.

### Presidents Message

by Wayne Pitts

Hi Everyone,  
Gilroy Beekeepers meeting 3 June at 7PM at Old City Hall, Gilroy, directions below.

#### Location:

This month we are meeting at Old City Hall, on the corner of 6th and Monterey in Gilroy at 7 PM on 6may. We will be using the meeting room upstairs. Enter via the front door on Monterey, stay right for about 8-10 feet and take the stairs on the right or the elevator on the left. If you haven't eaten here, may I suggest arriving about before 6 and enjoy the early bird dinner. \$12; for soup or salad, entrée, and ice cream. I generally take advantage of this at least once a week.

#### Web Site:

The Gilroy Beekeepers Association now has a web site: [Gilroy Beekeepers Association](http://GilroyBeekeepersAssociation.com)  
As part of the web site there is a swarm list, where paid members can have their contact information listed in hopes someone will call with a swarm to be retrieved. To be added to the swarm list please send an email to me at [kingbee@uvasgold.com](mailto:kingbee@uvasgold.com) with these 3 items in this order: Name, Phone number, and Area to

be served. Go to: [Swarms](#) to see how the list is organized. Just for fun, check out the list and then hit the F5 key (refresh on a PC), check out the list again. It is randomized every time it is accessed so the person top of the list should be different each time.

**Dues:**

The dues are \$20 per year, if you haven't paid, please do so at the meeting or by mailing a check made out to Gilroy Beekeepers Association % Wayne Pitts 110 Bella Vista Lane Watsonville, CA 95076

**Speaker:**

This month it will be me discussing top bar beekeeping.

If you have empty packages, please bring them to the meeting. If you can't, please store them in a cool location out of the weather until you can return them.

And door prizes.

See you there on Tuesday,

This month we look at viral diseases. Not being a virologist I had to go to Wikipedia to research these viruses. A common theme is varroa mite.

**Cripaviridae** - Chronic paralysis virus

Syndrome 1: Abnormal trembling of the wings and body occurs. The bees cannot fly, and often crawl on the ground and up plant stems. In some cases, the crawling bees can be found in large numbers (1000+). The bees huddle together on the top of the cluster or on the top bars of the hive. They may have bloated abdomens due to distension of the honey sac. The wings are partially spread or dislocated.

Syndrome 2 Affected bees are able to fly, but are almost hairless. They appear dark or black and look smaller. They have a relatively broad abdomen. They are often nibbled by older bees in the colony and this may be the cause of the hairlessness. They are hindered at the entrance to the hive by the guard bees. A few days after infection, trembling begins. They then become flightless and soon die.

In 2008, the chronic bee paralysis virus was reported for the first time in *Formica rufa* and another species of ant, *Camponotus vagus*.

**Dicistroviridae** - Acute bee paralysis virus is considered to be a common infective agent of bees. It belongs to the family Dicistroviridae, as does the Israel acute paralysis virus, Kashmir bee virus, and the black queen cell virus. It is frequently detected in apparently healthy colonies. Apparently, this virus plays a role in cases of sudden collapse of honey bee colonies infested with the parasitic mite *Varroa destructor*.

**Israeli acute paralysis virus**- A related virus described in 2004 is known as the Israeli acute paralysis virus (IAPV). The virus is named after the place where it was first identified—its place of origin is unknown. IAPV has been suggested as a marker associated with colony collapse disorder.

**Kashmir bee virus** related to the preceding viruses. Recently discovered, it is currently only positively identifiable by a laboratory test. Little is known about it yet.

**Black queen cell virus** causes the queen larva to turn black and die. It is thought to be associated with *Nosema*.

**Cloudy wing virus** - A little-studied, small, icosahedral virus commonly found in honey bees, especially in collapsing colonies infested by *Varroa destructor*, providing circumstantial evidence that the mite may act as a vector.

**Sacbrood virus** - *Perina nuda*, a picorna-like virus, causes sacbrood disease. Affected larvae change from pearly white to gray and finally black. Death occurs when the larvae are upright, just before pupation. Consequently, affected larvae are usually found in capped cells. Head development of diseased larvae is typically retarded. The head region is usually darker than the rest of the body and may lean toward the center of the cell. When affected larvae are carefully removed from their cells, they appear to be a sac filled with water. Typically, the scales are brittle but easy to remove. Sacbrood-diseased larvae have no characteristic odor.

**Iflaviridae** - Deformed wing virus is the causative agent of the wing deformities and other body malformations typically seen in honeybee colonies that are heavily infested with the parasitic mite *Varroa destructor*. DWV is part of a complex of closely related virus strains/species that also includes Kakugo virus, *Varroa destructor* virus and Egypt bee virus. This deformity can clearly be seen on the honeybee's wings in the image. The deformities are produced almost exclusively due to DWV transmission by *V. destructor* when it parasitizes pupae. Bees infected as adults remain symptom-free, although they do display behavioral changes and have reduced life expectancy. Deformed bees are rapidly expelled from the colony, leading to a gradual loss of adult bees for colony maintenance. If this loss is excessive and can no longer be compensated by the emergence of healthy bees, the colony rapidly dwindles and dies.

**Kakugo** virus is an iflavirus infecting bees; varroa mites may mediate its prevalence.

**Iridoviridae** -Invertebrate iridescent virus type 6. Applying proteomics-based pathogen screening tools in 2010, researchers announced they had identified a co-infection of an iridovirus; specifically invertebrate iridescent virus type 6 (IIV-6) and *Nosema ceranae* in all CCD colonies sampled. On the basis of this research, the New York Times reported the colony collapse mystery solved, quoting researcher Dr. Bromenshenk, a co-author of the study, "[The virus and fungus] are both present in all these collapsed colonies." Evidence for this association, however, remains minimal and several authors have disputed the original methodology used to associate CCD with IIV-6.

**Secoviridae** -Tobacco ringspot virus; a RNA virus tobacco ringspot virus, primarily a plant pathogen, can infect honeybees through infected pollen.

## June In The Beeyard

If this column looks vaguely familiar, you're right. It first appeared in the June 2013 edition

of "The Buzzz" After reading it, all the information is still pertinent. Why fix it if it's not broken! I have added a recipe for ant control. Hopefully it helps.

June generally marks the transition from the spring nectar flow to the summer nectar flow, especially for those beekeepers in rural areas. In the city it might not be quite as noticeable. Perhaps the most important thing to remember about this transition period is not to let the bees starve.

After a strong spring nectar flow, there may be a temptation to harvest all the honey possible. It is extremely important to leave enough honey for the bees survival, especially if the summer flow turns out to be less than expected. If too much honey is extracted, it will be necessary to begin feeding syrup much earlier than anticipated. Not only is this expensive, it's just not good for the bees.

June is probably the last good month to do splits and still have time to sufficiently build up prior to winter. Jeremy Rose in his book *Beekeeping in Central California* recommends using one or two additional frames of brood for each month after May. For example, if you did a split in May with three frames of brood, your June split would have four or five.

While it may seem that June is a bit of a respite after the busy spring, we must still be vigilant for hive problems including mites, ants and nosema.

It seems that ants are a year round problem and no bee yard is exempt. The following is a natural recipe for ant control, which should help with the problem. This article is reprinted in part from the November/December 1997 issue of *Organic Gardening*.

1. Start by making a 1% boric acid and 20% sugar solution by thoroughly dissolving 1 teaspoon of boric acid and 6 tablespoons of sugar in 2 cups of water Do this in a clear jar so you can see when all the boric acid crystals are dissolved. Then soak some cotton balls in this bait solution.
2. Make bait dispensers out of some old plastic margarine tubs with lids. Punch holes in them so the ants can get inside, then put

the soaked cotton balls into the containers and cover them with the lids so the bait won't dry out. **(Note: Make the holes small enough so your bees don't get in)**

3. Place the containers wherever you see ants.
4. Clean the containers and freshen up the bait solution at least once a week.
5. Be patient! Let those worker ants continually carry boric acid back to feed the ants in their nests.
6. After a few weeks, reduce the boric acid concentration to 1% for long term ant control. Using a lower dose makes it more likely that surviving ants will continue eating the bait and taking it back to the nest.

## **Drippings From the Extractor**

by Dave Stocks

This month's column by Dr. Mussen reinforces an opinion that I have mulled over for quite some time. When we treat prophylactically, whether it be for mites, Nosema, or other maladies, we are very likely making the problem worse. When you think about it in relation to yourself, we don't take antibiotics to ward off illness. We only take them when diagnosis indicates that we have a bacterial infection. With some obvious exceptions, maybe it's time to start treating the bees like we treat ourselves!

On May 23rd, I attended the board meeting of the California State Beekeepers Association in Modesto. There was a long discussion about the recent bee kill during almond pollination. As you might remember, there were 80,000 colonies that were either damaged or killed by exposure to the fungicide Pristine. It has long been a practice to spray orchards during the pollination season. Because of the detrimental effect on bees, many growers have stopped the practice. However, they were still affected this year when their bees foraged into treated orchards. It appears the problem resulted from applying and improper concentration of the chemical. The CSBA approached the Environmental Protection Agency about the

inadequacies of the product labeling. The EPA basically said they aren't going to change anything. Fortunately, California regulators have been more receptive. It is quite possible that California will require stricter labeling than the feds.

Dr. Eric Mussen discussed his upcoming retirement on June 27. Dr. Mussen has been the California Extension Apiculturist since 1976. He has been the guest speaker at GBA meetings many times over the years. We will miss his candidness and wealth of information.

Dr. Mussen's replacement is Alena Nino (My apologies if miss-spelled). She arrives in the position in September. Her main area of interest involves the life of sperm within the queen's spermatheca and the rising incidence of drones with dead sperm. These are both important concerns of ours as we struggle to keep queens producing longer than one year and are finding an increasing number of drone layers. We look forward to inviting her to a meeting in the near future.

On May 22nd, Vicki Basham, Randy Fox and myself had the privilege of being on the "Old Time Farm and Garden Show" on radio station KKUP where we got to spend two hours talking about bees. Thanks to Randy for arranging it.

At the May meeting, we had nominations for the position of treasure. The only nominee was Vicki Basham. The GBA Board (Bored) of directors has decided to make the nomination permanent. If you have the desire to contact any of the board members, their contacts are listed below.

President: Wayne Pitts  
presidentgba@uvasgold.com

Vice President: Randy Fox  
vicepresidentgba@uvasgold.com

Treasure: Vicki Basham  
treasuregba@uvasgold.com

Secretary/Newsletter Editor: Dave Stocks  
secretarygba@uvasgold.com

## **Classifieds**

Art Hall is selling his 4 yr old 2 frame manual Mann Lake spinner. He has an extra set of

gears because he was worried about the plastic gears. Spare parts may be needed in 10-15 years. The unit was \$295+tax new. He is asking \$240.00. You can contact Art at 408-712-0663. For Sale: Top Bar Hives, Warre Hives, Native Bee Nesting Blocks, Bumble Bee Houses. Contact Dave at dave.stocks@yahoo.com

## Calendar of Events

### Meetings

#### **June 2, 2014**

Santa Clara Valley Beekeepers Guild -  
6:15 PM  
1292 Minnesota Ave.  
San Jose, Ca  
<http://beeguild.org/>  
Topic:  
Extracting honey w/ Mark Paterson

#### **June 3, 2014**

Gilroy Beekeepers Association - 7 PM  
Gilroy Old City Hall  
7400 Monterey  
Gilroy, CA  
<http://www.uvasgold.com/gba/>  
Topic:  
Top Bar Beekeeping

#### **June 4, 2014**

Santa Cruz Beekeepers Guild - 6:30 PM  
El Rio Mobile Home Park  
2120 N. Pacific Ave  
Santa Cruz, Ca  
<http://santacruzbees.com>  
Topics:  
Gardening for Bees

#### **June 5, 2014**

Beekeepers Guild of San Mateo County-  
7 PM  
1106 Alameda de Pulgas  
Belmont, Ca

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

Topic:

Ecosystem Services and conservation  
w/ Neal Williams, Asst, Prof. at UC Davis

#### **June 7, 2014**

Monterey Bay Beekeepers - 8 AM  
2450 N. Fremont St. Monterey, Ca  
<http://www.montereybaybeekeepers.org/>

### Classes/Workshops/Meetings

#### **June 21, 2014**

Advance Beekeeping with Randy Oliver  
San Mateo, CA  
Contact [president@sanmateobeeguild.org](mailto:president@sanmateobeeguild.org)  
with questions

#### **August 2-3, 2014**

2nd Annual Treatment Free Workshop  
Medford, OR  
Details at [www.blisshoneybees.org](http://www.blisshoneybees.org)

#### **September 6, 2014**

Intermed. Beekeeping w/ Serge Labesque  
San Mateo, CA  
Contact  
<http://www.sanmateobeeguild.org/> for  
details

#### **September 17-20, 2014**

Western Apicultural Society Annual  
Meeting  
Missoula, Montana  
[http://ucanr.edu/sites/was2/Conference\\_Information/](http://ucanr.edu/sites/was2/Conference_Information/)

#### **November 18-21, 2014**

California State Beekeepers Association  
Valencia, CA  
<http://www.californiastatebeekeepers.com/events.html>