



# Buzzword



West Sound Beekeepers Association

Editor:-Basil Gunther 360 297-5075

Volume XI Issue V March 2008

March 18. 2008 Meeting  
7:00P.M.  
Stedman's Bee Supplies  
Silverdale, WA  
Next meeting April 15, 2008

Program  
6 PM "Bee-ginner" Class  
7 PM Program/Meeting  
8:30? Queen Rearing Group ?

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President /Webmaster George Purkett



360 895 9116

Vice President/Librarian Roy Barton



360 613 0175

Secretary Judy Gunther



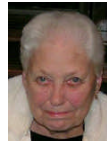
360 297 5075

Treasurer Dennis Heeney



206 842 5545

Educational Materials Barbara Stedman



360 692 9453

Education Chair Paul Lundy



360 297 6743

Queen Rearing Group Leader

**Currently recruiting!!**

**This Meeting's Refreshments:**

**Drinks: Bob Rice**

**Snacks: Joan Chissus**

## **A message from the president**

(April is your chance to vote him out)

I thought I would put together a list of what I would buy, make, or have available if I were starting up beekeeping again without my current accumulation. I will try to keep it to a short list and list whether the item is mandatory, recommended, optional, or not recommended. Keep in mind I am trying to keep it simple for a beginner.

As a beginning beekeeper, you will need:

- 1 hive tool (buy the cheap one) mandatory
- 1 smoker (choose what you want to spend, they all work) mandatory
- 1 veil/hat combination (various styles available, just pick one) mandatory
- 1 bee suit (many types optional, some come with a veil) recommended
- 1 pair bee gloves (many types avail) optional
- 1 bee brush (I had one for 2 years before I used it) optional
- 1 capping scratcher (for checking for varroa mites) recommended
- 1 spare veil/hat combination (so you can show your hives to friends) recommended

I also recommend you start with 2 hives, this will allow you to compare one to the other as they progress and gives you many more options if a catastrophe happens.

To start, you will need the following for each hive:

- 1 bottom board mandatory
- 1 single deep hive body w/ 10 frames and foundation mandatory
- 1 inner hive cover mandatory
- 1 telescoping cover mandatory  
(you may use a migratory cover rather than a telescoping cover)
- 1 boardman feeder mandatory  
(you may use a frame feeder rather than a boardman feeder)
- 1 3# package of bees w/queen mandatory
- 10 lb. granulated white sugar mandatory
- 1 container of liquid vegetable oil (for tracheal mite control) recommended
- 1 hive stand (pallet, cinder block and plank, railroad ties, etc.) recommended

Additionally, If both hives have no problems, and you live in the ideal honeybee microclimate, you may need the following for each hive:

1 additional single deep hive body w/10 frames and foundation about 7 weeks after the package introduction.

You will also need more sugar when the sugar runs out.

If your bees do very well, you may need to add 1 single western super w/10 frames and foundation about 10 weeks after package introduction.

The above listing should be all that you need during the first year up until August when you need to make a decision about what, if any, medications you may want to use (on the bees, that is). I will conclude with a disclaimer that this is 'my list'. I am sure I could find a beekeeper that would argue with everything on my list and have a better or cheaper alternative.

I hope to see you at the meeting. If you have Internet access, I highly recommend you get yourself added to the Yahoo group. The web link for the Yahoo group is <http://pets.groups.yahoo.com/group/westsoundbees/>. Visit our Association website <http://www.westsoundbees.org> for old newsletters and posted information. Visit <http://www.apitherapy.org/> for information on the apitherapy conference in Seattle April 4 - 6.

George, the want-to-be campaign manager for any prospective presidential hopeful.

### **And a poem...**

I eat my peas with honey,  
I've done it all my life.  
It makes the peas taste funny,  
But it keeps them on the knife.

-anonymous

## Minutes from the February 19, 2008 meeting

Submitted by Basil Gunther

### Treasurer's Report:

Checking: \$1474.03

Savings: \$ 3063.20

### Education Committee:

**Good Turnout for Bee-ginner class!**

**Paul attended State meeting and found...**

**The State Apiary advisory committee running and ready to apply State funds to bee research.**

**The State Beekeepers Association Pushing for a State Testing Lab for bee pests and Diseases.**

**The Dean of WSU supporting the role of WSU in supporting practical beekeeping for Washington State beekeepers.**

**There will be no WSU field days this year.**

**Beekeeping in Washington State is at a disadvantage because has not been described (officially) as an "Agricultural" activity!**

#### Old & New Business:

**George is working on an Annual Budget.**

**Stan and Ruth Jorgensen want to run an observation hive at the Jefferson County Fair in August.**

**Members continue to line up speakers:**

**Basil -Sam Hapke**

**George -Van Sherod**

**Dave Heid -Dan Harvey**

**Guest Mead Maker Dan Nichols will lead us in making a batch of blackberry mead at the August Picnic! We'll provide the honey and blackberries and he'll provide the guidance and equipment and share his mead making expertise and lore! When the mead is ripe he will do a follow-up presentation and tasting at a meeting and picnic participants will get a bottle to take home!**

**Kenneth Houghton found out how to have the ARS Beltsville Lab test bees for pathogens and reported it in the Yahoo Group: I couldn't quite make sense of the website, but after a few calls I got a hold of the guy at the research lab. For anyone who is interested, the guy's name is Bart Smith. He said the best way to send bees is to double bag them in freezer bags with some alcohol, and of course label your samples. He said some folks write directly on the bag, and by the time he is done messing with them the writing on the plastic has worn off, so he suggests some kind of paper label affixed to each bag-o-bees.**

### So if anyone needs the address, here it is:

Irving Barton Smith (Bart)

Bee Research Entomologist

[Bart.Smith@...](mailto:Bart.Smith@...)

Phone: (301) 504-8821

Fax: (301) 504-8736

Room 211

10300 BALTIMORE AVENUE

BLDG 476 BARC-EAST BELTSVILLE, MD,

20705

David Mackovjak did a presentation on the Deaths of our Association Hives; the seeming culprit: lack of good fall Management!

## The Buzzing Of Bees Can Warn Of Nearby Poisons

University of Montana, March 20, 2007

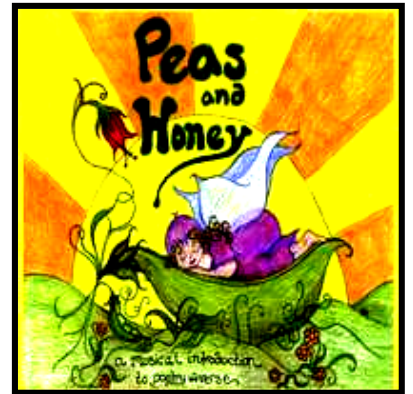
Everyone has heard of the canary in the coal mine, which sways or drops dead in the presence of poisonous gas, alerting miners to get out. Now a University of Montana research team has learned to understand the collective buzzing



of bees in their hives, which can provide a similar biological alert system.

But bees evidently provide a lot more information than canaries.

The



researchers, who work for a UM spin-off technology company called Bee Alert Technology Inc., have found that the insects buzz differently when exposed to various poisonous chemicals. "We found bees respond within 30 seconds or less to the presence of a toxic chemical," said Research Professor Jerry Bromenshenk. "The military is interested in that for countering terrorism. But the real surprise was that the sounds bees produce can actually tell what chemical is hitting them."

The insects also make different sounds when attacked by honeybee maladies such as varroa mites or foul brood. This may lead to applications that help beekeepers maintain healthy hives. "We can tell not only whether the colony has mites or not," Bromenshenk said, "but also the level of infestation they have. The sounds they make change with every stressor in characteristic ways."

Scott Debnam, a Bee Alert field technician and self-described "bee whisperer," said people have known for centuries that hives make a different sound when the queen is removed. Now modern listening equipment and computer software have revealed a secret bee vocabulary much more intricate than previously thought.

Bees lack sound-making organs, but they buzz by vibrating their wings and bodies and pushing air through spiracles -- tiny airways used for respiration. Debnam said Bee Alert discovered the unique hive sounds two years ago while studying how bees react to a poisoning event. The bees were filmed, recorded and counted, and it soon became apparent that sound was the best medium for determining if something toxic had entered the hive.

"We poisoned them with off-the-shelf stuff like acetone and malathion -- the types of poisons they might encounter in an agricultural situation," he said. "They responded within 30 seconds, which is amazing." Debnam said bees recycle the air in their hives every three minutes and never sleep, so they can provide 24-hour air monitoring, seven days a week.

"With some chemicals you can hear they don't like it," he said. "With the solvent toluene, for example, you hear their buzz go to BZZZZZZZZZZ just like that."

For most chemical agents, however, a more exacting instrument than the human ear is needed. UM electronics technician Dave Plummer designed a listening device that's basically a human hearing aid on a stick. However, if you leave it in a hive for an extended period, all you will hear is "crash, crash" noises as the bees try to pull the foreign object out of the hive or plug the end of the microphone. So Plummer had to create a special screen cage to protect the microphone.

The device records the same type of ".wav" audio files used for digital music. UM software engineer Larry Tarver designed a mathematical algorithm that allows a computer to analyze these files. "Most of the time for bees their normal sound range is 200 to 400 hertz," Tarver said. "When they get dosed with something, they really go to a high amplitude."

He said his program creates a running average to weed out incidental noises such as doors slamming or horns honking. Bee Alert's Colin Henderson, a faculty member at UM's College of Technology, then examines the audio samples with statistical analysis software. The end result is an electronic signature for each type of chemical or malady affecting the honeybees.

"To be honest, when I was collecting sounds in the field, I thought, 'Oh, this isn't working,'" Debnam said. "But I was wrong. You just can't hear this stuff with the human ear."

Bee Alert uses "smart hives" filled with electronics to monitor bee colonies, and these can be adapted to monitor hive sounds. So if a hive is sprayed with chemicals or invaded by pests or diseases, the sounds can be analyzed and a signal sent immediately via satellite to a beekeeper's computer or cell phone.

The researchers also hope to create a handheld listening device that beekeepers can use on hives to instantly tell whether the bees are healthy. "What we are trying to do is revolutionize bee technology," said Steve Rice, an electronics engineer and COT instructor. "Patents are pending on a lot of this." The new audio technology also helps distinguish different bee species. Debnam said there already is a device that can tell the difference between 100 percent European honeybees (the agricultural standard) and 100 percent African bees (also known as killer bees). However, European and African bees interbreed, and the Bee Alert audio technology seems to detect when they have intermingled. "You don't want Africanized bees," Rice said. "They get angry easily."

There also is some evidence the audio technology can differentiate between the multiple types of beneficial European honeybees used in agriculture. This can be useful to the Montana beekeeper, for example, who needs Russian honeybees instead of the Italian variety that are more susceptible to mites. A simple swipe of a handheld device and the beekeeper knows if the bees she ordered are right.

Besides doing statistical analysis to study bee noises, Bee Alert is using artificial neural networks to examine the buzzes. Information systems manager Robert Seccomb said ANN technology can recognize complex patterns on sonograms and is used a lot in voice-recognition software.

"It's not 100 percent accurate, but it's a lot quicker than statistical analysis," Seccomb said. "Once we build up a sufficiently large library of recordings, I'm pretty sure ANN will give another method of analyzing the sounds." He said if the statistical analysis method and ANN both agree on the meaning of a buzz, "we'll know pretty much what the answer is. If one says 'yes' and the other says 'no,' then we will say this is a questionable one, and you should check it out anyway."

**Honeybees are vitally important to the success of humanity -- not because they produce honey but because they pollinate the majority of our crops. Debnam said Albert Einstein once claimed that if all bees disappeared tomorrow, then all people would follow a scant four years later.**

**"We think this new technology can help bees and revolutionize beekeeping," Debnam said. "If you took a picture of beekeeping from 1947, it would look just like a bee yard today -- with the same smoker and other tools. Our audio technology might be one of the bigger things to come along."**

## **The Bee Manager**

*Jerry Hominda*

### **STARTING THE YEAR WITH WINTER SURVIVORS????**

**Well I am back after a long year in 2007 working as chief engineer on cruise ships-fortunately I was home during the critical times when my bees needed attention. For those who do not know me I have been doing bees since 1989 and have been part of the dynamic evolution of beekeeping. We observed our first Varroa mites approx. 15 years ago after coming out of the Almonds-E.WA orchards then into the Cascade Mountains. After the bees were placed in yards bees began crawling and dying-covering the ground in the bee yards with dead bees. Since the discovery of Varroa Mites beekeeping has not been the same and has required the creation of new methods for the beekeeper to use.**

**Hopefully with my series of articles I can bring you the nuts and bolts and help sort through this scientific beekeeping age of theories, misconceptions, and convoluted information. Trust me when I say my experience does not seem to help very much when it comes to colony survival. I have experience and feel confident when it comes to working bees, making observations, finding mites, diseases, American Foul Brood (AFB), moving bees, raising queens, keeping queen banks, and building equipment.**

**Consequently, when it comes to the control of Varroa Mites I feel like a beginner trying to manage my colonies preparing them for the winter.**

**Like many beekeepers I took a big hit this last winter-I went into the mountains last year with 60 colonies-came out of the mountains with 27 colonies and now I have 10 colonies that made it through the winter. The majority of my colonies from last July dwindled down to a queen and a handful of bees-certainly not enough to make it through winter. I lost approximately 10% to starvation-my fault did not have enough stores to get through the winter. Starvation is easy to detect-most of the bees die in a cell head first with their abdomen hanging out-they are attempting to find food before they perish.**

**Now what do we do? If your bees made it through the winter-then you are either lucky or you used good management techniques. I will almost guarantee with a 99.9% accuracy everyone reading this who still have bees also have Varroa mites and they are not going away. Now is a critical time of year-the weather begins to warm, bees are flying more frequently, there is no nectar and they are consuming last years stores. In addition, the queen is laying and the mites are beginning to populate as well.**

**Here are recommendations for some early year management tasks. To begin with-feeding bees is very important this time of year and there are a couple of reasons why bees should be fed. They should be fed to supplement low honey**

stores. In addition, feeding fools the queen into laying more eggs. She thinks the workers are bringing in nectar-she has no idea where the sweet solution is coming from. (I use frame feeders (look at photos) which hold about a gallon of mixed sugar water-they can be purchased from most of the beekeeping equipment suppliers they cost \$2.00-\$4.00 ea.). I mix my feed at least 50/50 so there is less chance of solution going rancid and I dump it and replace it if bees do not take it in 5-7 days. Your colonies should be cleaned out-I take the boxes off the bottoms and scrape and clean the bottom boards. Now is the time to install screened bottom boards if you are not already using them. While I am cleaning the colony I assess the queen-I check to see if there is a laying queen. I do not have to see the queen, but I should find some eggs. This time of year the queen will be laying eggs in the middle of the cluster of bees. Right now all my colonies have 1 ½ frames of sealed brood, worms and eggs.

If you find a colony that is queenless your best option is to combine it with another colony, but you can purchase queens from Hawaii this time of year. After I have cleaned and put the colony back together I treat them with the Dowdy method (sprinkling a couple of cups of powder sugar over the cluster of bees). Doing this helps remove mites from the backs of bees and right now most of the mites are on the backs preparing to begin breeding in sealed drone brood. This is also a good time to place an empty frame in the hive so the bees can create a comb for just drone-which you will remove in approx.20 days. This is used to control where mites are breeding.

More than likely when you go into the colony you will observe excess moisture including mold on frames-this is from lack of air circulation. In our country the bees do an excellent job sealing the top and all the air leaks with propolis trapping moisture and stopping ventilation. I take a thin stick 1/8"-1/4"thick and prop my lid up so there is a slight air flow this will help dry the inside of the colony. After completing these minor tasks I let the bees do their thing. I believe the less you disturb them the less stress you expose them to and less chance of harming the queen. These are a few things the bee manager should begin doing to prepare the bees for the nectar flows that will be occurring soon.

From all the reading I have done in the last 6 months concerning managing bees with mites it is my opinion that the Germans have some excellent natural organic methods for managing bees with mites. The American Bee Journal (ABJ) printed a three part series of "Varroa Biology and Methods of Control" in their 2007 October, November, and December issues-written by two German research people. If you do not receive the ABJ then you can go on line and look up a Dr. Otto Boecking and Kristen Traynor, they describe many methods for the control of mites.

Good luck beekeeping and hope your bees are survivors.

## **The March Buildup**

*Paul Hosticka March, 2003*

March, what can one say about March? It is not winter and it is not spring. It is not horrible nor is it wonderful. It is somewhat like November, a month we just need to get through.

In the bee yard it is quite a bit different. Colonies that have wintered well and that are strong and healthy are beginning their population explosion. Pollen is flowing in the door, the first spring bees are emerging and there are three or four frames of capped brood days away from emerging. The queen is hard at it and stores are in great demand. These powerful

colonies need close attention. Monitor for mites and disease. Feed if light and think about reversing or at least opening up the brood nest with an empty frame or two. It is too early to do splits but not too early to start thinking about it. Have a plan and get what equipment you need ready. Varroa strips, if used, should already be in but if you need to treat this spring you have no time to waste.

Formic treatment can wait for a few weeks for better weather unless you have a critical situation. If so you should treat now and hope for suitable conditions. If the weather does not cooperate repeat treatment later.

March can also be the make - or - break month for struggling colonies. Tracheal mite and nosema take their greatest toll about now. Small suffering colonies should be reduced to one box, protected from robbing and boosted with a frame or two of capped and emerging brood. Medicate as appropriate. Be careful about combining weak colonies with strong, you don't want to introduce disease or parasites to a strong colony simply to save a few weak bees. Colonies that are going to make it will turn the corner in April and start getting stronger offering hope and reward to the diligent beekeeper. Those whose fate is sealed will perish, leaving a sadder but wiser beekeeper to carry on and learn from bitter experience.

All beekeepers hate chemicals, all beekeepers hate mites, all beekeepers pine for the old days when we could tend our flock in peace and harmony with nature. We do not enjoy those blissful conditions today. Too much of beekeeping is doctoring and fretting about resistance and what trouble lies around the next corner. We have hope, and work toward a better future, but today we can only play the hand we have been dealt... We can wring our hands, stamp our feet, kick the cat and cry to the heavens that it is not fair but if any solution is to be found it is up to us...

So go out on a sunny day and spend some good quality time with your best colonies. Revel in the beauty and wonder of it all and fill your spirit with joy. Then put a clothes pin on your nose and do what must be done to help the unfortunate struggling colonies get on the road back to health.

## **Web pick of the month:**

[www.scientificbeekeeping.com](http://www.scientificbeekeeping.com)

This site, Randy Oliver's, has an amazing amount of current information on Varroa, Nosema, Bee Nutrition, and the almond pollination scene!

Yes! I want to be a member of West Sound Beekeepers' Association during 2008.  
I have enclosed a check payable to West Sound Beekeepers Association

**Check one:**  \$24 annual household membership dues.  
 \$34 Bee-ginner class fee (\$24 membership dues + \$10 study guide)

NAME(S): \_\_\_\_\_

MAILING ADDRESS: \_\_\_\_\_

PHONE: \_\_\_\_\_ EMAIL: \_\_\_\_\_

I would prefer to receive **email / snail mail** versions of the newsletter!!  
(circle preference)

**Please return to:**

**Dennis Heeney, WSBA Treasurer  
5350 Welfare Ave  
Bainbridge Island, WA 98110**

## **2008 American Apitherapy Society Course and Conference**

**CMACC, or the Charles Mraz Apitherapy Course  
and Conference, named after Mraz,  
a pioneer in apitherapy**

**April 4-6 2008**

**Seattle, WA**

**631.470.9446**

e-mail: [office@apitherapy.org](mailto:office@apitherapy.org) [www.apitherapy.org](http://www.apitherapy.org)

**BASIC APITHERAPY COURSE FOR BEGINNERS 7AM -9PM Friday, April 4  
(\$200): Honey, Bee Venom, Propolis, Royal Jelly, Propolis Healing Salve  
Preparation, Pollen, Principles of Apitherapy, BVT in Groups-10 Years'  
Experience, Legal Issues of Apitherapy, Hands-on BVT, Course Conclusion  
2 Day Conference Follows (\$300, \$400 for both Conference and  
Course)see website!**