



Buzzword



West Sound Beekeepers Association

Editor:--Basil Gunther 360 297-5075

Volume XI Issue IV February 2008

February 19, 2008 Meeting

7:00P.M.

Stedman's Bee Supplies

Silverdale, WA

Next meeting March 18, 2008

Program

6 PM "Bee-ginner" Class

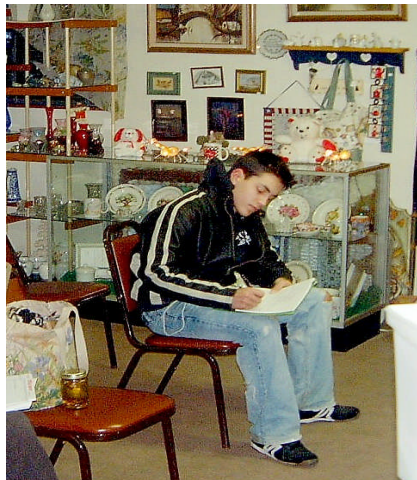
7 PM Program/Meeting

8:30? Queen Rearing Group ?

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Congratulations to John Mackovjak having passed the Apprentice Beekeepers' test.

President /Webmaster George Purkett



Vice President/Librarian Roy Barton



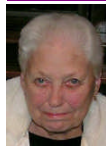
Secretary Judy Gunther



Treasurer Dennis Heeney



Educational Materials Barbara Stedman



Education Chair Paul Lundy



Queen Rearing Group Leader Vacant

This Meeting's Refreshments:

Drinks: Mark Follet

Snacks: Stan Jorgensen

Message From the President:

A message from the president-who-should-be-replaced in the April elections...

It is February. Have you started 'keeping' your bees yet?" You should have already opened up the covers and looked in to see if you have happy and thriving hives, surviving hives, struggling hives, or a pretty stack of bee equipment in need of live bees in the spring. Since the first of the year, I have popped the covers on all of my hives to take a look. As expected, I found a variety of conditions.

I went into the fall/winter with 16 hives. I now have 5 stacks of pretty equipment, and 11 surviving hives. Without adding candy boards, I would expect they would have all been in the struggling hive category and maybe reduced to stacks of equipment by spring. They all perked up after I added the candy board.

Top Bar Hive -It's alive! I made a candy board frame and added it to the top bar hive. I made it just like the one auctioned at the December Dinner (I knew I should have bid on that.) The top bar hive is more difficult to inspect without breaking the cluster so I do not know how well they are doing, only that there are bees in it. I need a warm day to look in it...maybe I could reach in with a camera and take a picture. Will the flash disturb them?

Single Deep Hives - 6 with summer raised queens, pollen substitute and heavy sugar feeding in the summer/fall are doing well. 1- with a summer raised queen. This one did not build up like the rest in the fall and I should have dismantled it in the early fall. I think it had a weak queen and was robbed out by the remaining hives. It is now an equipment stack.

Hives Built Up From Packages in the Spring. 4, all of them, reduced to equipment stacks. These are also called deadouts. (1) One hive found with no bees in the late fall. I was pulling lots of resources from this hive through the summer to support nucs for growing queens. Going into the fall it seemed to be not as nice as it had been earlier. I may have damaged the queen (or moved her to another hive) or disoriented this hive through manipulation during the summer. I do not know what happened to the bees. I will blame it on an inept beekeeper. (2 &3) Two hives had small clusters that died. One had lots of honey around the cluster, the other, some honey but none near the cluster. In the end the small cluster could not maintain its heat and get to food, but why they were a small cluster is unknown. (4) One hive had a small cluster that starved (head in cells) and lots of recently dead bees in the bottom. I believe this one was mainly starvation. I could have saved this one if I had looked in December and added food.

George, the soon-to-be-past-president. Quack, quack!

And a poem...



High Summer

I am a little Italian Bee,
I am Queen of a colony,
And I have no parents to bother my life,
I have no husband to call me "wife"
I have no taxes and no debts to pay,
Living's high cost don't come my way,
And I am as busy as busy can be
At superintending this colony.

- Mrs J. M. Morgan, 1918

Illustration by Melissa McLeod available
on line as a 10X10 print on canvas \$60

Minutes from the January 15, 2008 meeting

Submitted by Judy Gunther

Queen Rearing

Group: Maya will resign as QRG leader due to increased responsibilities elsewhere.

No **Treasurers Report** this month. Dennis and his wife went to Hawaii!

Old Business:

- Paul wants to get and distribute WSU queens earlier this year.
- George still working on getting Van Sherod as a guest speaker.
- Basil still working on getting Sam Hapke as a guest speaker.

Education Committee:

- Paul Lundy reports that John Mackovjak has passed his Certified Apprentice Beekeeper's test with flying colors! Congratulations John!
- Teen Beekeeper Grant still available. (See application on our website)
- Beekeeping classes start in February. (See Calendar back cover)
- Paul Lundy discussed local paper advertising for the class.

New Business:

- David Heid will work on getting Dan Harvey of Olympic Wilderness Apiaries as a guest speaker.
- Stan Jorgensen wants to set up a display hive at the Jefferson County Fair this year. (He and his wife, Ruth, do the Mineralogical Society show there).
- David Mackovjak wants to know how to get Public Service Points for Journeyman Beekeeper accreditation.

Announcement: The Yahoo group "Westsoundbees" has been formed!

Translation: For those with computer access to the internet, a web browser, and an email address, can join the "**Westsoundbees**" yahoo group. **(Yes, it is amazingly free!)** Once signed up, you can send an receive email from/to the entire group **(Oh Joy!)** There is an opportunity to post other files, articles, lists, etc. Photos have started to show up from past **Westsoundbees** association events. There is a calendar, which now contains upcoming meetings and beginner classes. If you have a question, post it! See if you get an answer. If you do not see an answer to a question, go ahead and answer it. It a good method to share information.

You may have already received an email offering you to join it. The email would have been from "**westsoundbees moderator**" and titled "**Yahoo! Groups: You're invited! Join westsoundbees today.**" There is a button in the email titles '**Join Now**'. Click on it and follow directions...it is very easy!

The web link for the yahoo group is <http://pets.groups.yahoo.com/group/westsoundbees/> If you did not get the email invite, visit the site and click on the 'join this group button'.

UC Davis bee breeder-geneticist Susan Cobey is building a better bee

Kathy Keatley Garvey, UC Davis Aug. 2007



Susan Cobey

"The queen, mother of all individuals in a hive, determines the inherited characteristics of the colony," she wrote in a published paper. "Her success, productivity and lifespan are dependent upon the number and genetic diversity of drones with whom she mates."

"The challenge with honey bee genetics is that queens always mate in flight," Cobey said. "They'll mate with multiple drones, as many as 60, although average about 10, within a couple of days. The drones die after mating and the impregnated queen settles down to begin her lifelong egg-laying."

Cobey is considered the world's most renowned bee insemination authority and instructor. She teaches courses on "The Art of Queen Rearing," "Instrumental Insemination and Bee Breeding" and "Advanced Instruction

Instrumental Insemination."

Cobey's job is basically to build a better bee by maximizing the good traits and minimizing the bad traits. "Controlled mating," she said, "is the basic foundation of all stock improvement programs."

After enrolling in a student exchange program in entomology in 1975 at Oregon State University, Corvallis, Cobey received her bachelor's degree in entomology in 1976 from the University of Delaware, Newark. From 1978 to 1980, she worked at UC Davis, where she was influenced by Harry Laidlaw (1907-2003).

Known as the "father of honeybee genetics," Laidlaw perfected artificial bee insemination technology. "He discovered the valve fold in the queen bee which hinders injection of semen into the lateral oviducts," Cobey said. "He developed instrumentation to bypass the valve fold enabling the success of bee insemination."

Utilizing the training, Cobey established the Vaca Valley Apiaries in Vacaville in 1982, developing the highly regarded New World Carniolan Breeding Program. In 1990 she pulled up roots—and hives—and settled in Ohio, serving as staff apiarist at the Rothenbuhler Honey Bee Research Laboratory at Ohio State University until accepting the research associate position at the UC Davis facility in May, 2007. She joins Eric Mussen, a longtime UC Cooperative Extension apiculturist.

Cobey is part of the overall plan to launch the UC Davis bee biology research program back to international prominence, said Walter Leal, professor and chair of the Department of Entomology. Over the past decade, budget cuts, resignations and retirements took their toll. The department is now recruiting a professor specializing in bee pollination.

"With instrumental insemination, we can control mating, enabling selection to enhance commercial stocks and maintain desired traits, including temper and resistance to disease and parasites."

Careful Honeybee Breeding Combats Tracheal Mite Pests

From: *Ohio State University* 1998

COLUMBUS, Ohio -- A study at Ohio State University has shown that selective breeding helps honeybees develop resistance to tracheal mites, pests that beekeepers normally control with acaricide.

The research indicates that with a combination of selective breeding and other natural controls, beekeepers may maintain healthy hives without relying on chemical controls.

Before Ohio State began selectively breeding for mite resistance, about half of the bees at the university had tracheal mites. As of spring 1997, the number had dropped to nearly undetectable levels, without the use of chemicals.



mites in tracheal tube

"The problem with treating bee hives with chemicals is that the honey can become contaminated," said Susan Cobey, apiarist at Ohio State. **"The mites eventually develop a resistance to the chemicals anyway. We are trying to develop more natural techniques for controlling tracheal mites that will be practical for commercial beekeepers."**

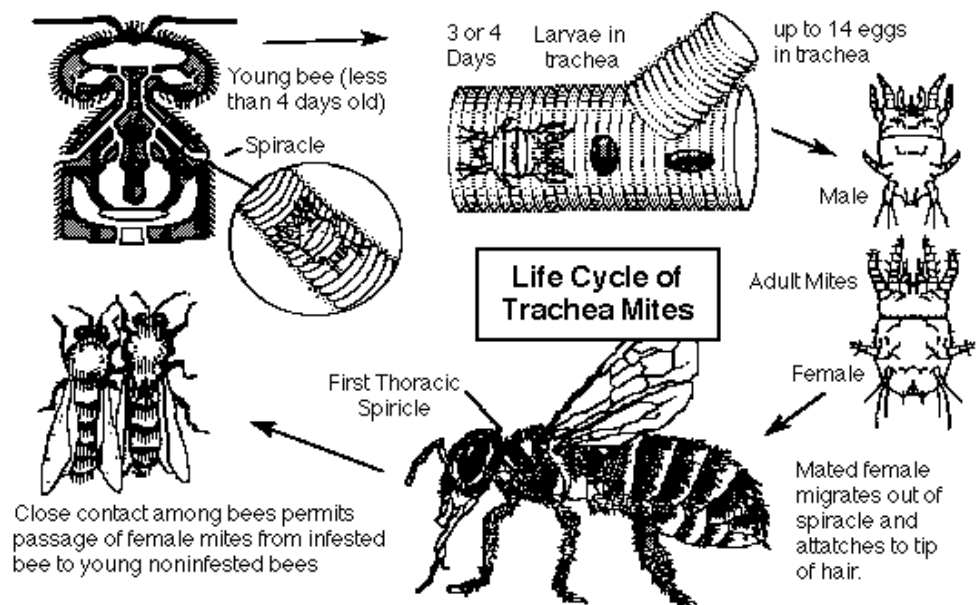
In an article in the *American Bee Journal*, Cobey explained how beekeepers could control tracheal mites effectively over the long term -- by breeding bees that carry the genetic traits that help them combat the mites.

Cobey said that such genetic resistance occurs naturally. Bees in Europe, where scientists first discovered tracheal mites in the 1920s, have long since developed a resistance to them. When the mites first migrated to the United States on European honeybees in the 1980s, they decimated entire bee populations here.

Diagram of tracheal mite life cycle (prep: C. Henderson, ill: B. Alexander)

Tracheal mites attach themselves to the inside of a bee's breathing tubes and feed on the bee's blood. The bees that survive are usually so weak that they can't maintain their hive.

"Infested bees become very lethargic," said Cobey. **"In really severe cases, the bees end up crawling in the grass because they've lost their ability to fly."**



They stop foraging and feeding their young so the population dwindles. They also develop secondary infections caused by bacteria or fungi. In that condition, they can't defend their hive from invaders. The mites continue to spread because healthy bees from other hives invade these weakened colonies to steal honey, and they carry tracheal mites back with them."

Since the 1980s, bees in the United States have begun to develop their own resistance -- slowly. Cobey said the process normally takes decades.

"What we're trying to do is speed up the process of natural selection by breeding the bees that seem least affected by the mites," said Cobey.

Since 1991, Cobey and her colleagues have been maintaining a special breed of bee they call the New World Carniolan (NWC). Through instrumental insemination, they have been breeding queens and drones that appear to show mite resistance and high honey production. Twice a year, the researchers dissect a random sample of bees and search their tracheas for mites.

Cobey said that the selective breeding program was responsible for cutting the mite infestation in the NWC population from about 50 percent to 1 percent in 6 years.

Rather than figure out exactly how the bees develop resistance -- which Cobey says would be too lengthy a task -- she and the other researchers are simply selecting and breeding the bees that seem to prosper the most overall despite the presence of the mites and other environmental conditions. As a result, the Ohio State bees are hearty in general.

Scanning electron micrograph of an *Acarapis woodi* tracheal mite.



Cobey called for beekeepers and their suppliers to put more effort into maintaining breeding stock, like the farm industry does. She said that suppliers of queens and drones don't control breeding enough to assure the quality of their bees.

"You can ask for the pedigrees of chickens, pigs, or cows before you buy them, but you can't ask for a bee pedigree," said Cobey.

But beekeepers can't easily control who their bees mate with. Queen bees mate with up to 20 different drones in a season. They mate in mid-flight, sometimes with drones from neighboring hives.

"Instrumental insemination is the best way to guarantee the quality of the bees," said Cobey, "but it's a fairly technical laboratory procedure, which industry has been slow to adopt."

As a result, most beekeepers just let their bees mate freely, and any beneficial genetic traits that their bees initially possess become lost in succeeding generations.

Cobey wants to organize queen producers on a national level to promote bee breeding. She offers a summer class in bee breeding to encourage beekeepers to establish their own breeding programs. Cobey warned that bee breeding requires patience and a long-term commitment because results aren't always immediately visible.

BASICS IN NORTHWEST BEEKEEPING

Adapted from Ron Bennett (<http://members.aol.com/beetools/>)

In January and February you should disturb the bees as little as possible. They will be in a tight cluster and you should not break their cluster.

Determine if hives need emergency feeding of sugar candy or dry sugar by lifting or weighing hives. Dry sugar or sugar candy is best because the bees can access it with minimum time away from the cluster and consume it directly. With syrup feed they must go to the feeder (breaking cluster and risking chilling themselves) and syrup has to be further evaporated for consumption by the bees. Continue to check for moisture on the inside of the outer cover. If you notice condensation make sure you increase hive ventilation by placing some pebbles or a twig between the inner and outer covers.

Watch the flight intensity on warm days to spot weak colonies. Also pay regular attention to the front of each hive looking for signs of disease. Deformed bees are a pointer to infestation by Varroa mites. Bees crawling on the ground without any deformations may be an indication of tracheal mite infestation.

In February, if you have determined that treatment for mites with miticide strips is warranted, then carefully follow the directions that come with the product. You should start your treatments for Varroa mites by mid-February so that you have completed treatment **BEFORE you put on your first honey super in March. Early supering will help gather the first honey flow of maple, and give your bees the space they need to help minimize swarming.**

Store your unused brood comb in a cool dry place and protect from mice. Drawn comb is one of your most important assets. It takes your bees a lot of honey and pollen to generate a frame of wax. *Check periodically for Wax Moth infestation!* Now is the time to build frames and hive bodies.

Order Package Bees! Packages are usually available in the first or second week of April, so you need to have your equipment ready and your packages ordered in time. In case of failing or poor queens one of the best management tools we beekeepers have is re-queening, so, if deemed necessary, plan and order queens for April 2nd delivery.

Keep your yard clean! Remove winter deadouts and salvage what you can. As you clean and store the equipment, think about why they died and act accordingly.

Keep entrances clear of dead bees! Dennis Heeney recommends taking a long piece of firm wire with a crook at the end and pulling debris from way back on the bottom board as well. Keep hives tilted slightly forward so water will run out, not in.

Order pollen supplement! now so you'll have it when you need it next month!

Paul Hosticka once said "We can also stand under the filberts and listen to the buzz or happily watch as the girls boil out for a cleansing flight on a sunny afternoon. Be sure to smile, the sunshine is good for your teeth!"

Pay dues to your local bee association (send \$24 payable to West Sound Beekeepers Association c/o Dennis Heeney, Treasurer. 5350 Welfair Av. Bainbridge Island, Wa 98110). The Association needs your support and we all benefit).

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** version of the newsletter **(circle preference)**

**Please return to:
Dennis Heeney, WSBA Treasurer, 5350 Welfare Av, Bainbridge Island, WA 98110**

