

Skagit Valley Beekeepers



William Markus, President
Alerd Johnson, Vice President
Brad Raspet, Secretary
Scott Rhodes, Treasurer
Bruce Bowen, Board

630-5086 or 661-0452
293-7953
708-9424
856-2652
422-5146

Edward Marcus, Board 421-4296
Greg Fagot, Board 854-0424
Charlie Langseth, Honorary Board 293-6853
Robert Niles, Editor robert@yakima.net

November 2013

ELECTIONS!

We will be having elections for new officers for 2014. *If you don't show up, you may be voted president!*

The next meeting will be **November, 14th, 7:00 PM** at the Skagit Farmers Supply CENEX Administration building, located at 1833 Park Avenue, Burlington WA. **This month we have bee breeder-geneticist Susan Cobey** of the University of California, Davis and Washington State University as the speaker. She will be talking about her work to enhance the genetic diversity of honey bees here in the United States.

As you might know, Sue Cobey was featured in the Wall Street Journal last month concerning honey bee mating and breeding. Sue Cobey and Bill Markus were interviewed for the story and even The Skagit Valley Beekeepers Association got a mention! See the October 2013 newsletter for the link (the newsletter is on our web site if you need it). It is an honor to be able to have her come talk at our meetings. We hope to see you there!

Remember, there is no meeting in December!

Are you listed in the Almond Board of California Pollination Directory?

The Pollination Directory contains information for California almond growers to use as a valuable resource for beekeepers and bee brokers. The Almond Board of California has re-structured the Pollination Directory located on the Board's website. Please log on to the Almond Board of California Pollination Directory at <http://goo.gl/nljJHG> to make sure your information is current.

Select Almond Pollination Directory. Then Select either Beekeepers or Bee Brokers at the bottom of the list.

If your business is currently on the website, please review your information and submit any changes that need to be made by selecting the "Update Beekeeper Info" button on

the bottom left (in orange).

If you are not on the site, and would like to participate, please select the "Update Beekeeper Info" button on the bottom left (in orange) and complete the form.

They would like the directory information to be current for the upcoming 2014 bloom, so please act now. If you have any questions or need help, please call Debye Hunter at 209.343.3230 or e-mail her at dhunter@almondboard.com.

Things To Do This Month

- Ensure your hives have plenty of ventilation. Excess moisture is your foe!
- Make sure they're fed up well. Lift the hive - it should be hefty. If not, it's too late for liquid feed but fondant or candy or simple dry sugar will help.
- Clean up your equipment and sharpen your hive tools.
- Protect combs from wax moth damage.
- Treat for Varroa mites? Hopguard seems to be a good option for Winter treatment.
- Install mouse guards.

Join the WA State Beekeepers Forum

Discussions on beekeeping at a local level with local beekeepers. Talk bees, post items for sale, get reviews and more. Registration is required but it is free.

Visit <http://goo.gl/ngua39> to register and sign in!

Might there be a cure for American Foul Brood (AFB)?

I asked **Karen Bean** of Brookfield Farms about her recent experiment to deal with American Foul Brood using *phages*...

How did you hear about using phages to fight AFB ?

I had battled AFB for two years - killing the bees, burning the frames, brood, honey...,scorching the boxes, swearing volubly (the last is mandatory you know).

I kept digging through the internet looking for alternatives, other than antibiotics (which do not kill AFB bacteria, but rather let the bees live with it). The researchers I found had either retired or given up. Finally three studies emerged: UK: only on how AFB spreads but not treatment (by the way, no antibiotics are allowed in UK); a German study, but I could never reach the researcher; then on something like page four of yet another rephrased Google search I found an article in a local Las Vegas newspaper on researchers working on phages that would attack AFB.

Using some of the information in that article I was able to track down the student who had presented the paper and a copy of her paper. **Diane Yost** is her name. She is/was (I think she's graduating now) at U Nevada, Las Vegas. This was in early spring.

I wrote her an email - rather: am I reading this article right? Do the phages work? Can I have some if they are available? Saying in the email that I understood that it was all in the early stages, but maybe in a few years, we could hope.... I also told her if she needed samples, let me know, because I had some I was about to burn.

She wrote back and said, yes to the samples. Then she wrote again to say she had checked with **Dr. Penny Amy** (the lead researcher) and had gotten permission to ask if I wanted to put my two AFB hives into the study.

Give me a millisecond, eh?

So I said yes, then proceeded to bite my finger nails while they put together phages to use - it took some weeks, and there were those hives sitting with AFB in two of my bee yards.

Hummm, that was more than you asked, I'll read on...

What are phages?

From Wikipedia: A bacteriophage (informally, phage) is a

virus that infects and replicates within bacteria. Me: Little tiny viruses that attack bacteria; in this case specifically AFB bacteria (go phages, go!!!! I love these little things).

How did you introduce phages to your hives?

Good, I'll pick up the story from here. Yost and Amy had isolated the phages and dehydrated them (my word not theirs - some fancy science term would be better). The phages were mixed with a cane syrup solution - 1:1 cane sugar and water - and sprayed on the AFB frames -every other frame in one box, the alternate frames in the next, alternate in the next as so on.

This was repeated every two weeks - for three weeks (or was it four?)...

A side note: each week I would photograph selected frames, then spray. Later in the test I sent samples.

We also had a control hive (the other AFB hive) which received no phages (a weirder, interesting story there). We also had a non-infected hive which was treated (the Karen is pleased as punch to have these phages around).

Each of these three hives: infected & treated, infected no treatment, not infected but treated were in three different bee yards.

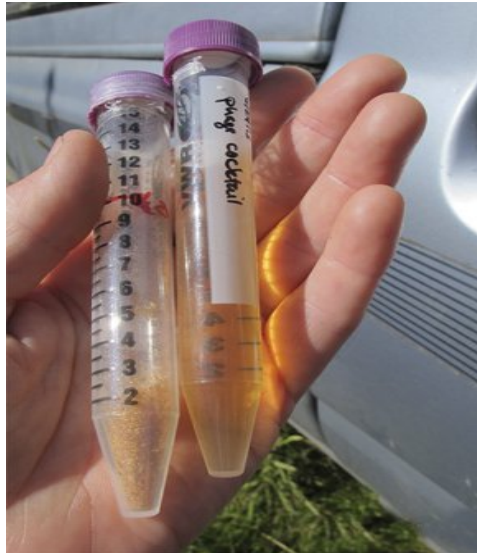
After using the phages for a season, how were the results?

The AFB would slow down, then pick up again. So not an earth-shaking result, but it gave them information which will enable them to continue on with the research.

My addition: throughout the test, the hive continued to grow! Even with AFB infected cells. So some were clearly surviving. I even had to super. The hive is six boxes tall going into winter, but read the next part to see what I did after the phage test...

The incredibly cool part:

After the tests were finished I emailed Dr. Amy and Diane and asked if they wanted to do anything else. If not I would do an experiment of my own. They had no further



Phages before and after re-hydration

Photo by Karen Bean

use so I went to the hive and removed (and burned) all infected brood. Boxes were NOT replaced. Just the brood removed. Then I went hiking for three weeks (that's very important to my sanity, if not the experiment). When I returned a few frames in one box showed AFB. Other frames showed healthy brood and more eggs (what a queen, eh? She never gives up).

I removed and burned those frames.

Two weeks later, I went to check the hive. No sign of AFB.

In the subsequent weeks I've treated that hive like all my others: Mite Away Quick Strips, Feed with essential oils and Nozivet. To this day there is no sign of AFB - to me -- I don't have equipment to do a check and I did not want to pull samples this late in the year.

So I'm incredibly pleased. If the hive makes it to 2014, I'll send a sample to Dr. Amy (Diane is off to new adventures). I think the hive might not make it, not because of AFB, but because they lost so much brood over the summer, but, hey, they've tons of honey as I didn't pull honey from that hive...at least they won't starve.

You can read more about the experiment and see additional pictures at Karen's Brookfield Farm Bees & Honey Blog: <http://goo.gl/qlzne2>

2013 WSBA District 1a Annual Meeting

(aka - Regional Dinner)

Thursday Nov. 7th, 6 PM at the Farmhouse Restaurant located at 13724 LaConner-Whitney Road, Mt. Vernon, WA just off Highway 20. Take I-5 Exit 230, head west towards Anacortes; it's about half-way between I-5 (Burlington) and Anacortes.

Featured Speaker: Dr. Brad Weeks, MD

"Health and Wealth from the Hive: The Practical Applications of Apitherapy"

Do you have any suggestions?

Story ideas? Something you would like to know about or an article that you would like to write yourself? Please submit them to robert@yakima.net. We'd love to hear from you! **For the January issue, Please have any articles to me by January 1st, 2014.**

Just Laugh!

Q: *What do you get if you cross a bee with a door bell?*

A: A hum dinger!

Q: *What goes zzub, zzub?*

A: A bee flying backwards!

Q: *What's the last thing to go through a bees mind when it hits your windshield?*

A: Its bum.

The Latest Buzz

Ancient bees may have been wiped out with the dinosaurs

<http://goo.gl/TC1hAq>

Bees most attracted to lavender and marjoram, study finds

<http://goo.gl/1D4TOr>

Bees' perfect landing inspires robot aircraft

<http://goo.gl/aywjMo>

Pollinating Bees Are The Pesticide Deliverymen Of The Future

<http://goo.gl/GIzctS>

Borage (*Borago officinalis*)

Also known as a starflower, borage is an annual herb quite liked by the honey bee. It grows in the garden easily, and is self-seeding. While not often eaten in the United States, the leaves are edible and are often served in some parts of Europe. As a fresh vegetable, borage has a cucumber like taste. Consumption should be moderate.



Photo by Jengod, CC license

Blooms start in June on established plants and continues to bloom until October and November in our area, providing good fall forage. Borage can provide 200 pounds honey per acre and 60-160 pounds pollen.

