HONEY BEE VIRUSES

Dr. Lynn Royce

Viruses are tiny particles of genetic material wrapped in a protein coat that is sometimes surrounded by a membrane envelope. Most honey bee viruses have RNA as their genetic component. Some well-known RNA viruses that infect humans include polio, influenza, and measles.

Viruses have complex life cycles that are intricately linked with the host cell. In addition, viruses seem to have an affinity for cell organelles, parts of a cell that are enclosed in membrane. The study of viruses has taught cell biologists a lot about the function of these cell parts, because infection with a virus changes the function of the organelles. A single type of virus infecting a cell may use several organelles to complete the development of new virus particles.

Viruses do not live long outside their host cell, and they can be present in a host without apparent harm. One of the ways they do this is by becoming incorporated into the host cell genome, or DNA. Here they are replicated along with the genes of the host, but the virus genes are only copied, i.e., they are not activated. These latent viruses become activated when something threatens the host cell. When the host cell is threatened, the virus separates from the host chromosome and actively produces more viral particles. These particles escape the host cell before it has a chance to succumb to the environmental damage. There may be other ways in which viruses can remain latent, unknown to me and perhaps to virologists. We still have much to learn about these tiny particles.

For many years, viruses have been known to infect honey bees. And increasing numbers of viruses continue to be identified as microbiological techniques improve. At the moment, some fourteen different viruses are known from honey bees. Before parasitic mites became a problem for European strains of honey bees, viruses posed more of a curiosity than a well-understood
A MESSAGE FROM THE PRESIDENT

At our most recent Membership Meeting in Newport this past October, it became obvious that there was some confusion over OSBA funds which would be used for research only and funds which could be applied to an endowment at the Oregon State University Foundation. I would like to address these questions in this message.

The confusion arose, I think, because at our 2004 Membership Meeting we voted to create a Research Fund, which would be established with monies raised at our annual auction. We voted that all auction funds in the future would be added to this account. At our 2005 meeting, we discussed what OSBA monies could be applied toward establishing a new endowment at the OSU Foundation, and the discussion turned to the Research Fund monies. Some members preferred that donations intended for research be applied to research only, and not the endowment. (There will be more on the endowment later in this message.) We then pulled out the minutes from the 2004 meeting and learned there that we had intended that the Research Fund monies be used for research or endowment. We were poised to move ahead with the endowment, but some monies that people or groups had planned to donate for research were going to be added to the Research Fund (and not the General Fund) because of the name of the fund. I assured the membership that the Board would address these matters.

To that end, I formed a committee that met this past December 1 in Corvallis. The committee consisted of the four OSBA officers, plus Fritz Skirvin, Fred VanNatta, and George Hansen. We had two main items on the agenda: first, to clear up our use of the name “Research Fund” and the monies in it; second, to create a final draft of the Endowment Agreement which I could present to the OSU Foundation for their consideration.

Briefly, here is what we decided regarding the Research Fund. We will keep the name Research Fund, and monies in this fund which were donated for research only will be used for research only. Other unrestricted monies currently in the fund, such as auction monies, will be removed from the account and will be included in the first donations by OSBA to the endowment once it is a reality. Thus, only monies intended for apicultural research will remain in the Research Fund. Any member or association that wishes to donate money for research only should make out a check to “OSBA,” and on the memo line be sure to write “Research Fund.” Any member or association that wishes to donate money to the Endowment (once it is activated) should make out a check to “OSU Foundation” (not OSBA), and on the memo line be sure to write “Apiculture Endowment.” These checks should be mailed directly to the OSU Foundation. All donations to the Endowment, including those made by OSBA, will be made out to the OSU Foundation, and not funneled through OSBA.

I hope that clears up any issues surrounding the Research Fund. Now let me address the progress on the Endowment. Early in October, George Hansen sent a letter to about 15 beekeepers asking if they would be willing to pledge money toward an Endowment, and, if
so, how much. This letter was reproduced in the October Bee Line. Its purpose was to gain some idea of how much money we could hope to initiate an Endowment Fund with. The beekeepers who responded indicated pledges that amounted to over $15,000. At its October meeting, the Executive Board voted that OSBA match dollar-for-dollar the first $12,500 of actual donations when the pledges might be called in. (This would be when the Endowment Agreement with the OSU Foundation is signed and activated.) This would mean that the first wave of contributions to the Endowment Fund would meet or exceed the $25,000 mark. Also, in a rather unexpected but welcome move, the Idaho beekeepers who attended our Fall Conference voted in their business meeting to assist the Oregon effort in the same way, that is, their Association would also match the first $12,500 in donations by Idaho beekeepers. Thus, after we sign an agreement with the OSU Foundation, the principal could reach $50,000 in the first five or six months. Needless to say, this is rather exciting and gives us the opportunity to tell other potential donors what beekeepers themselves have done to get the ball rolling.

Regarding the Endowment itself, which we will refer to as the “Apiculture Endowment,” the committee that met in December has produced a draft of a proposed Endowment Agreement which allows for using the Endowment earnings at first for research in apiculture; later, if the University hires a honey bee entomologist, the Endowment may be used to support that position. Soon I hope to bring this draft to an attorney for review. Following this, I will submit it to the OSU Foundation for consideration by them and the University. The Executive Board authorized my signing the Endowment Agreement on behalf of OSBA, provided there are no serious hitches in the process.

Now that I have thoroughly confused everybody, let me add to the soup the news that there is another apiculture-related fund already in existence. This is the Herman A. Scullen Memorial Fellowship. Dr. Scullen was the honey bee entomologist at OSU until his retirement in 1953 after a forty-year career involved with the honey bee. Dr. Scullen died in 1981 and, when his wife Bessie passed away in 1991, the Scullen Fund was established following a $5,000 bequest from Bessie’s estate. The purpose of the fund is to support graduate student research in apiculture at OSU. However, the original documents describing the fund’s administration involved both the Chair of the Department of Entomology and the Professor of Apiculture within that department. As both the department and the position have been eliminated, the College of Agricultural Sciences has not utilized these funds, although a graduate student in another department could conceivably perform apicultural research. In any case, the intent of the donors, while clear, is not being applied currently to the funds. As a result, we have asked for development of a review committee, consisting of faculty and beekeepers, to determine appropriate uses and candidates for the fund, in accordance with the intent of the donors and in the absence of an Entomology Department. Incidentally, the idea of a similar review committee is incorporated in our current draft of the Apiculture Endowment Agreement described earlier. What is key here, in dealing with the Scullen Fund as well as with the new Apiculture Endowment, is that the intent of the donors be honored. Nobody could foresee at the time the Scullen Fund was established a future with no Entomology Department and no apiculturist at OSU. Because we are working with OSU now toward the Apiculture Endowment, we would like to feel some certainty that the intent remains honored, regardless of changes in structure at OSU.

Kenny
MINUTES: GENERAL MEMBERSHIP MEETING

October 28, 2005—Newport, Oregon

The General Membership Meeting of the Oregon State Beekeepers Association was called to order at 4:30 pm by president Kenny Williams.

Kenny began by explaining the Endowment Fund to the membership, and the steps it took to get to this point. George Hansen explained his letter to beekeepers asking for them to pledge support. He believes the closer a person was to the effort, the more they were willing to commit. Therefore, we need information for potential donors.

OSBA will match endowment pledges up to $12,500.00. In the beginning, the interest the Endowment Fund earns will fund research. Hopefully stakeholders will also add to our donations and the Fund will grow accordingly. Kenny asked for a show of hands from members approving this venture. A majority of the membership approved.

Jan Lohman read the minutes from the previous General Membership Meeting. The minutes were approved as read.

Phyllis Shoemake gave the Treasurer’s Report. We currently have $56,646.07 in the treasury. Fred VanNatta moved that we accept the report as read, and Fritz Skirvin seconded the motion. The Treasurer’s Report was approved as read.

Thom Trusewicz reported that the website is going very well.

John Jacob reported that he has written a letter about donations to the Endowment Fund that he will present to Regional Groups to use. He has already presented it to his group in southern Oregon. [Note: This letter appeared in the November/December 2005 Bee Line.]

There will be a Home & Garden Show the 22nd–26th of February at the Portland Expo Center, and they would like our participation. Sam Hutchinson is working on the project to provide volunteers for a booth on pollination and beekeeping. The 10-foot x 15-foot booth will be at no cost. Our responsibility is to have one observation hive and a talk each day. The Portland group will help Sam with this project.

Kenny introduced Rosanna Mattingly as the new Bee Line Editor.

Harry Vanderpool talked about the 2006 Conference. It will again be held at Agate Beach Inn. Sue Cobey will be one of the speakers.

Kenny turned the floor over to Chuck Sowers, head of the Nomination Committee. Chuck asked for suggestions from people concerning the Treasurer position. Phyllis has done the job for a long time and she would like to be replaced when we can find someone capable of doing the job. Kenny Williams and Harry Vanderpool are willing to be President and Vice President for another year. Bob Olstrom made a motion that we accept both Kenny Williams and Harry Vanderpool for another year in their positions. Jordan Dimock seconded the motion and it was approved. Jan Lohman has agreed to another year as Co-Secretary/Treasurer, and Phyllis will continue until we find a replacement. Bob Olstrom made a motion, Jordan Dimock seconded the motion, that Jan and Phyllis remain in their positions and this also passed. Fred VanNatta made a motion that Regional Representatives remain for another year, seconded by Bob Olstrom, and the Regional Representatives also remain for another term.

With no further business, the meeting adjourned at 6:00 pm.

Respectfully Submitted,

Janice Lohman
Co-Secretary/Treasurer
SOUTHERN OREGON BEEKEEPERS HONOR TWO MEMBERS

**Mysti Jacob**

The Southern Oregon Beekeepers Association recently honored two members with lifetime membership.

**Morris Curtis** has been a beekeeper in our valley since around 1963, when he started with just a few hives. His honey and pollination business in Eagle Point, Oregon, has always been a family business, and now his sons have taken over the brunt of the work. Morris taught beekeeping for 4H in the 1970s at the Jackson County Fairgrounds. He and his sons have taken their bees for pollination as far north as Canada’s Okanogan Valley, as far south as Visalia, California, and as far west as Wyoming. Morris has earned the reputation as one of our valley’s most respected and esteemed beekeepers.

**Stan Kee** obtained his first hive when he was in 7th grade in Shady Cove, Oregon. He raised bees all through high school and took a break when he left for college. When Stan returned to the Rogue Valley in the early 1970s with degrees in teaching and aviation, he sought to keep bees again. He bought five frames from a local beekeeper and has been going strong ever since. He was the previous president of the Southern Oregon Beekeepers Association and his wife, Patsy, served as secretary. Sadly, Stan is hanging up his veil for good. We hope to see him at future meetings, as his knowledge and insight have been valuable assets to our beekeeping community.

BLACKBERRY RUST

**Thom Trusewicz**

Producers of blackberry honey may be affected by blackberry rust fungus, *Phragmidium violaceum*. The presence of this rust has been confirmed in 14 counties in Oregon and in southwest Washington. Oregon counties include: Coos, Curry, Douglas, Lincoln, Clatsop, Columbia, Clackamas, Multnomah, Yamhill, Marion, Polk, Linn, Benton, and Lane.

*Phragmidium violaceum* is an organism used as a biological control agent in Australia, New Zealand, and Chile. It somehow made landfall for the first time in the United States during 2005 in southern Oregon. It infects Himalayan and commercial evergreen varieties, but has yet to be found on cultivated varieties of blackberries or raspberries. Researchers are keeping a close eye on crop varieties.

The rust can defoliate severely infected canes, and may infect blossoms and fruit. Although yield may be reduced, the fruit is safe for human consumption.

Researchers from Oregon State University, the Oregon Department of Agriculture, USDA’s Agricultural Research Service, and others are currently working on management strategies for future control.

Blackberry nectar is generally the basis of honey production for most nonmigratory beekeepers in Oregon and Washington. Loss of this plant may be good for those who battle the progression of this weed on a regular basis from gardens, fields, and vacant lots. However, impacts resulting from the potential loss of blackberries may substantially lessen honey production unless other abundant sources of nectar can found by the honey bees. The beginning to the end of the blackberry bloom is generally considered to represent the entire time frame of the nectar flow in Oregon and Washington.

The blackberry bloom happens early enough in the season to allow beekeepers to pull surplus honey in time for the medication cycle in early August. If honey production becomes dependent on a later nectar sources, such as fireweed and Japanese knotweed, beekeeping cycles may need to be reassessed and adjusted.

*Continued on page 10*
OSBA REGIONAL REPRESENTATIVES

Columbia Basin: Debbie Morgan
3800 Benson Rd, The Dalles; (541) 298-5719

Eastern Oregon: Jordan Dimock
2635 Mitchell Butte Rd, Nyssa; (541) 372-2726

Metropolitan Area: Chuck Sowers
26730 S Hwy 170, Canby; (503) 266-1740

North Coast/Webmaster: Thom Trusewicz
90041 Logan Rd, Astoria
(503) 325-7966; ccbee@intergate.com

South Coast: Joann Olstrom
3164 Maple Ct, Reedsport; (541) 271-4726

Southern Oregon: Pat Morris
1333 Rogue River Hwy, Gold Hills
(541) 855-1402

Willamette Valley: Fritz Skirvin
6694 Rippling Brook Dr SE, Salem
(503) 581-9372

OSBA REGIONAL ASSOCIATIONS

Central Oregon Beekeepers
Meets 6:30 pm, third Tuesday, Bend
Deschutes Public Library, Hutch Rm
President: Dennis Gallagher
(541) 389-4776; denbend@coinet.com
Secretary/Treasurer: Glenda Galaba
(541) 383-1775; galaba@msn.com

Clatsop County Beekeepers
Meets 7 pm, third Wednesday, Astoria
Extension Office, 2001 Marine Dr, Ste 210
President: Steve Lindros
(503) 325-1127; slindros@hotmail.com
Vice Pres: Don Thompson; (503) 458-6714
Secretary/Treasurer: Marylyn Sanbrailo
(503) 717-8448

Coos County Beekeepers
Meets 6:30 pm, third Saturday (except Dec)
Ohlsen Baxter Bldg, 631 Alder St, Myrtle Pt
President: Thomas Kyelberg
(541) 297-4017; usvi@charter.net
Vice Pres: Spike Richardson; (541) 267-4725
Secretary: Marsha Burgdorff; (541) 888-5695
Treasurer: Jane Oku; (541) 396-4016
jane_oku@hotmail.com

Lane County Beekeepers
Meets 7:30 pm, third Tuesday, Eugene
EWEB Meeting Rooms, 500 E 4th Ave
President: Mike Harrington
(541) 689-8705; beekeeper@comcast.net
Vice Pres: Morris Ostrofsky
(541) 685-2875; ostrofsky@pacinfo.com
Secretary: Barbara Bajec
(541) 767-9086; mbartels@bbastrodesigns.com
Treasurer: Nancy Ograin
(541) 935-7065; woodrt@pacinfo.com

Portland Area Beekeepers
Meets 7 pm, second Thursday, Oregon City
Hous Auth Clackamas Bldg, 13930 S Gain
President: Sam Hutchinson
(503) 829-7744; samh@molalla.net
Secretary: Paul Hardzinski; (503) 631-3927
Treasurer: John Keeley
(503) 632-3682; keeley81@btconline.com

Southern Oregon Beekeepers
Meets 7:30 pm, first Monday, Central Pt
So Or Res & Ext Ctr, 569 Hanley Rd
President: John Jacob
(541) 582-BEES; oldso@jeffnet.org
Vice Pres: Brian Bolstad
(541) 512-2364; bolstad815@hotmail.com
Secretary: Mysti Jacob; (541) 582-2337
Treasurer: Laurie Boyce
(541) 846-0133; leanira@hotmail.com

Tillamook County Beekeepers
Meets 7 pm, first Thursday, Tillamook
Forestry Building, 5005 Third St
President: Bob Allen; (503) 322-3819
Vice Pres: Terry Fullan
(503) 368-7160; tfullan@nehalemelt.net
Secretary/Treasurer: Wayne Auble

Tualatin Valley Beekeepers
Meets 7:30 pm, last Friday, Beaverton
OSU Ext, #1400, 18640 SW Walker Rd
President: Todd Balsiger
(503) 357-8938; toddbalsiger@comcast.net
Vice Pres: Andrew Schwab
(503) 537-0506; Pyr4ausi@verizon.net
Secretary: Preston Gabel
(503) 530-1436; preston@gabelhaven.com
Treasurer: Walt Amour; (503) 690-9930

Willamette Valley Beekeepers
Meets 7:30 pm, fourth Monday, Salem
Chemeketa Comm College, Bldg 34, Rm A
President: Ken Kite
(503) 769-2941; thekites@hisurfer.net
Vice Pres: Mike Rodia
(503) 364-3275; drodia@yahoo.com
Secretary: Evan Burroughs
(503) 585-5924; n7ifj@qwest.net
Treasurer: Susan Raukhfuss
(503) 391-5600; smokfoot@cyberis.net
NEWS FROM THE REGION

Coos County Beekeepers
Steve Lindros reports that the Clatsop County Beekeepers Association is “under construction.” They are increasing membership, covering new areas for member locations, and adding 2–3 new 4H Clubs to the Association to give kids a project. The group hopes to continue to expand in knowledge and numbers of beekeepers and bees.

Lane County Beekeepers
See: http://www.lcbaor.org/Newsletters/BeeNews%20Jan%2006.pdf

Portland Metro Beekeepers
Sam Hutchinson notes that Elbert Lowry will speak on Apitherapy during the January meeting. In addition, the group will be discussing the booth for the Portland Home & Garden Show in February. Bee Day this year will be at George Hansen’s in Colton on April 22. Present plans for the February meeting are to have a doctor speak on venom reactions and what steps need to be taken immediately for some reactions. The group will be completing the planning for the Home & Garden Show at that meeting.

Southern Oregon Beekeepers
The Southern Oregon Beekeepers Association is strong and adding new members every month, says Mysti Jacob. The group has been trying to promote beekeeping in the area by welcoming beginner beekeepers and those simply interested in honey bees. In addition, they have been trying to balance meetings to include news, info, and discussion relevant to the pros and commercial beekeepers, as well as discussions focusing on topics relevant to beginners. Laurie Boyce is in the process of putting together a spring bee school for late April or early May. The valley has a lot of really knowledgeable beekeepers in different areas of expertise, so it should be beneficial to newbies and seasoned beekeepers alike. In addition, the group recently recognized two SOBA members as honorary lifetime members: Morris Curtis and Stan Kee (see page 5).

Tualatin Valley Beekeepers
Todd Balsiger says that the speaker for the next meeting will be Sheryl Johnson from Ruhl Bee Supply. Sheryl will discuss the cost of beekeeping with emphasis on the beginning beekeeper. This idea came to Todd by reading the last Bee Line and the information that Ed Johnson shared. The group has a new vice president, Andrew Schwab, and a new treasurer (belated news, as he has been serving for 6 months or so), Walt Amour. Jerry Schwanke has announced that he and his wife, Shirley, are dramatically downsizing their beekeeping operation. Jerry and Shirley have been very instrumental in the success of the TVBA over the years. The group has responded by voting to make Jerry a lifetime member of the Tualatin Valley group.

Willamette Valley Beekeepers
Harry Vanderpool notes that the group will hold its annual bee school on March 13, 20, and 27 at Chemeketa Community College, Building 34, at 7:00 pm. Cost is $25.00, which includes all materials and annual membership in the Association. For information, call (503) 399-3675 or (503) 364-3275, or send an e-mail to shallotman@yahoo.com.

Taking a Pulse
Marianne McMurrian and others at GloryBee say that most folks coming in are interested in buying equipment. Many are just getting started in keeping bees. They are wanting to know when to start a hive, and asking about bee school. Beekeepers also are wanting to know when package bees will be available and how much they will cost. Questions are fewer than last month, and fewer beekeepers are coming in for medications. GloryBee is taking Continued on page 8
orders now for package bees to arrive April 14–15. The deadline to order is April 7. They will have queens until June 30.

Folks coming into Ruhl Bee Supply similarly are buying supplies and equipment. And many are just getting started in beekeeping. They too are checking pricing, and asking whether or not package bees are going to be available this year. Sheryl Johnson says they are—two shipments are scheduled, one for April 10 and one for April 24. The first shipment is almost sold out, and orders taken now will be for the second shipment. This shipment actually arrives at a better time for beekeepers installing bees at high altitudes and in eastern Oregon and eastern Washington. In addition, a number of beekeepers are asking about dead bees. Sheryl is willing to take a look at the brood chamber if beekeepers want to bring it in, but it needs to be kept “as is.” More often than not, Sheryl can tell what happened (e.g., foulbrood, queenlessness, starvation) from clues left behind. Just be sure to leave things as they are. In addition, Sheryl reminds beekeepers that CheckMite+ and Api Life Var need to be reapproved by EPA before they can be used in Oregon, Washington, and Idaho. Until then, these materials are not available. Apistan is still approved.

**HOME AND GARDEN SHOW UPDATE**

*Sam Hutchinson*

The sign-up list for volunteers for the Portland Home & Garden Show this February is now posted on the OSBA website [see http://www.orsba.org]. The list includes dates and times for booth volunteers to sign up for the four days of the show. Admission to the show is free for volunteers, though volunteers will need to pay for parking. The Portland Metro group would like some help with putting the booth up for the show. We would also like some help with taking things down after the show on Sunday night. There are sign-up positions for these times on the website also.

The Show Manager has asked Portland Metro Beekeepers to put on three seminars, which I agreed we would do. If anyone wants to put on one or more of these presentations, they are welcome to do so. The seminars will be held in a conference area at the Expo Center, with a subject—“Beekeeping in Oregon.” It is a broad title, but can probably be changed as needed. We will have a 45-minute slot on Thursday, Friday, and Sunday afternoon.

The booth next ours is being designed as a Bee Friendly Garden. The designer, Sarah Smith, needs about 100 square feet of heated greenhouse space to get crabapple trees to bloom. She needs this space about February 1. All the other plants for that booth will be much easier to force.

**BEEKEEPING IN WESTERN OREGON**

*Harry Vanderpool*

**January / February**

Ventilation in our hives is very important during the cold months, as it is at other times in the year. Take a walk through the apiary on a cold, clear day and peek under some hive covers. Is the underside wet or moldy? If so, place a short twig about 1/8th inch under one end of the outer cover as you close it.

Spring usually brings some of the windiest weather of the year. Make sure your hive lids are secured in one fashion or another.

Keep a close eye on hive weight, especially during warm winters. Provide emergency feed for any featherweight colonies.
February usually has a couple of warm days that will give you the opportunity to inspect your colonies. This will give you a chance to move frames of feed closer to the brood nest and equalize stores among healthy colonies.

Dust colonies with 2 tablespoons of Terramycin and powdered sugar mix, every 5–7 days to ensure a continuous treatment for 21 days. To make the mix, thoroughly combine and mix 2 pounds of powdered sugar with one 6.4 oz packet of Terramycin. Store any unused mix in a sealed container in a safe place between treatments.

If you find colonies that have died-out over the winter, make your best effort to find out why. Haul the hives into the shop and take a long, close look. You have spent good money for the lesson before you. Don’t ignore it.

If a fast build-up is desired, you can start feeding pollen patties and light syrup in February.

As soon as the weather will allow, start your Varroa treatment. Read and follow the directions on the package! Mark the date for strip removal on the calendar or some other place so that you cannot forget.

Things are going to be getting busy soon. Assemble the hive equipment you will need to get through the year. Invite a non-beekeeper friend or neighbor over to help. Everyone likes driving nails!

Order queens and packages now.

If your regional association is making plans to run an annual bee school, why not step forward and offer to do a short segment on one of the nights? Choose your favorite subject and share all you’ve learned!

**Note:** I saw and tasted some of John’s beautiful comb honey last fall. When queried about his means, he responded as follows:

We do absolutely nothing special to make comb honey.

We use plain beeswax foundation, with split pins at the ends instead of wire to help hold it in place—quite standard. Some people use a thinner wax foundation for comb honey, but we don’t notice the regular-thickness foundation in our combs when we eat it, so we continue to use it. It’s probably easier to handle than the thinner stuff.

We always make comb honey in shallow frames, because the area of a shallow frame’s comb can be cut up into exactly four squares that fit in the standard honey boxes, so there is no waste.

This year I interspersed frames for comb honey among other frames in supers already on the hives and already at least partly drawn out and filled, mainly because I was late with making up the frames and foundation for the comb honey. In previous years I have just put a whole shallow super with all plain beeswax foundation on a hive. The only drawback with that was that some of the resulting combs were too fat to fit in the boxes. If the bees have to make the comb fit between other combs, they won’t make them too thick.

As you know, sometimes bees resist using plastic foundation, but they never resist using
**Comb Honey** *(continued from page 9)*

beeswax, so, in that sense, making comb honey is a little more sure-fire than making honey on frames with plastic. Basically, if they will make honey at all, they will make it in a frame set up for comb honey.

We don’t use “Robinson Rounds,” where you use special frames with round plastic things suspended in place of regular foundation. The bees make honey in the plastic rounds, and all you have to do to sell them is put a cover on them. I have heard that you have to crowd the bees into a small space at the right time of the summer to make them use the rounds, with the risk of making them swarm instead. I have no interest in doing that, and I think the boxed honeycomb is just as attractive.

We were lucky this year. The bees had made very little honey up until late June, but they found a good source of nectar (or maybe the populations boomed, or both) in late June and July. We took the honey off in very early August and got a pretty good amount to extract, as well as 71 boxes of honeycomb to share with others. Sometimes I think beekeeping is worth the trouble!

---

**Honey Bee Viruses** *(continued from page 1)*

threat. Most of the time, honey bees recovered from viral infections without intervention by the beekeeper, and losses resulting from viruses did not appear to be great.

I will describe honey bee viral infections that I have or think I have seen in western Oregon. For those interested in a list of bee viruses, I recommend the book, *Honey Bee Pests, Predators and Diseases*.

**Chronic paralysis virus** has two syndromes. One causes bees to tremble, crawl (be unable to fly), and have bloated abdomens; the other causes hairlessness that results in bees having a greasy, shiny look. Hair loss may be the result of other bees nibbling on infected bees. Eventually, these bees also become flightless, trembling, and soon die. Bees seem to have considerable resistance to this virus under normal circumstances.

**Sac brood virus** is especially apparent during late larval development, where the last larval molt is interrupted and fluid builds up between the last larval skin and the new pupal skin. The appearance of these larvae is saclike. The infection begins during early larval development. Although the virus also infects adult bees, the diagnostic symptom of saclike larvae occurs only in late larvae. Adult bees show no symptoms. Nurse bees are able to transmit virus particles to young larvae. When most older bees become foragers, the incidence of this virus decreases in brood.

**Acute paralysis virus** affects both adult bees and larval bees. This virus apparently can exist in a latent state in honey bee colonies. One of the stressors that will activate this virus is *Varroa* brood mites. Once activated, this virus will cause colony mortality.

A similar relationship exists with **Kashmir bee virus**. Kashmir bee virus has been identified as
There are no controls or treatments for viral infections. Although mites are clearly a stress that may trigger virus outbreaks in honey bee colonies, there may be other factors to consider.

Example, in a human or a honey bee, and then gaining entry. (Plant cells have cell walls instead.) As a general rule, DNA viruses simply insert their genetic material into the host cell’s DNA. In contrast, RNA viruses must first turn their RNA into DNA (with the help of the host cell!) before the insertion takes place. Viruses are amazing, ubiquitous, and, thankfully, often “picky” about the type of cells they infect.

Deformed wing virus is another virus that has a strong relationship with Varroa destructor. Bees emerge from the pupa with shortened, deformed wings, and are unable to fly. As a result, the colony will eventually lose its forager force and decline.

Black queen cell virus infects all life stages of the bee, but causes death to the final stage of queen larvae. This virus has a strong relationship with Nosema apis. When bees are heavily infested with Nosema, black queen cell virus can be activated.

Although viruses are common, symptoms are not always distinctive and the possibility of misdiagnosis is high. Think about what first comes to mind when you see a colony with a huge pile of dead bees just outside the entrance. Or consider what you think of when there are crawling bees in large numbers around the entrance. Severe outbreaks of honey bee viruses have been infrequent. Sometimes the effects of viruses become apparent when colonies become crowded, such as during or shortly after long periods of bad weather in the spring.

There are no controls or treatments for viral infections. Although mites are clearly a stress that may trigger virus outbreaks in honey bee colonies, there may be other factors to consider.

These factors include old and new pesticides (not just insecticides but also herbicides and others), changes in weather patterns, changes in habitat (including the availability of good water and forage), and beekeeping practices such as migration and pollination. Without clear answers for managing honey bee colonies to reduce the threat of viral infections, extension apiculturists are left with the old standard: keep colonies healthy. Make sure that your colonies have good food stores, a laying queen, and good clean honeycomb. Do everything possible to reduce stress.


Note: Many members of OSBA were keeping bees long before Watson and Crick made their now-famous contribution to science in the early 1950s by “cracking” the genetic code and thereby making “DNA” part of our everyday language.

These two men also contributed to our understanding of virus structure. As Lynn states, viruses are small bundles of genetic material, either DNA or RNA, carried about in a shell made up of bits of protein. They cannot reproduce on their own. Instead, a virus uses such means as “tricking” a host cell to pull it inside or fusing with the cell’s membrane, for example, in a human or a honey bee, and then gaining entry. (Plant cells have cell walls instead.) As a general rule, DNA viruses simply insert their genetic material into the host cell’s DNA. In contrast, RNA viruses must first turn their RNA into DNA (with the help of the host cell!) before the insertion takes place. Viruses are amazing, ubiquitous, and, thankfully, often “picky” about the type of cells they infect.
CHAI

2 cinnamon sticks, broken in half
8 allspice berries
4 whole cloves
2 peppercorns
4 cups water
16 cardamom pods, lightly crushed
4 slices fresh ginger, lightly crushed
2 tea bags or 1 Tbs. black tea
1/2 cup milk, or to taste
3 Tbs. honey, or to taste

With mortar and pestle, coarsely grind cinnamon sticks, allspice, cloves, and peppercorns. In a saucepan, combine the ground spices, water, cardamom pods, and ginger. Bring to a boil over high heat, reduce heat to medium-low, cover and simmer for 10 minutes. Set aside, covered, for 10 minutes. Place the tea bags in a teapot, or put the loose tea in a tea ball and place in the pot. Return the spiced water to a boil and pour into the teapot. Steep for 2–3 minutes, then strain the tea and serve with milk and honey on the side. Serves 4.


CLASSIFIED ADS

Old Sol Enterprises presents Oregon Grown Super Queens and nucs. Mite resistant, highly productive, winter hardy and very gentle. Reserve yours now by calling (541) 582-BEES or by visiting http://www.oldsolenterprises.com.

At least 100 (10-frame) supers of all sizes. Twelve 8-frame supers. Frames, new & used; approx. 150 drawn combs. Tops, bottoms, feeders, uncapping knife, some foundation, misc. Sell all or part. Philip, (541) 302-1419.

Beekeeping Class taught by Torey Johnson at Ruhl Bee Supply in Gladstone. Learn about equipment to start and how to work bees. February 7th & 9th, 6:45–9 pm. $30 per person. For additional information, please call (503) 657-5399.

Bees for sale. 4-frame nucs available near the 3rd week of April. $45 each plus $10 refundable deposit on nuc box. Andrew, (503) 537-0506; Newberg OR.

The Bee Line is the official publication of the Oregon State Beekeepers Association. The newsletter is published ten times a year and subscriptions are included with OSBA membership. Send news about your bees and beekeeping, as well as corrections, letters, comments, photographs (old and new), stories, interviews, and advertising to the Editor, The Bee Line, PO Box 42363, Portland OR 97242; thebeeline@comcast.net.

<table>
<thead>
<tr>
<th>Size of Ad</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Ads</strong>, per issue:</td>
<td></td>
</tr>
<tr>
<td>Business-card</td>
<td>$10.00</td>
</tr>
<tr>
<td>Quarter-page</td>
<td>$25.00</td>
</tr>
<tr>
<td>Half-page</td>
<td>$50.00</td>
</tr>
<tr>
<td>Full-page</td>
<td>$100.00</td>
</tr>
<tr>
<td><strong>Classified Ads (30 words)</strong>, per issue:</td>
<td></td>
</tr>
<tr>
<td>OSBA members</td>
<td>$3.00</td>
</tr>
<tr>
<td>OSBA members—for items given away at no charge (as long as space is available)</td>
<td>FREE</td>
</tr>
<tr>
<td>Non-members</td>
<td>$5.00</td>
</tr>
</tbody>
</table>

Note: Please submit all copy and art by the 15th of the month prior to publication. The next issue is March 2006. For advertising, send payment to Co-Secretary/Treasurer, Phyllis Shoemake. Contact the Editor for additional information.
ADVERTISING ON THE WEB

Revenues from web ads are the sole support of the OSBA website, www.orsba.org, a resource accessed by over 1,500 people worldwide every month. Web ads run for one year, beginning in January and continuing until January of the following year.

Cost per ad: $4 for OSBA members, $6 for nonmembers

Name of Advertiser or Business: ________________________________

For the following, include only information that you want listed on the website.

Address: _______________________________________

Telephone number: ________________________ fax: ________________________

e-mail address: ________________________ Website: ________________________

Area of coverage for services or deliveries (e.g., within 50 miles of Salem):

Please indicate and provide brief descriptions for categories of interest (e.g., won blue ribbon at the Clackamas County Fair or available in 1- and 2-pound containers):

_____ Swarm call (FREE)  _____ Honey for sale, buckets or drums
_____ Apitherapy  _____ Pollination, 1–20 hives
_____ Bee art and cards  _____ Pollination, 21 or more hives
_____ Bee removal  _____ Pollen for sale
_____ Bees for sale  _____ Propolis for sale
_____ Candles for sale  _____ Queens
_____ Custom extracting  _____ Wax for sale, up to 20 pounds
_____ Honey buyer  _____ Wax for sale, more than 20 pounds
_____ Honey for sale, gallon-sized containers or smaller  _____ Other service or product (describe):

Number of categories: ________   Total enclosed: ________

To place an ad, send the web-ad form with check payable to OSBA to: Thom Trusewicz, 90041 Logan Rd, Astoria OR 97103. For ad changes during the year, contact the OSBA Webmaster. Refunds are not available for ads discontinued before the year’s end.

Snow Peak Apiaries

Custom Wood Shop
All types of supers, including 8-frame, Cedar top and bottom boards; Frames—all styles
Custom cut to fit your operation
Franz & Audrey Yordy

(541) 451-3752  34769 E. Lacomb Dr.
Toll free 1-877-530-5882  Lebanon OR 97355
GLORYBEE
P.O. Box 2744 Eugene, OR 97404
Ph: 541-689-0913 Fax: 541-689-9692
Toll Free: 1-800-Glorybe (456-7923)
e-mail: sales@GloryBeeFoods.com
www.GloryBeeFoods.com

BUYING ALL GRADES NEW CROP HONEY

Call for prices
Free Bee Supply Catalog
1-800-Glorybe (456-7923)
MEMBERSHIP AND PUBLICATIONS FORM

Membership in the Oregon State Beekeepers Association is open to anyone with an interest in bees and beekeeping. You do not need to own bees or reside in Oregon to join. OSBA membership includes a vote in OSBA elections, discounts on publications, and ten issues of *The Bee Line*.

**Name:**

**Mailing address:**

**City/State/Zip:**

**Telephone number:**

**Regional Association (if applicable):**

**Discounted Publications:**

<table>
<thead>
<tr>
<th>Journal</th>
<th>1 year</th>
<th>2 years</th>
<th>3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>American Bee Journal</em></td>
<td>$17.96</td>
<td>$34.05</td>
<td>$47.89</td>
</tr>
<tr>
<td><em>Bee Culture</em></td>
<td>$19.00*</td>
<td>$36.00*</td>
<td>—</td>
</tr>
<tr>
<td><em>The Speedy Bee</em></td>
<td>$13.25</td>
<td>$25.25</td>
<td>—</td>
</tr>
</tbody>
</table>

*Outside the US, add $15 per year for postage.

*The OSBA respects the privacy of members and will not sell any information provided. May we include your name and address in a membership list that will be given to OSBA members only? YES/NO (please circle one).*

**Membership:** $20 per person ($29 per person outside the US) $_________

**Publication(s):** Indicate journal(s) and period(s) of subscription $_________

**Additional voluntary contribution:** Designate Research Fund/General Fund (please circle one) $_________

**Amount enclosed:** $_________

**Members of an OSBA Regional Association:** Make check payable to the Regional Association and attach form. The Regional Association Treasurer will submit the form and a check for the amount less $1, which goes to support the Regional Association.

**Regional Association Treasurers and others:** Make check payable to OSBA and send with form to: Phyllis Shoemake, 1702 Toucan St NW, Salem OR 97304.
Please check your mailing label. If the date on the label is near 1-Feb-06, your membership is due to expire. This is your friendly renewal notice.

More good wishes for the new year!

Oregon State Beekeepers Association is a nonprofit organization representing and supporting all who have an interest in bees and beekeeping.

President: Kenny Williams
20367 Long Rd
Blodgett OR 97326
(541) 456-2631

Vice President: Harry Vanderpool
7128 Skyline Rd S
Salem OR 97306
(503) 399-3675
shallotman@yahoo.com

Co-Secretary/Treasurer: Jan Lohman
77225 Colonel Jordan Rd
Hermiston OR 97838
(541) 567-3209
vazzafrm@uci.net

Co-Secretary/Treasurer: Phyllis Shoemake
1702 Toucan St NW
Salem OR 97304
(503) 364-8401
phy9201s@open.org

Website: www.orsba.org

Webmaster: Thom Trusewicz
(see page 6 for contact information)

Editor, The Bee Line: Rosanna Mattingly
PO Box 42363
Portland OR 97242
(503) 772-3486
thebeeline@comcast.net

This issue of The Bee Line printed on recycled paper by Powell Minuteman Press; (503) 234-2040