Scout Bee Newsletter

American Foulbrood -- One step closer to finding a cure

CATCH THE BUZZ - Scientists in Germany have discovered a new mechanism of infection for the most fatal bee disease. American Foulbrood (AFB) is the only infectious disease which can kill entire colonies of bees. Every year, this notifiable disease is causing considerable economic loss to beekeepers all over the world. The only control measure is to destroy the infected hive.

The mechanism of infection (pathogenic mechanism) was originally thought to be through the growth of a bacterium called Paenibacillus larvae in the organ cavity of honey bee larvae. The accepted view was that the bacteria germinate preferentially at either end of the gut of honey bee larvae then make holes in the gut wall and enter the larval organ cavity, the presumed primary place of bacterial proliferation.

In a paper published in Environmental Microbiology, Professor Elke Genersch and colleagues in Berlin explain that they have discovered that these bacteria cause infection in a completely different way. They colonize the larval midgut, do most of their multiplying in the mid-gut - living from the food ingested by the larvae - until eventually the honey bee larvae gut contains nothing but these disease-causing (pathogenic) bacteria. It isn't until then that the bacteria 'burst' out of the gut into the organ cavity thereby killing the larvae. These findings are a major breakthrough in honeybee pathology.

"Now that we fully understand the way in which this disease works, we can start to look at ways of preventing the spread of infection" said Professor Genersch.

Honeybees are important pollinators of crops, fruit and wild flowers. Therefore, they are indispensable for a sustainable and profitable agriculture but also for the maintenance of the non-agricultural ecosystem. Honeybees are attacked by numerous pathogens including viruses, bacteria, fungi and parasites. For most, if not all of these diseases, the molecular pathogenesis is poorly understood hampering the development of new ideas about how to prevent and combat honeybee diseases.

Professor Genersch added: "Molecular understanding of pathogen-host interactions is vital for the development of effective measures against infectious diseases. Therefore, in the long run, our findings will help to save large numbers of bees all over the world."

This message brought to you by *Bee Culture*, The Magazine Of American Beekeeping www.BeeCulture.com

HVAS Dues are Due!

The annual $10.00 dues were due January 1, 2008 . This will be to last newsletter sent to lapsing memberships. Dues can be paid in person at the meeting or sent to the treasurer Don Wheeler at: 5960 Medallion Court Alexandria, VA. 22303

The Scoutbee Newsletter is the bi-monthly newsletter of the Hagerstown Valley Apian Society

May-June 2008

Hagerstown Valley Apian Society

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Inside This Issue:

Selecting and Breeding Hardy Queen Bees in Frederick County, Md

Local beekeeper and researcher launches commercial sales of local Honey Bees.

Adam Finkelstein, President of the Frederick County Beekeepers Association, queen breeder since 1989 and his wife Kelly Rausch, a biologist at NIH who has been using Instrumental Insemination in their honey bee breeding program for nine years, have expanded their queen breeding program to the general public this year.

Their breeding population has been untreated for almost a decade. Honey production, over-wintering ability, Spring build-up, and tolerance to Varroa and Tracheal mites have been their selection goals. All their queens are bred from survivor stock. Since 1999, they have been committed to managing all their colonies without any mite treatments. They have built this hardy breeding population from their's and others' survivor stock since then. They feel that the queens they use to head their honey production colonies, would be ones you'd also want to use in your colonies.

Finkelstein says:
"Evaluating bee stock for desirable breeders is a 'numbers game'. The more stock that can be evaluated and tested, the greater the chance of finding queens/colonies that show desirable traits. Since we don't run a 5,000 colony operation, we choose to leverage a selection strategy using Instrumental Insemination to control matings with already established lines."

They collaborate with bee breeders throughout the U.S.A. and by testing their stocks, and then using the most suitable in carefully planned crosses, they're seeing great results for Varroa tolerance and overall hardiness. They also provide breeding stock to other breeders.

Their light and dark lines both show tolerance to Varroa and tracheal mites. They are great honey producers, and are selected from untreated stock. The light line has a more open brood-nest. The dark line goes through Winter with a tighter cluster. Queen and worker colors vary.

Queens are Available by reservation: call for latest availability date. Clipping/Marking included unless otherwise requested. www.vpqueenbees.com

Adam is also the recipient of a Sare Grant for 2008. SARE stands for Sustainable Agriculture Research and Education and is part of the USDA. SARE website: www.uvm.edu/~nesare/
The title of the project is: "Testing Two Selection Assay's Efficacy for Varroa Mite Tolerant Queen Bee (Apis mellifera) Production"

What he and Kelly plan to do is to compare two different breeding lines of bees with two tests. One line is a known mite tolerant line. The control line is an Italian line that makes no claims for any tolerance. The tests will estimate Varroa mite populations in the hive, and how hygienic the bees are. This will be conducted over the 2008 season. The results will be analyzed and then published and made available on the the VP Queen Bees website: www.vpqueenbees.com

Adam and Kelly hope to see differences in the two lines' results. This would show that these two tests are a good tool to use when selecting queens for mite tolerance--that any beekeeper could use when making queens or even testing purchased queens. Ideally, a region could pool resources for the testing and test a number of queens. The best performing queens could then be used to breed from. Good for everyone!

Looking for someplace to sell your honey?

Try one of the area's local farmers markets! There is likely a Farmers Market close to you. Here is a message that we received about one of the local farmers markets:

Brunswick, MD in Frederick County is hosting a Farmers' Market from June through October. The Market will run on Sundays from 1 to 4 p.m., and we will be heavily promoting it to our 6000+ local residents, as well as our 700+ MARC train commuters, the hundreds of folks who turn out for our First Friday series that feature live entertainment, and the 1000+ people who we expect to attend the Brunswick BluesFest this year. The Market will be centrally located in our historic downtown, and we will advertise it to our Frederick and Washington County neighbors, as well as neighbors in Loudoun County, VA and Jefferson County, WV. We hope some of your members will be interested in joining our Market to sell honey and/or beeswax products. Thank you for your attention to this matter. Michelle Tuwiner Co-Chair, Promotions Committee Brunswick Main Street, Inc.

EAS 2008 August 4-8, 2008
Murray State University, Murray, Kentucky

The Eastern Apicultural Society of North America was established in 1955 with the purpose of promoting honey bee culture, the education of beekeepers, and excellence in bee research. Every summer, EAS conducts its annual conference in one of its 22 member States/Provinces. About 500 people, from around the world, attend this conference every year. You must be a member of EAS in order to participate in the Short Course, Conference, or other activities. Dues may be paid with your conference or short course registration. Additional information about the 2008 EAS Short Course and Conference Additional information about the 2008 EAS Short Course and Conference can be found at www.easternapiculture.org

HAS the heartland apicultural society

This year the Heartland Apicultural Society meeting will be closer to us than the EAS meeting. Mark your calendars for the HAS 2008 meeting on July 10-12, Marshall University in Huntington, WV. Registration forms and more information is available at www.heartlandbees.com

HAS 2007 / Nancy Troup demonstrates how to clip & mark a queen

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PROMOTING BETTER BEEKEEPING IN THE TRI-STATE REGION .

We're on the Web!
http://ScoutBee.org

Maryland State Beekeepers meeting Sat June 7, 2008

The MSBA summer meeting will be held at the Oregon Ridge Nature Center, Hunt Valley, MD. The featured speaker for this meeting will be Mr. Kim Flottum : Editor of Bee Culture Magazine

Next HVAS meeting will be Tuesday, June 10, 2008 7:30 pm @ the Washington County Extension Office

Tulip Poplar, Liriodendron tulipifera

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